

# POLICY ISSUE INFORMATION

May 13, 2011

SECY-11-0063

FOR: The Commissioners

FROM: R. W. Borchardt  
Executive Director for Operations

SUBJECT: CLOSING FIRE PROTECTION ISSUES—SEMIANNUAL  
UPDATE— MAY 2011

PURPOSE:

To provide the Commission with the semiannual update on the U.S. Nuclear Regulatory Commission (NRC) staff's progress in 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 SRM M080717, the staff prepared the Commission paper SECY-08-0171, "Plan for Stabilizing Fire Protection Regulatory Infrastructure," dated November 5, 2008. That stabilization plan delineated eight tasks with associated milestones and deliverables necessary to complete the stabilization of the regulatory infrastructure for those nuclear plants transitioning to the risk-informed, performance-based fire protection regulations and those remaining under the traditional deterministic fire protection regulations. On May 22, 2009 (SECY-09-0079, "Closing Fire Protection Issues—Semiannual Update"); November 2, 2009 (SECY-09-0161 (same title as SECY-09-0079)), May 14, 2010 (SECY-10-0060 (same title as SECY-09-0079)), and November 12, 2010 (SECY-10-0150 (same title as SECY-09-0079)), the staff updated the Commission on milestones that it had completed. This paper provides the fifth semiannual update of the stabilization plan, and documents completion of the remaining two tasks.

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DISCUSSION:

The NRC staff has now closed all eight of the tasks in the stabilization plan. Specifically, since the NRC staff updated the stabilization plan on November 12, 2010, it has issued the Oconee Nuclear Station safety evaluation report for the adoption of Title 10 of the *Code of Federal Regulations* (10 CFR) 50.48(c) and National Fire Protection Association Standard 805, "Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805), and has completed work related to the fire protection lessons learned.

As noted above, the staff completed Task 1 by issuing the Oconee safety evaluation report on December 29, 2010. The NRC staff is continuing to track the completion of NFPA 805 implementation actions at Oconee. Another NFPA 805 pilot plant, Shearon Harris Nuclear Power Plant, reported completing its implementation in a letter to the NRC dated January 19, 2011. The NRC is also working with industry stakeholders to create a stable regulatory framework for submittal and review of the nonpilot NFPA 805 licensee applications.

For Task 6, on April 27, 2011, the staff issued a memorandum summarizing the lessons learned. The staff has also developed training to support communicating the lessons learned and the staff provided the first lessons learned training session to NRC staff on May 5, 2011. The staff is considering the topic of fire protection lessons learned as part of ongoing NRC knowledge management activities. This completes Task 6 of the stabilization plan.

CONCLUSION:

The enclosure to this paper provides the revised and completed stabilization plan, with changes made since the publication of the updated plan on November 12, 2010. Since the staff has completed all of the items described in the enclosure, this will be the last update to the plan. This completes staff actions in response to the SRM. Normal agency feedback processes, such as the Reactor Oversight Process, will help to ensure that the fire protection program infrastructure remains stable.

By memorandum dated October 19, 2008, then-Executive Director for Operations Luis A. Reyes formed the Fire Protection Steering Committee to facilitate resolution of key technical and regulatory issues related to fire protection and to interface with industry stakeholders on those issues. Specifically, the committee charter called for the group to facilitate the predictable and efficient implementation of NFPA 805 and the clear and timely resolution of emerging fire protection issues, including operator manual actions and multiple spurious operations from fire-induced cable faults. With the completion of this plan as documented in the enclosure, the Fire Protection Steering Committee is hereby retired.

The Commissioners

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COORDINATION:

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

*/RA/*

R. W. Borchardt  
Executive Director  
for Operations

Enclosure:  
Plan for Stabilizing Fire Protection  
Regulatory Infrastructure, Revision 5

The Commissioners

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COORDINATION:

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

*/RA/*

R. W. Borchardt  
Executive Director  
for Operations

Enclosure:  
Plan for Stabilizing Fire Protection  
Regulatory Infrastructure, Revision 5

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# **Enclosure**

## PLAN FOR STABILIZING FIRE PROTECTION REGULATORY INFRASTRUCTURE

Revision 5

(Schedule changes since November 10, 2010, the last update provided to the Commission, are highlighted in *blue*.)

## ACRONYMS

CFR	<i>Code of Federal Regulations</i>
CY	calendar year
EGM	enforcement guidance memorandum
EPRI	Electric Power Research Institute
ERFBS	electrical raceway fire barrier system
GAO	U.S. Government Accountability Office
GL	generic letter
IN	information notice
LAR	license amendment request
NEI	Nuclear Energy Institute
NFPA	National Fire Protection Association
NRC	U.S. Nuclear Regulatory Commission
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 the Transition to Risk-Informed and Performance-Based Fire Protection Regulation— 10 CFR 50.48(c) and National Fire Protection Association Standard 805, “Performance-Based Standard for Fire Protection for Light-Water Reactor Electric Generating Plants, 2001 Edition” (NFPA 805)**

**Objective**      To develop and validate the regulatory processes that facilitate the predictable, efficient, and effective transition of operating nuclear power plants to the U.S. Nuclear Regulatory Commission (NRC) risk-informed and performance-based fire protection requirements.

**Definition of Closure**      Closure is achieved when the regulatory infrastructure is in place and when the NRC issues the safety evaluation reports (SERs) for the NFPA 805 pilot plants. The NRC considers the review and approval of subsequent license amendment requests (LARs) to be routine staff activities.

**Status**      The staff completed this task in the fourth quarter of calendar year (CY) 2010.

**Background**      The Commission approved the final rule incorporating the 2001 revision to the national consensus standard NFPA 805 into Title 10 of the *Code of Federal Regulations* (10 CFR) 50.48(c) by reference through Staff Requirements Memorandum (SRM)-SECY-04-0233, “Proposed Rulemaking—Post-Fire Operator Manual Actions,” dated May 11, 2004. The NRC published the rule on June 16, 2004, and it became effective on 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 the Shearon Harris Nuclear Power Plant (Shearon Harris) and Oconee Nuclear Station (Oconee), respectively, to become pilot plants for the transition to NFPA 805.

The NRC issued regulatory guidance for licensees adopting NFPA 805 in Regulatory Guide (RG) 1.205, “Risk-Informed, Performance-Based Fire Protection for Existing Light-Water Nuclear Power Plants,” in May 2006. The NRC revised this guidance to incorporate lessons learned from its license amendment reviews for the pilot plants and issued Revision 2 in December 2009. Also, the staff endorsed the industry proposal to establish a frequently asked questions 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. However, Monticello Nuclear Generating Plant and Nine Mile Point Nuclear Station Unit 2 have since withdrawn their intent to adopt NFPA 805, thus reducing the number of plants that are adopting NFPA 805 from 51 to 49.

<b>STEPS TO CLOSURE</b>	<b>DUE CY QUARTER</b>
<b>Establish Regulatory Foundation</b>	
NFPA 805 is issued.	Complete: January 2001
The NRC issues 10 CFR 50.48(c).	Complete: June 2004
<b>Structure for Enforcement</b>	
New enforcement policy for NFPA 805 under 10 CFR 50.48, "Fire Protection," provides a 2-year enforcement discretion period.	Complete: June 2004
The staff revises the NFPA 805 enforcement policy to address licensee budgetary cycles to the end of 2005 for existing noncompliances.	Complete: January 2005
The staff revises the NFPA 805 enforcement policy to provide a 3-year enforcement discretion period.	Complete: April 2006
The Commission approves the revised enforcement discretion policy, thus allowing discretion to extend 6 months past the issuance of the second pilot plant's SER.	Complete: September 2008
<b>Develop Implementation Guidance</b>	
The NRC and the Electric Power Research Institute (EPRI) jointly issue NUREG/CR-6850, "EPRI/NRC-RES Fire PRA Methodology for Nuclear Power Facilities."	Complete: September 2005
The Nuclear Energy Institute (NEI) issues industry implementation guidance NEI 04-02, "Guidance for Implementing a Risk-Informed, Performance-Based Fire Protection Program under 10 CFR 50.48(c)," Revision 1.	Complete: September 2005
The staff issues RG 1.205 as guidance for plants adopting NFPA 805.	Complete: May 2006
The staff issues a draft of Section 9.5.1.2, "Risk-Informed, Performance-Based Fire Protection Program," of Chapter 9, "Auxiliary Systems," of NUREG-0800, "Standard Review Plan for the Review of Safety Analysis Reports for Nuclear Power Plants: LWR Edition," for public comment.	Complete: March 2009
The staff completes the triennial procedure for pilot testing.	Complete: March 2009
The staff issues draft RG 1.205 for public comment.	Complete: April 2009

The staff clarifies NUREG/CR-6850 to include the current issues identified through the frequently asked questions program.	Complete: December 2009
The staff issues a revised RG 1.205 and the standard review plan for NFPA 805 implementation.	Complete: December 2009
<b>Validate Implementation</b>	
Duke Energy sends the first letter of intent (Oconee).	Complete: February 2005
Progress Energy sends the second letter of intent (Shearon Harris).	Complete: June 2005
The NRC receives the pilot plant LAR for Shearon Harris.	Complete: May 2008
The NRC reviews the pilot plant SER for Oconee.	Complete: June 2008
<b>Final Closure</b>	
The staff issues the pilot plant SER (Shearon Harris).	Complete: June 2010
The staff issues the pilot plant SER (Oconee).	<i>Complete: December 2010</i>

**Task 2      Close Out Hemyc and MT Electrical Raceway Fire Barrier System (ERFBS) Issues 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**      Closure is achieved when the staff issues a report documenting the closeout of Hemyc and MT barrier issues.

**Status**      The staff completed this task in May 2010.

**Background**      To meet fire protection regulations, licensees often installed an ERFBS to achieve the required separation of redundant trains of cables and equipment located in the same room or fire area. The NRC found that two of these systems may be nonconforming and issued Generic Letter (GL) 2006-03, "Potentially Nonconforming Hemyc and MT Fire Barrier Configurations," dated April 10, 2006. GL 2006-03 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 CY 2007, the NRC had accepted all responses to GL 2006-03 and had approved all the licensing actions to address Hemyc issues of non-NFPA 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. Task 2 has been closed based on the issuance of the December 17, 2008, memorandum that documents the closeout of Hemyc and MT fire barrier issues.

Following the completion of this task, in May 2010, the NRC staff finalized NUREG-1924, "Electric Raceway Fire Barrier Systems in U.S. Nuclear Power Plants," to document the history and to provide an overview of the use of electrical raceway fire barriers at U.S. nuclear power plants.

<b>STEPS TO CLOSURE</b>	<b>DUE CY QUARTER</b>
<b>Establish Regulatory Foundation</b>	
The staff issues Section III.G, "Fire Protection of Safe Shutdown Capability," of 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."	Complete: January 1980
<b>Structure for Enforcement</b>	
No enforcement discretion exists for barrier issues.	Not applicable
<b>Develop Implementation Guidance</b>	
The staff issues Information Notice (IN) 2005-07, "Results of HEMYC Electrical Raceway Fire Barrier System Full Scale Fire Testing."	Complete: April 2005
The staff issues GL 2006-03.	Complete: April 2006
<b>Validate Implementation</b>	
The staff responds to all GL 2006-03 information requests.	Complete: December 2007
The staff confirms closure through inspections related to GL 2006-03 (Hemyc and MT).	Complete: December 2008
<b>Final Closure</b>	
The staff issues final closeout documentation.	Complete: December 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 when the staff completes the validation of an application of the circuit resolution methodology. The NRC considers the review and approval of the subsequent use of the circuit failure resolution methodology by individual licensees to be routine staff activities.

**Status**            The staff completed this task in October 2010.

**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. These rules include an important requirement to protect redundant equipment and cables necessary to place the plant in a safe-shutdown state and 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 require clarification 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.

The completion of Task 3 involved the validation of the implementing guidance for fire-induced circuit failures described in RG 1.189, "Fire Protection for Nuclear Power Plants," Revision 2, issued October 2009. RG 1.189 endorses portions of the implementing guidance in NEI 00-01, "Guidance for Post-Fire Safe Shutdown Circuit Analysis," Revision 2, issued January 2005, for fire-induced circuit failures. The NRC staff validated the guidance with inspections at Millstone Power Station and Vogtle Electric Generating Plant. Based on the results of those inspections, the staff is confident that the guidance is sufficient for licensees to implement. As with any complex technical issue, the staff expects to receive implementation issues from licensees and to disposition these issues. The disposition of implementing issues does not affect the NRC staff's conclusion that it has stabilized the regulatory framework.

<b>STEPS TO CLOSURE</b>	<b>DUE CY QUARTER</b>
<b>Establish Regulatory Foundation</b>	
S. Collins (NRC) issues a letter to R. Beedle (NEI) on spurious actuations.	Complete: March 1997
<b>Structure for Enforcement</b>	
The staff issues Enforcement Guidance Memorandum (EGM) 98-002, "Disposition of Violations of Appendix R, Sections III.G and III.L, Regarding Circuit Failures."	Complete: March 1998
The staff issues an updated EGM, including Commission direction for fire-induced circuit failures.	Complete: May 2009
<b>Develop Implementation Guidance</b>	
EPRI and NEI complete circuit failure testing at Omega Point Laboratories, Inc., Elmendorf, TX.	Complete: June 2001
The staff and industry publish (through EPRI) EPRI Report No. 1006961, "Spurious Actuation of Electrical Circuits Due to Cable Fires: Results of an Expert Elicitation."	Complete: May 2002
The staff issues Regulatory Issue Summary (RIS) 2004-03, "Risk-Informed Approach for Post-Fire Safe-Shutdown Circuit Inspections," Revision 1.	Complete: December 2004
Industry publishes NEI 00-01.	Complete: January 2005
The staff issues RIS 2005-30, "Clarification of Post-Fire Safe-Shutdown Circuit Regulatory Requirements."	Complete: December 2005
The commission issues SRM-SECY-2006-0196, "Issuance of Generic Letter 2006-xx, 'Post-Fire Safe-Shutdown Circuits Analysis Spurious Actuations.'"	Complete: December 2006
The staff completes additional testing for RIS 2004-03 and issues NUREG/CR-6931, "Cable Response to Live Fire (CAROLFIRE)," Volume 1, "Test Descriptions and Analysis of Circuit Response Data"; Volume 2, "Cable Fire Response Data for Fire Model Improvement"; and Volume 3, "Thermally-Induced Electrical Failure (THIEF) Model."	Complete: April 2008
The staff transmits SECY-2008-0093, "Resolution of Issues Related to Fire-Induced Circuit Failures," to the Commission for action.	Complete: June 2008
The staff issues a draft of RG 1.189 for comment.	Complete: April 2009

The staff publishes the RIS and attached draft RG clarification of circuit expectations.	Determined not to be needed
Industry revises NEI 00-01, Revision 2.	Complete: June 2009
The NRC issues the Revision 2 of RG 1.189 for fire-induced circuit failures.	Complete: November 2009
<b>Validate Implementation</b>	
The staff establishes a method to validate the disposition of circuit issues.	Complete: December 2009
The staff informs the Commission of the status of circuit closure.	Complete: August 2009
Licensees begin work to resolve circuit issues.	Complete: December 2009
<b>Final Closure</b>	
The staff completes the validation of the circuit issue disposition method.	Complete: October 2010

**Task 4      Stabilize Regulatory Infrastructure to Resolve Postfire Operator Manual Action (OMA) Issues**

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

**Definition Of Closure**      Closure is achieved when the regulatory infrastructure is in place and when the licensees submit LARs or exemption requests or when they complete modifications that validate the effectiveness of the infrastructure. The NRC considers the review and approval of those applications to be routine staff activities.

**Status**      The staff completed this task in October 2010.

**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 provision of these rules was the protection of redundant equipment and cables required to place the plant in a safe-shutdown state. In areas where redundant equipment could not be separated, the NRC permitted licensees, under certain conditions, to use postfire OMAs to mitigate the effects of the fire.

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

The NRC issued enforcement discretion for licensee-identified unapproved postfire OMAs with the intention of giving licensees an opportunity to find and correct unapproved postfire OMAs. This discretion provided a period of time for licensees to self-identify unapproved postfire OMAs and also allowed them time to bring those unapproved postfire OMAs into compliance without the NRC taking enforcement action. The NRC expects licensees to resolve the unapproved postfire OMAs through reanalysis, procedure changes or modifications, or through a request for NRC approval. 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 the NRC staff in reviewing postfire OMA applications under conditions permitted by the agency. NUREG-1852 is publicly available to allow licensees to examine the factors that the NRC staff will review.

The enforcement discretion for manual actions related to single spurious actuations described in EGM 07-004, "Enforcement Discretion for Post-Fire Manual Actions Used as Compensatory Measures for Fire-Induced Circuit Failures," dated June 30, 2007, ended on March 6, 2009, for plants that did not have exemptions or had not submitted license amendments to the NRC for review.

The staff reviewed the completion of Task 4 as part of the inspections at Millstone and Vogtle. The inspections concluded that the NRC had stabilized the regulatory framework in a manner that provided licensees with sufficient information to properly disposition the use of postfire OMAs at their stations.

<b>STEPS TO CLOSURE</b>	<b>DUE CY QUARTER</b>
<b>Establish Regulatory Foundation</b>	
The Commission issues SRM-SECY-04-0233.	Complete: December 2004
The staff issues "Fire Protection Program—Post-Fire Operator Manual Actions," in the <i>Federal Register</i> (FR) (71 FR 11169; March 1, 2005); the proposed rule is withdrawn.	Complete: March 2005
<b>Structure for Enforcement</b>	
The staff issues enforcement discretion for OMAs as part of EGM 07-004 for OMAs; enforcement discretion ends March 2009.	Complete: June 2007
<b>Develop Implementation Guidance</b>	
The staff publishes RIS 2006-10.	Complete: June 2006
The staff publishes NUREG-1852.	Complete: October 2007
<b>Validate Implementation</b>	
Licensees complete corrective actions, LARs, or requests for exemptions.	Complete: March 2009
The staff develops a plan to validate the effectiveness of the closure of OMA issues for utilities that are not transitioning to NFPA 805 and that do not have an active licensing action.	Complete: December 2009
The staff validates the effectiveness of the infrastructure by completing a review of one licensee's resolution of the issue.	Complete: October 2010
<b>Final Closure</b>	
The infrastructure is stabilized and validated.	Complete: October 2010

**Task 5 Assess Regulatory Effectiveness**

**Objective** To 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 when the baseline is established. The NRC considers the ongoing implementation of the process to be a routine staff activity.

**Status** The staff completed this task in the fourth quarter of CY 2009.

**Background** On July 29, 2008, the Commission directed the staff in SRM M080717, "Briefing on Fire Protection Issues," to provide it 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 types of all open fire protection deficiencies that were compensated and the manner of compensation used in 2007.

U.S. Government Accountability Office (GAO) 08-747, "Nuclear Safety: NRC's Oversight of Fire Protection at U.S. Commercial Nuclear Reactor Units Could Be Strengthened," issued June 2008, includes 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 NRC Chairman responded to GAO 08-747 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.

The NRC staff considers this an ongoing activity and will continue to assess the effectiveness of the fire protection framework through monitoring until such time as the staff has determined that additional monitoring is no longer warranted. Currently, the monitoring is documented in a publicly available memorandum from the NRC Office of Nuclear Regulatory Research. The most recent memorandum was dated April 5, 2011.

STEPS TO CLOSURE	DUE CY QUARTER
<b>Commission Commitments</b>	
The staff determines the metric for measuring the effectiveness of ongoing improvements.	Complete: December 2008
The staff develops a metric monitoring methodology.	Complete: March 2009
<b>Final Closure</b>	
The staff collects information and establishes monitoring.	Complete: November 2009

**Task 6      Develop Training on Historical Lessons Learned from Fire Protection**

**Objective**      To train appropriate staff on the important historical lessons learned from the fire protection issue resolution activities since the establishment of Appendix R to 10 CFR Part 50.

**Definition Of Closure**      Closure is achieved when a lessons learned review is completed, when lessons are incorporated into a knowledge management or training program, and when the adequacy of that program is validated using a pilot application. The NRC considers ongoing staff awareness and training to be part of routine staff activities.

**Status**      The staff completed this task in the second quarter of CY 2011.

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

The NRC staff researched the historical lessons learned from the implementation of fire protection issues at the NRC and prepared the list of lessons learned. Following the pilot training to the Office of Nuclear Reactor Regulation’s Division of Risk Assessment, improvements to the training were incorporated into the training. The lessons learned as a result of performing this review will continue to be shared with agency staff. Based on the actions taken by NRC staff, this task is closed.

<b>STEPS TO CLOSURE</b>	<b>DUE CY QUARTER</b>
<b>Perform Lessons Learned Evaluation</b>	
The staff compiles the history.	Complete: March 2009
The staff develops lessons learned.	<i>Complete: April 2011</i>
<b>Develop Knowledge Management/Training Tool</b>	
The staff develops training on the lessons learned.	<i>Complete: May 2011</i>
The staff conducts pilot training on the fire protection lessons learned.	<i>Complete: May 2011</i>
<b>Final Closure</b>	
The staff incorporates lessons learned from the pilot training.	<i>Complete: May 2011</i>

**Task 7      Develop an 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 when procedures and plans are in place for the periodic updating of that database. The NRC considers periodic updates to the database to be a routine staff activity.

**Status**      The staff completed this task in the second quarter of CY 2010.

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

The NRC Chairman responded to GAO 08-747 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.”

<b>STEPS TO CLOSURE</b>	<b>DUE CY QUARTER</b>
<b>Commission Commitments</b>	
The staff collects data on fire protection exemptions.	Complete: June 2009
The staff completes the development of the database.	Complete: December 2009
<b>Final Closure</b>	
The staff establishes procedures for updates.	Complete: April 2010

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

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

**Definition Of Closure**      Closure is achieved when the review is complete and when appropriate actions are taken to address any fire protection regulatory issues identified. The NRC considers addressing any additional issues identified to be a routine staff activity.

**Status**      The staff completed this task in the third quarter of CY 2009.

**Background**      Since the 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 that 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 an enhanced 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.

<b>STEPS TO CLOSURE</b>	<b>DUE CY QUARTER</b>
<b>Commission Commitments</b>	
The staff completes the review.	Complete: April 2009
The staff evaluates responses.	Complete: July 2009
<b>Final Closure</b>	
The staff identifies issues and develops recommendations.	Complete: July 2009