

DRAFT SUPPORTING STATEMENT
FOR
FIRE PROTECTION

10 CFR 50.48, 10 CFR 50.48(a), 10 CFR 50.4(c), 10 CFR 50.48(f),
10 CFR 50.48(f)(2), 10 CFR 50.48(f)(3) and 10 CFR 50 Appendix R

DESCRIPTION OF THE INFORMATION COLLECTION

10 CFR 50.48 requires certain provisions for fire protection in operating and permanently shutdown nuclear power plants. This regulation upgrades fire protection at nuclear power plants licensed to operate prior to January 1, 1979, by requiring resolution of certain contested generic issues in fire protection safety evaluation reports. The program on which this part is dependent is Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," which makes requirements of certain items of fire protection guidance that have been used by the staff since the Browns Ferry fire on March 22, 1975, to evaluate the adequacy of fire protection programs at operating nuclear power plants.

A. JUSTIFICATION

1. Need for and Practical Utility of the Collection of Information

10 CFR 50.48(a) requires that each operating nuclear power plant have a fire protection plan that satisfies Criterion 3 of 10 CFR 50 Appendix A. This fire protection plan must describe the overall fire protection program for the facility, identify the various positions within the licensee's organization that are responsible for the program, state the authorities that are delegated to each of these positions to implement those responsibilities, and outline the plans for fire protection, fire detection and suppression capability, and limitation of fire damage. The plan must also describe specific features necessary to implement the program described above, such as administrative controls and personnel requirements for fire prevention and manual fire suppression activities, automatic and manually operated fire detection and suppression systems, and the means to limit damage to structures, systems, and components important to safety so that the capability to safely shut down the plant is ensured. Licensees shall retain the fire protection plan and each change to the plan as a record until the Commission terminates the reactor license and shall retain each superseded revision of the procedures for three years from the date it was superseded. These requirements will not affect nuclear power plants that were licensed to operate prior to January 1, 1979, and that already have the 10 CFR 50 Appendix R requirements identified in their safety evaluation reports. 10 CFR 50.48(a) does not affect presently licensed plants if they are expected to have already completed these requirements with their approved fire protection programs. 10 CFR 50.48(a) will apply to new licensees as their applications are submitted to the NRC. No special requirement for a format or form is imposed with this rule. Each licensee is free to develop the method and forms that best suits its individual operation.

A new 10 CFR 50.48(c) was implemented in 2004 to provide licensees with the option to transition their fire protection programs to ones based on National Fire Protection Association Standard NFPA 805, "Performance-Based Standard for Fire Protection for Light Water Electric Generating Plants, 2001 Edition" [69 FRN 33536, June 16, 2004]. By May

2006, licensees covering 40 separate nuclear units have submitted letters of intent to transition their traditional fire protection programs to NFPA 805, and licensees might reasonably be expected to submit similar letters for an additional 20 separate units in the foreseeable future. Therefore, the ultimate expectation is that 60 nuclear units will adopt and need to maintain performance-based fire protection programs under 10 CFR 50.48(c). The transition will affect approximately 20 plants annually starting in 2008.

10 CFR 50.48(f) requires licensees that have submitted 10 CFR 50.82(a)(1) certifications to maintain a fire protection program to address the potential for fires which could cause the release or spread of radioactive materials.

10 CFR 50.48(f)(2) requires that the fire protection program be assessed by the licensee on a regular basis and revised, as appropriate, during decommissioning.

10 CFR 50.48(f)(3) permits the licensee to make changes to the fire protection program without prior NRC approval if the changes do not reduce the effectiveness of fire protection for facilities, systems, and equipment which could result in a radiological hazard.

10 CFR 50 Appendix R, "Fire Protection Program for Nuclear Power Facilities Operating Prior to January 1, 1979," requires manual fire fighting capability at each plant. It states that a fire brigade of at least five persons on each shift shall be maintained at each nuclear power plant unit. In addition, 10 CFR 50 Appendix R requires certain minimum levels of training for each brigade member, and training and drills for each brigade as a team. 10 CFR 50 Appendix R also requires maintaining certain records of the training and drills provided for the brigades and brigade members. The recordkeeping requirements were agreed to by licensees as part of the license amendments that resulted from the staff's fire protection review of each plant. The two specific recordkeeping requirements, as committed to by licensees, are:

a. Section III.I.3.d

At one-year intervals, a randomly-selected, unannounced, drill must be critiqued by qualified individuals independent of the licensee's staff. A copy of the written report from such individuals shall be available for NRC review and shall be retained as a record as specified in Section III.I.4 of 10 CFR 50 Appendix R.

b. Section III.I.4

Individual records of training provided to each fire brigade member, including drill critiques, shall be maintained for at least 3 years to ensure that each member receives training in all parts of the training program. These records of training shall be available for NRC review. Retraining or broadened training for fire fighting within buildings shall be scheduled for all those brigade members whose performance records show deficiencies. Requirements to establish procedures and controls contained in 10 CFR 50 Appendix R, Sections II.C.7 and III.K, have been completed by all affected licensees.

Overall, sixty nuclear units expected to transition to performance-based fire protection programs under 10 CFR 50.48(c) with 40 during the clearance period. These will comply with requirements under 10 CFR 50 Appendix R, Section III.G, as part of their new fire protection programs. However, of the remaining 44 units, only two are assumed that will need to produce an enhanced response to GL 2006-03, *Potentially Nonconforming Hemyc*

and MT Fire Barrier Configurations; RIS 2005-30, Clarification of Post-Fire Safe-Shutdown Circuit Regulatory Requirements. (Responses on the part of the NFPA 805 licensees can be assumed to be incorporated into their reporting requirements under Section 50.48©.)

2. Agency Use of Information

These records are required to enable the NRC staff to evaluate the effectiveness of each licensee's fire protection plan, and specifically, each fire brigade training program and issues related to the generic communications.

3. Reduction of Burden Through Information Technology

There are no legal obstacles to reducing the burden associated with this information collection. The NRC encourages respondents to use information technology when it would be beneficial to them. NRC issued a regulation on October 10, 2003 (68 FR 58791), consistent with the Government Paperwork Elimination Act, which allows its licensees, vendors, applicants, and members of the public the option to make submissions electronically via CD-ROM, e-mail, special Web-based interface or other means. It is estimated that approximately 33% of the potential responses are filed electronically.

4. Effort to Identify Duplication and Use Similar Information

There is no duplication of requirements. NRC has in place an ongoing program to examine all information collections with the goal of eliminating all duplication and/or unnecessary information collections.

5. Effort to Reduce Small Business Burden

This regulation does not affect small business.

6. Consequences to Federal Program or Policy Activities if the Collection is Not Conducted or is Conducted Less Frequently

This information is required so that the NRC can determine that licensee fire protection programs are adequate in the event there is a fire emergency. Information related to fire brigade training and drills are collected only at the time of training and when drills are conducted. Other information is collected according to the dictates of the licensees' approved fire protection programs and response requirements as stipulated in the generic communications. The frequency cannot be further reduced. The health and safety of the public could be affected adversely if this information is not available as specified.

7. Circumstances Which Justify Variation from OMB Guidelines

Licensees must retain the fire protection plan until the NRC terminates the license in order to ensure the health and safety of the public.

8. Consultations Outside the NRC

When the NFPA-805 proposed rule was published, a comment was received that the burden had been over-estimated by at least a factor of three. In the final rule, effective in 2004, the burden was re-examined and determined to have been over-estimated by a factor

of four. The burden was adjusted accordingly.

The opportunity for public comment on this information collection has been published in the Federal Register.

9. Payment or Gift to Respondents

Not applicable.

10. Confidentiality of Information

Confidential and proprietary information is protected in accordance with NRC regulations at 10 CFR 9.17(a) and 10 CFR 2.390(b).

11. Justification for Sensitive Questions

This regulation does not request sensitive information.

12. Estimated Industry Burden and Burden Hour Cost

Industry Burden Estimates	No. of Plants Affected	Initial Response		Maintenance and Update	
		Hours/Plant	Recordkeeping Burden (hr)	Hours/Plant	Recordkeeping Burden (hr/yr)
Appendix R: Section III.I.3.d + Section III.I.4	104	0	0	144	14,976
Appendix R: Section III.G -- GL 2006-03	2 ^a	1,200	2,400	0 ^b	0
10 CFR 50.48: Section 50.48(c)	40	695 ^c	27,800	16 ^d	640
10 CFR 50.48: Section 50.48(f)	20	0	0	72	1,440
Total Burden			30,200		17,056

- a. Only two of the 15 plants known to have Hemyc/MT are not planning to adopt NFPA 805. These two are assumed to provide maximal responses, involving 1,200 hours/plant and 2,400 hours recordkeeping.
- b. Assumption that plants will continue at current level of maintenance and update. No increase as a result of GL.
- c. Based on maximum estimates for McGuire units over three years (3,840 hours ÷ 2 units ÷ 3 years = 640 hours/unit-yr) from EPRI TR-1010981, *Transition Process Pilot Report: NEI 04-02 Guidance for Implementing a Risk-Informed, Performance Based Fire Protection Program Under 10 CFR 50.48(c)*, plus weighted estimates for the two plants with enhanced responses to GL 2006-03, i.e., [2*1200 hours]/[44 units] = 55 hours/unit).
- d. Since NFPA 805 grants licensees the ability to perform plant changes without special approval or submittal to the NRC, except where these changes may involve significant increases in risk, and few, if any, such risk-significant changes are anticipated, a maintenance and update burden per plant of 4 hrs/change for 4 changes/yr is assumed.

The estimated burden of 47,256 hours (30,200 + 17,056) is based on the NRC staff's experience. The total estimated cost to industry is \$10,254,552 (\$217/hour x 47,256 hours).

13. Estimate of Other Additional Costs

The quantity of records to be maintained is roughly proportional to the recordkeeping burden and therefore can be used to calculate approximate records storage costs. Based on the number of pages maintained for a typical clearance, the records storage cost has been determined to be equal to .0004 times the recordkeeping burden cost. Therefore, the storage cost for this clearance is estimated to be \$1,425 (16,416 x \$217 x .0004).

14. Estimated Annualized Cost to the Federal Government

a. Initial Response

The NRC staff will expend time to review the information provided by the licensees for the 60 units adopting NFPA 805, pursuant to 50.48(c), and the 2 units with enhanced responses to GL 2006-03, as estimated in the table below.

b. Maintenance and Update

The NRC staff will expend time to review the information provided by the licensees for: (1) the 40 units adopting NFPA 805, pursuant to 10 CFR 50.48(c); (2) the two units with enhanced responses to GL 2006-03; (3) the fire brigade drill and training records at all 104 units, pursuant to 10 CFR 50.48(f); and, (4) records maintained by the 20 permanently shutdown plants, pursuant to 10 CFR 50.48(f), as estimated in the table below. Thus, the total cost to the Government is \$10,333,540 ([39,080 + 8,540 hours] x \$217/hour). This cost is fully recovered by fee assessments to NRC licensees pursuant to 10 CFR 170 and/or 10 CFR 171.

Staff Review Cost Estimates	No. of Plants Affected	Initial Response		Maintenance and Update	
		Hours/Plant	Burden (hr)	Hours/Plant	Burden (hr/yr)
Appendix R: Section III.I.3.d + Section III.I.4	104	0	0	5	520
Appendix R: Section III.G -- GL 2006-03	2 ^e	40	80	0	0
10 CFR 50.48: Section 50.48©	40	975 ^f	39,000	133 ^g	8,000
10 CFR 50.48: Section 50.48(f)	20	0	0	1	20
Total Cost			39,080		8,540

e. Only two of the 15 plants known to have Hemyc/MT are not planning to adopt NFPA 805. These two are assumed to provide maximal responses, requiring 40 staff hours/plant for review.

f. Based on estimate from July 2004 Briefing by John Hannon, Chief, Plant Systems Branch, to NRC Executive Team regarding NFPA 805.

g. Based on assuming 400 staff hours/plant every three years, including Regional triennial inspections, i.e., 400/3 = 133.33 staff-hours/plant-year, shown as 133 in table above. Note that 133.33 is used in the burden calculation.

15. Reasons for Changes in Burden or Cost

The estimated burden has changed from 16,416 to 47,256 hours to reflect the number of plants transitioning to NFPA 805 and the remainder responding to the issuance of NRC GL 2006-03 (see Item 12 and the footnotes for numerical assumptions. In addition, the hourly rate has increased from \$156 to \$217.

16. Publication for Statistical Use

17. The collected information is not published for statistical purposes.

Reason for Not Displaying the Expiration Date

The requirement is contained in a regulation. Amending the Code of Federal Regulations to display information that, in an annual publication, could become obsolete would be unduly burdensome and too difficult to keep current.

18. Exceptions to the Certification Statement

None.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Not applicable.