

## **POLICY ISSUE INFORMATION**

May 20, 2009

SECY-09-0079

FOR: The Commissioners

FROM: Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

SUBJECT: CLOSING FIRE PROTECTION ISSUES—SEMIANNUAL UPDATE

### PURPOSE:

To provide the Commission with the semiannual update on the U.S. Nuclear Regulatory Commission (NRC) staff's plan for closing fire protection issues.

### BACKGROUND:

In staff requirements memorandum (SRM) M080717 "Briefing on Fire Protection Issues," dated July 29, 2008, the Commission directed the staff to provide a Fire Protection Closure Plan including milestones and deliverables.

In response to the subject SRM, the staff prepared Commission paper SECY 08-0171, "Plan for Stabilizing Fire Protection Regulatory Infrastructure," dated November 5, 2008. That Commission paper delineated eight tasks with associated steps and schedules that the staff plans to complete. The paper also included a commitment to provide semiannual updates on the status of these tasks to the Commission. This Commission paper provides the semiannual update on the tasks delineated in SECY 08-0171.

### DISCUSSION:

Enclosure 1 to this paper summarizes the status of each of the eight tasks and the accomplishments and challenges identified since November 5, 2008.

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Enclosure 2 provides the revised closure plan with markups of changes since the plan was published on November 5, 2008.

Under Task 1, the NRC's schedule to review Oconee's license application to adopt 10 CFR 50.48(c) – National Fire Protection Association (NFPA) 805 is expected to change by two quarters. This delay of a pilot plant application review is due to several issues, such as the lack of specificity on planned modifications and fire probabilistic risk assessment issues. The delay in issuance of the safety evaluation report for Oconee is expected to impact (delay) the submittal and, in turn, the review schedule of some of the amendments scheduled to follow the Oconee review. It should be noted that according to the interim enforcement discretion policy applicable to plants transitioning to NFPA 805, the non-pilots continue to be subject to enforcement discretion up to six months after the NRC staff reviews and publishes the safety evaluation report for the second pilot plant.

COORDINATION:

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

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Eric J. Leeds, Director  
Office of Nuclear Reactor Regulation

Enclosures:

1. Summary of Status, Accomplishments, and Challenges Identified Since November 5, 2008
2. Plan for Stabilizing Fire Protection Regulatory Infrastructure—Revision 1

## **SUMMARY OF STATUS, ACCOMPLISHMENTS, AND CHALLENGES IDENTIFIED SINCE NOVEMBER 5, 2008**

### **Task 1: Stabilize the Regulatory Infrastructure Supporting Transition to Risk-Informed and Performance-Based Fire Protection Regulation (10 CFR 50.48(c) and NFPA 805)**

**Status:** A delay of approximately two quarters to issue the Oconee safety evaluation report (SER) is likely.

The current third quarter schedule for calendar year (CY) 2009 remains achievable for staff to review and publish a SER for Shearon Harris' transition to 10 CFR 50.48(c) – National Fire Protection Association Standard 805 (NFPA 805). There is a possibility of a change to the fourth quarter of CY 2009 for the Harris SER. The Oconee SER schedule will likely be delayed by two quarters due to several issues including the lack of specificity on committed modifications, and technical fire probabilistic risk assessment (PRA) issues. The NRC staff plans to engage Oconee in the following ways:

- increase senior management engagement with licensee's senior management, and
- perform additional site visits to clarify requests for additional information (RAIs) and expedite the RAI resolution process.

The U.S. Nuclear Regulatory Commission (NRC) is also delaying updating Regulatory Guide (RG) 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants," and providing clarifications to NUREG/CR-6850, "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities," issued September 2005, to the fourth quarter of CY 2009. The update of RG 1.205 and the clarification of issues related NUREG/CR-6850 are being delayed due to the complexity of several technical issues that emerged. These delays do not affect the pilot applications which have already been submitted. The new issues that arose during the pilot reviews may delay the non-pilot plants, but this delay will allow non-pilots to incorporate lessons learned from the new issues. Because delays in the review of the pilot applications automatically provide additional time for non-pilots to submit their license amendment requests (LARs), the delays related to RG 1.205 and NUREG/CR-6850 will not affect the non-pilot applications.

The following key activities reflect significant staff accomplishments since November 5, 2008.

- The staff completed the draft final triennial inspection procedure for NFPA 805 plants. It has been placed on hold for pilot use until after the NRC issues the SERs for the pilots.
- NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports" (the Standard Review Plan), Section 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection Program," has been published for public comment.
- The staff issued the RG 1.205 update for public comment.

- The staff completed a regulatory audit in support of the review of Oconee's LAR.
- The staff issued RAIs for the Oconee LAR.
- The staff completed a regulatory audit in support of the review of Harris's LAR.

**Challenges:** Delays in the review and approval of the Oconee license amendment request is expected to impact the submittal and review schedule of some of the non-pilot plants' LARs. It should be noted that according to the interim enforcement discretion policy applicable to plants transitioning to NFPA 805, the non-pilots have up to six months to submit their applications after the NRC reviews and publishes the SER for the second pilot plant.

**Task 2: Hemyc and MT Electrical Raceway Fire Barrier (ERFBS)  
Closure for Plants Transitioning to NFPA 805**

**Status:** Completed

The staff of the Office of Nuclear Reactor Regulation (NRR) has reviewed and approved license amendment and exemption requests from facilities not using the NFPA 805, "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants," 2001 Edition, and inspectors have confirmed that all non-805 licensees have completed the necessary modifications. Inspectors have also confirmed that all licensees addressing this issue through their transition to NFPA 805 have established compensatory measures.

**Challenges:** None

**Task 3: Stabilize Regulatory Infrastructure to Resolve  
Fire-Induced Circuit Failure Issues**

**Status:** Three to six month delay of intermediate goals.

Based on requests from industry representatives, the staff determined that it would be more appropriate to tie the beginning of the enforcement discretion to the issuance of the final revision of RG 1.189, "Fire Protection for Nuclear Power Plants," as opposed to the draft regulatory guide which documented the Commission-approved high-level method for resolving multiple spurious actuations (MSAs). This will delay the time for licensees to begin resolving issues related to circuit failures until the end of the third quarter of CY 2009.

The Nuclear Energy Institute (NEI) had committed to revising NEI 00-01, "Guidance for Post-Fire Safe Shutdown Analysis," issued October 2002, regarding MSAs by December 31, 2008. The NRC staff has not received the final revision. The following key activities reflect significant staff accomplishments since November 5, 2008.

- NEI provided a draft version of NEI 00-01 (Revision 2c) in January 2009, and committed to provide a revised version of NEI 00-01, which will include the comments that the NRC provided to NEI by May 2009.

- The staff issued a draft guide 1214, which is an update to RG 1.189, which provides the high-level methodology for MSA analysis, for public comment.

The staff issued an enforcement guidance memorandum (EGM) for resolution of the MSAs.

**Challenges:** The NRR staff has provided comments on the detailed industry methodology. The NRR staff and industry stakeholders met publically to address those comments and the industry is updating its guidance document.

#### **Task 4: Stabilize Regulatory Infrastructure to Resolve Post-Fire Operator Manual Action Issues**

**Status:** On schedule.

Enforcement discretion on operator manual actions (OMAs) expired on March 6, 2009.

Plants in transition to NFPA 805: Fifty-one units are closing this issue through their transition to NFPA 805. The staff plans to confirm resolution through the transition review.

Plants not in transition to NFPA 805: Fifty-three units are not transitioning to NFPA 805 at this time. Of the 53 units, 12 units represented by 8 sites have recently applied for exemptions or license amendments. Enforcement discretion for these specific issues at the eight sites will continue during the staff review of amendment and exemption requests. The staff has already approved one previously submitted request for an exemption. The staff will complete the review of amendment and exemption requests by the end of the first quarter of CY 2010.

Based on a survey done by NEI, the remaining non-NFPA 805 plants have addressed the OMA compliance issue through implementation of plant changes. The staff is developing a plan to confirm closure of OMAs for utilities that are not transitioning to NFPA 805 and that do not have an active licensing action. This plan will be completed in the second quarter of CY 2009.

**Challenges:** The staff plans to verify that plants have appropriately dispositioned OMAs. This activity may result in additional staff actions in the event staff identifies inadequate closure of OMAs on the part of the licensee. The staff will take appropriate regulatory action for any inadequate closures of OMAs.

#### **Task 5: Assess Regulatory Effectiveness**

**Status:** On schedule

The NRR staff has identified three metrics to monitor fire safety and regulatory stability. The Office of Nuclear Regulatory Research staff and the NRR staff are working together to develop methods for reporting metrics on fires and inspection findings. The staff is working with NEI on procedures that the industry will use to provide data on the percentage of fire areas with long-term compensatory measures.

**Challenges:** Reporting data on long-term compensatory measures is not a requirement. If data provided by NEI is incomplete, the NRC staff will take additional measures to obtain data via other means.

#### **Task 6: Historical Lessons Learned From Fire Protection**

**Status:** On schedule

The NRR staff has compiled a list of documents to be evaluated to develop the historical lessons learned.

**Challenges:** None

#### **Task 7: Exemption Database**

**Status:** On schedule

The NRR staff is working with the Office of Information Services to ensure that fire protection exemptions are made publicly available in the main library of the Agencywide Documents Access and Management System (ADAMS). The database will be created from the information in ADAMS.

**Challenges:** None

#### **Task 8: Establish Reasonable Assurance That All Past Regulatory Infrastructure Instabilities Are Identified**

**Status:** On schedule

The NRR staff has collected information from internal fire protection stakeholders regarding open fire protection issues. The staff has identified no safety-significant issues.

**Challenges:** None

## Enclosure 2

# PLAN FOR STABILIZING FIRE PROTECTION REGULATORY INFRASTRUCTURE

Revision 1

(Schedule changes since November 5, 2008, are highlighted in *blue*.)

## ACRONYMS

1Q -----first quarter  
2Q -----second quarter  
3Q -----third quarter  
4Q -----fourth quarter  
ADAMS-----Agencywide Documents Access and Management System  
CY -----calendar year  
CFR -----*Code of Federal Regulations*  
DRA-----Division of Risk Assessment  
EGM -----enforcement guidance memorandum  
EPRI -----Electric Power Research Institute  
ERFBS -----electrical raceway fire barrier system  
FAQ -----frequently asked question  
GAO -----U.S. Government Accountability Office  
GL -----generic letter  
IN-----information notice  
LAR -----license amendment request  
MSAs-----multiple spurious actuations  
NEI -----Nuclear Energy Institute  
NFPA -----National Fire Protection Association  
NRC -----U.S. Nuclear Regulatory Commission  
NRR-----Office of Nuclear Reactor Regulation  
NUREG -----NRC technical report designation  
NUREG/CR -NUREG contractor report  
OMA-----operator manual action  
RG-----regulatory guide  
RIS -----regulatory issue summary  
PRA -----probabilistic risk assessment  
SER -----safety evaluation report  
SRM -----staff requirements memorandum



**Task #1 Stabilize the Regulatory Infrastructure Supporting Transition to Risk-Informed and Performance-Based Fire Protection Regulation—10 CFR 50.48(c) and NFPA 805**

**Objective** To develop and validate the regulatory processes that facilitate predictable, efficient, and effective transition of operating nuclear power plants to the NRC's risk-informed and performance-based fire protection requirements.

**Definition of Closure** Closure is achieved when the regulatory infrastructure is in place and the safety evaluation reports of the NFPA 805, "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants, 2001 Edition," pilot plants are issued. Review and approval of subsequent LARs is considered routine staff activity.

**Background** The Commission approved the final rule incorporating the 2001 revision of the national consensus standard NFPA 805 into Title 10 of the *Code of Federal Regulations* (10 CFR) 50.48(c) by reference via an SRM on May 11, 2004. The rule was published on June 16, 2004, and became effective July 16, 2004. The Commission provided certain enforcement discretion as an incentive for licensees to adopt NFPA 805. Two licensees, Progress Energy and Duke Energy, volunteered Shearon Harris and Oconee, respectively, to become pilot plants for the transition to NFPA 805.

The NRC has prepared guidance for licensees adopting NFPA 805 in Regulatory Guide 1.205, "Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants." Also, the staff endorsed the industry proposal to establish an FAQ program to promptly clarify issues emerging at plants in transition to NFPA 805. The staff holds monthly public meetings with the industry to discuss emerging issues.

As of today, operators of 51 reactor units have sent letters of intent indicating their commitment to transition to NFPA 805.

**Steps to Closure**

**Due CY Quarter**

**Establish Regulatory Foundation**

NFPA 805 issued Complete: 01/2001

10 CFR 50.48(c) promulgated Complete: 06/2004

**Structure for Enforcement**

New 10 CFR 50.48 enforcement policy for NFPA 805 provides a two year enforcement discretion period Complete: 06/2004

NFPA 805 enforcement policy revised to address licensee budgetary cycles to the end of 2005 for existing non-compliances Complete: 01/2005

NFPA 805 Enforcement Policy revised to provide a three year enforcement discretion period Complete: 04/2006

Commission approves revised enforcement discretion policy allowing discretion to extend 6 months past issuance of the second pilot plant's SER Complete: 09/2008

### **Develop Implementation Guidance**

NRC and EPRI jointly issue NUREG/CR-6850, "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities" Complete: 09/2005

Industry issues implementation guidance NEI 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program Under 10CFR50.48(c)," Revision 1 Complete: 09/2005

Staff issues RG 1.205 as guidance for plants adopting NFPA 805 Complete: 05/2006

*Issue draft SRP 9.5.1.2 for public comment Complete: 03/2009*

*Complete triennial procedure for pilot testing Complete: 03/2009*

*Issue draft RG 1.205 for public comment Complete: 04/2009*

Clarification of NUREG/CR-6850 completed **2009 4Q**

Staff issues revised RG 1.205 and Standard Review Plan for NFPA 805 **2009 4Q**

### **Validate Implementation**

First letter of intent (Oconee) Complete: 02/2005

Second letter of intent (Harris) Complete: 06/2005

Pilot plant LAR received for Harris Complete: 05/2008

Pilot plant SER reviewed for Oconee Complete: 06/2008

**Final Closure**

Staff issues pilot plant SER (Harris)

**2009 4Q**

Staff issues pilot plant SER (Oconee)

**2010 1Q**

**Task #2 Hemyc and MT Electrical Raceway Fire Barrier (ERFBS) Closure for Plants Transitioning to NFPA 805**

**Objective** To evaluate and document the actions taken to address ERFBS questions, including the specific actions taken to address issues related to Hemyc.

**Definition of Closure** The safety issue has been closed. This task remains open until the staff issues a report documenting the closeout of Hemyc and MT barrier issues.

**Background** To meet fire protection regulations, licensees often installed an ERFBS to achieve the required separation when redundant trains of cables and equipment are in the same room or fire area. The NRC found that two of these systems may be nonconforming and issued GL 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations," dated April 10, 2006. The generic letter asked licensees to describe how Hemyc, MT, and other fire barrier materials are capable of providing the appropriate fire resistance rating. By the end of calendar year 2007, the NRC had accepted all responses to the generic letter and approved all the licensing actions to address Hemyc issues of non-805 plants.

On December 17, 2008, the NRC staff issued a memorandum describing the status of all plants that rely on Hemyc ERFBS. All plants have either resolved their Hemyc issues or are in transition to 10 CFR 50.48(c) and NFPA 805.

This task is complete and will be removed from future versions of this plan.

<b>Steps to Closure</b>	<b>Due CY Quarter</b>
<b>Establish Regulatory Foundation</b>	
10 CFR Part 50, Appendix R, Section III.G promulgated	Complete: 01/1980
<b>Structure for Enforcement</b>	
No enforcement discretion for barrier issues	N/A
<b>Develop Implementation Guidance</b>	
Staff issues IN 2005-07, "Results of HEMYC Electrical Raceway Fire Barrier System Full Scale Fire Testing"	Complete: 04/2005
Staff issues GL 2006-03	Complete: 04/2006
<b>Validate Implementation</b>	
Staff responds to all GL 2006-03 information requests	Complete: 12/2007

Staff confirms closure via inspections related to GL 2006-03 (Hemyc and MT)

Complete: 12/2008

**Final Closure**

Staff issues final closeout documentation

***Complete: 12/2008***

**Task #3 Stabilize Regulatory Infrastructure to Resolve Fire-Induced Circuit Failure Issue**

**Objective** To implement a predictable, efficient, and effective process to ensure that licensees complete specific actions related to possible fire-induced circuit failures.

**Definition of Closure** Closure is achieved when the regulatory infrastructure is in place and the staff completes validation of an application of the circuit resolution methodology. Review and approval of subsequent use of the circuit failure resolution methodology by individual licensees is considered routine staff activity.

**Background** To meet fire protection regulations, nuclear power plants must be able to demonstrate that they can be safely shut down in the event of a fire. An important requirement of these rules was the protection of redundant equipment and cables required to place the plant in a safe shutdown state. This included a requirement to protect circuits such that plant equipment does not fail or malfunction.

Beginning in 1997, a series of licensee event reports identified plant-specific problems related to potential fire-induced electrical circuit failures that could affect equipment necessary to achieve and maintain safe shutdown. The NRC staff issued IN 99-17, "Problems Associated with Post-Fire Safe-Shutdown Circuit Analyses," on June 3, 1999, to document additional problems.

In 2001, EPRI and NEI performed a series of cable functionality fire tests to enhance the nuclear industry's understanding of fire-induced circuit failures, particularly spurious equipment actuations initiated by circuit failures. Based on the test results and continued interactions with industry, the NRC staff concluded that regulatory expectations needed to be clarified to ensure safety, to provide clear regulatory expectations in the area of fire-induced circuit failures, and where appropriate, to make plant changes to mitigate such failures.

**Steps to Closure**

**Due CY Quarter**

**Establish Regulatory Foundation**

Letter from S. Collins (NRC) to R. Beedle (NEI) regarding spurious actuations Complete: 03/1997

**Structure for Enforcement**

Staff issues EGM 98-002, "Disposition of Violations of Appendix R, Regarding Sections III.G and III.L Circuit Failures" Complete: 03/1998

Staff issues updated EGM including Commission direction for fire-induced circuit failures **Complete: 05/2009**

**Develop Implementation Guidance**

EPRI/NEI circuit failure testing completed at Omega Point Laboratories, Elmendorf, TX Complete: 06/2001

staff and industry publish (through EPRI) “Spurious Actuation of Electrical Circuits Due to Cable Fires: Results of an Expert Elicitation”	Complete: 05/2002
Staff issues RIS 2004-03, Revision 1, “Risk-Informed Approach for Post-Fire Safe-Shutdown Associated Circuit Inspections”	Complete: 12/2004
Industry publishes NEI 00-01, “Guidance for Post-Fire Safe Shutdown,” Revision 1	Complete: 01/2005
Staff issues RIS 2005-30, “Clarification of Post-Fire Safe-Shutdown Circuit Regulatory Requirements”	Complete: 12/2005
Commission issues SRM-SECY-2006-0196, “Issuance of Generic Letter 2006-xx, ‘Post-Fire Safe-Shutdown Circuits Analysis Spurious Actuations’”	Complete: 12/2006
Staff completes additional testing for RIS 2004-03 and issues NUREG/CR-6931, “Cable Response to Live Fire,” Volumes 1, 2, and 3	Complete: 04/2008
Staff transmits SECY-2008-0093, “Resolution of Issues Related to Fire-Induced Circuit Failures,” to Commission for action	Complete: 06/2008
Staff issues draft of Regulatory Guide 1.189 for comment	<b>Complete: 04/2009</b>
Staff publishes RIS and attached, draft regulatory guide clarification of circuit expectations	2009 3Q
Industry revises NEI 00-01, Revision 2	<b>2009 2Q</b>
NRC issues final regulatory guide for fire-induced circuit failures	2009 3Q

### **Validate Implementation**

Staff establishes mechanism to validate disposition method for circuits issue	2009 4Q
Staff informs the Commission of status of circuits closure	2009 3Q
Licensees work to resolve circuits issues	2009 3Q

### **Final Closure**

Staff completes validation of the circuits issue disposition method	2010 2Q
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**Task #4      Stabilize Regulatory Infrastructure to Resolve Post-Fire Operator Manual Action Issues**

**Objective**      To ensure that licensees complete appropriate actions related to the inappropriate crediting of post-fire OMAs.

**Definition of Closure**      Closure is achieved when the regulatory infrastructure is in place and the licensees submit requests for license amendments, exemptions, or complete modifications validating the effectiveness of the infrastructure. Review and approval of those applications is considered routine staff activity.

**Background**      To meet fire protection regulations, licensees of nuclear power plants must demonstrate that the plant can be safely shut down in the event of a fire. An important requirement of these rules was the protection of redundant equipment and cables required to place the plant in a safe-shutdown state. Where separation of redundant equipment could not be achieved, licensees were permitted, under certain conditions, to use postfire OMAs to mitigate the effects of the fire.

In 2000, NRC inspections found that some licensees compensated for the lack of approved separation by relying on OMAs under conditions not permitted by the NRC. On June 30, 2006, the NRC issued RIS 2006-10, "Regulatory Expectations with Appendix R, Paragraph III.G.2, Operator Manual Actions," to clarify expectations.

With the intention of giving licensees an opportunity to find and correct unapproved postfire OMAs, the NRC issued enforcement discretion for licensee-identified unapproved postfire OMAs. This discretion provided a period of time for licensees to self-identify unapproved postfire OMAs and also allowed the licensees time to bring those unapproved postfire OMAs into compliance without the NRC's taking enforcement action. The NRC expects the unapproved postfire OMAs to be resolved through reanalysis, procedure changes, modifications, or by requesting approval from the NRC. Facilities in transition to NFPA 805 will address OMAs as part of the transition.

In October 2007, the NRC issued NUREG-1852, "Demonstrating the Feasibility and Reliability of Operator Manual Actions in Response to Fire," to assist NRC staff in reviewing postfire OMA applications under conditions permitted by the NRC. NUREG-1852 is publicly available so that licensees are able to examine the factors that the NRC staff will review.

The enforcement discretion ended on March 6, 2009, for plants that did not have exemptions or had not submitted license amendments to the NRC for review. For those licensees not granted the enforcement discretion provided by the review of exemptions or amendments, the Reactor Oversight Process applies, and no enforcement discretion is available.



## Steps to Closure

## Due CY Quarter

### Establish Regulatory Foundation

Commission issues SRM-SECY-04-0233, "Proposed Rulemaking—Post-Fire Operator Manual Actions" Complete: 01/2005

Staff issues "Fire Protection Program—Post-Fire Operator Manual Actions," *Federal Register* Notice 71 FR 11169, March 1, 2005. Withdrawal of the proposed rule Complete: 03/2005

### Structure for Enforcement

Staff issues enforcement discretion for OMAs as part of EGM 2007-004 for OMAs; enforcement discretion ends March 2009 Complete: 06/2007

### Develop Implementation Guidance

Staff publishes NRC RIS 2006-10

Staff publishes NUREG-1852 Complete: 10/2007

### Validate Implementation

Licensees complete corrective actions or requests for amendment/exemption **Complete: 03/2009**

***Staff to develop a plan to validate the effectiveness of the closure of OMA issues for utilities which are not transitioning to NFPA 805 and which do not have an active licensing action*** **2009 2Q**

Staff validates the effectiveness of the infrastructure by completing review of one licensee's resolution of the issue 2010 2Q

### Final Closure

Infrastructure stabilized and validated 2010 2Q

**Task #5 Assess Regulatory Effectiveness**

**Objective** Assess the effectiveness of the ongoing improvements to the fire protection regulatory framework.

**Definition of Closure** Closure is achieved when a monitoring process is in place and the baseline is established. Ongoing implementation of the process is considered routine staff activity.

**Background** On July 29, 2008, the Commission directed the staff in SRM M080717, "Briefing on Fire Protection Issues," to provide the Commission with a plan to assess the effectiveness of the ongoing improvements to the fire protection regulatory framework, using recent plant data to establish a baseline. Such a baseline could be, for example, the number and general type of all open fire protection deficiencies that were compensated and the manner of compensation used in 2007.

The GAO Report 08-747, "Nuclear Safety: NRC's Oversight of Fire Protection at U.S. Commercial Nuclear Reactor Units Could Be Strengthened," issued June 2008, included a recommendation to "develop a central database for tracking the status of exemptions, compensatory measures, and manual actions in place nationwide and at individual commercial nuclear units."

The Chairman responded to the GAO report in a letter to Congress dated September 11, 2008. The letter committed to "implement a Fire Protection Closure Plan 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." This action will resolve the issues of long-term compensatory measures and unapproved manual actions that have associated compensatory measures.

**Steps to Closure**

**Due CY Quarter**

**Commission Commitments**

Determine metric for measuring effectiveness of ongoing improvements

**Complete: 12/2008**

Develop metric monitoring methodology

**Complete: 03/2009**

**Final Closure**

Collect information and establish monitoring

2009 3Q

**Task #6 Historical Lessons Learned from Fire Protection**

**Objective** Train appropriate staff on the important historical lessons learned from the fire protection issue resolution activities since Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," to 10 CFR Part 50, "Domestic Licensing of Production and Utilization Facilities," was established.

**Definition of Closure** Closure is achieved when a lessons-learned review is completed, lessons are incorporated into a knowledge management or training program and the adequacy of that program is validated using a pilot application. Ongoing staff awareness and training are considered part of routine staff activity.

**Background** On July 29, 2008, the Commission directed the staff in SRM M080717 to provide the Commission with a closure plan that includes training for appropriate staff on the important historical lessons learned from the fire protection issue resolution activities since Appendix R to 10 CFR Part 50 was established.

<b>Steps to Closure</b>	<b>Due CY Quarter</b>
<b>Perform Lessons Learned Evaluation</b>	
Compile history	<b>Complete: 03/2009</b>
Develop lessons learned	2009 3Q
<b>Develop Knowledge Management/Training Tool</b>	
Develop training on lessons learned	2010 1Q
Pilot training on fire protection lessons learned	2010 1Q
<b>Final Closure</b>	
Incorporate lessons learned from pilot training	2010 2Q

**Task #7 Exemption Database**

**Objective** To develop a centralized database of fire protection exemptions for operating nuclear reactors.

**Definition of Closure** Closure is achieved when the exemption database is established and procedures and plans are in place for periodic updating of that database. Periodic updates to the database are considered routine staff activity.

**Background** GAO Report 08-747 included a recommendation to “develop a central database for tracking the status of exemptions.”

The Chairman responded to the GAO report in a letter to Congress dated September 11, 2008, which contained a commitment to “develop a centralized database of fire protection exemptions for operating nuclear reactors.”

**Steps to Closure**

**Due CY Quarter**

**Commission Commitments**

Collect data on fire protection exemptions 2009 2Q

Complete development of database 2009 4Q

**Final Closure**

Establish procedures for updates 2010 1Q

**Task #8**      **Establish Reasonable Assurance That All Past Regulatory Infrastructure Instabilities Are Identified**

**Objective**      Identify any additional fire protection issues that require further action.

**Definition of Closure**      Closure is achieved when the review is complete and appropriate actions are taken to address any fire protection regulatory issues identified. Addressing any additional issues identified is considered routine staff activity.

**Background**      Since publication of the fire protection rule in 1981, the NRC has identified and addressed many issues by using regulatory practices that were deemed appropriate at the time these issues were identified.

The NRC staff has initiated an effort to identify any outstanding fire protection issues by surveying cognizant NRC staff concerning the regulatory history of fire protection. The identification of additional issues will give the staff a more complete understanding of the issues and confidence that the agency is addressing all the necessary issues. The staff's activities for this effort include methodically surveying past and present NRC staff with knowledge of fire protection issues, evaluating their responses, and recommending followup actions.

**Steps to Closure**

**Due CY Quarter**

**Commission Commitments**

Complete review

**Complete: 04/2009**

Evaluate responses

2009 2Q

**Final Closure**

Identify issues and develop recommendations

2009 2Q