

OMB SUPPORTING STATEMENT FOR
Final Rule, 10 CFR 50.48, "Fire Protection,
Voluntary Adoption of NFPA 805 Fire Protection Requirements"

(3150-0011)

Description of the Information Collection

The Nuclear Regulatory Commission (NRC) is amending its regulations in Part 50 to permit existing light water reactor licensees to voluntarily adopt National Fire Protection Association (NFPA) Standard 805 "Performance-based Standard for Fire Protection for Light Water Reactor Electric Generating Plants, 2001 Edition" (NFPA 805) as an alternative set of risk-informed and performance-based fire protection requirements in lieu of existing deterministic fire protection requirements. This rule will impose new recordkeeping and reporting requirements.

The final rule adds Section 50.48(c) to 10 CFR Part 50 to incorporate NFPA 805 into the NRC's regulations by reference with certain exceptions, modifications and supplementation, and requires a license amendment for adoption of the NFPA 805 Standard or for the use of alternatives to NFPA 805. The final rule states that a fire protection program that complies with NFPA 805 will be considered to meet the requirements of 50.48(f) for a fire protection program.

A. Justification

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

The Enforcement Discretion Policy for this rule provides for licensees to submit a Letter of Intent to transition to compliance with the fire protection requirements of NFPA 805. The purpose of this provision is to allow licensees to notify the NRC that they intend to begin the assessment process required by this rule and for the NRC to begin enforcement discretion as provided in the Enforcement Discretion Policy. The Enforcement Discretion Policy also provides for licensees to submit a Letter of Intent canceling their transition to NFPA 805 compliance. While this provision is considered necessary, no such cancellations are expected.

Sections 50.48(c)(2)(vii) and (c)(4) of this rule require licensees to obtain approval of a license amendment for alternatives to compliance with NFPA 805 or for the use of risk-informed and performance-based approaches to the fundamental program elements and minimum design criteria in Chapter 3. The purpose of this requirement is to ensure that risk-informed and performance-based alternatives to NFPA 805 meet the nuclear safety and radiological release performance criteria in Chapter 1 of NFPA 805, maintain safety margins, and maintain fire protection defense-in-depth.

Section 50.48(c)(3)(i) of this rule provides a means for licensees to adopt NFPA 805, as excepted, as an alternative means of meeting existing fire protection requirements (10 CFR 50.48(a) and GDC 3). The existing requirements for which NFPA 805 would be an alternative are: 50.48(b) for plants licensed before January 1, 1979; fire protection license conditions for plants licensed to operate after January 1, 1979; and would be an acceptable fire protection program for

50.48(f) for light water reactor plants whose licensees have submitted the certifications of permanent cessation of operations required under 10 CFR 50.82(a)(1). The risk-informed and performance-based structure of NFPA 805 reduces the need for licensees to submit fire protection exemption or deviation requests, and results in savings of licensee and NRC resources over time. Section 50.48(c)(3)(i) requires licensees to submit an application for a license amendment requesting NRC approval to comply with the NFPA 805 fire protection requirements. The license amendment request is required to identify orders and license conditions that must be revised or superseded and any necessary revisions to the plant technical specifications and the bases therefore. This license amendment process ensures that the fire protection requirements pertaining to each plant are clearly identified.

Section 50.48(c)(3)(ii) requires that, before changing its fire protection program or modifying its nuclear power plant, the licensee completes its implementation of the methodology in Chapter 2 of NFPA 805 (including all required evaluations and analyses) and, upon completion, modifies the fire protection plan required by 10 CFR 50.48(a) to reflect the licensee's decision to comply with NFPA 805. The purpose of this *a priori* plant-wide review requirement is to ensure that all cognizant parties reviewing a licensee's revised fire protection program can understand the plant fire protection status with respect to NFPA 805. This requirement ensures the licensee establishes an appropriate level of knowledge of the plant fire protection licensing basis for compliance with NFPA 805.

Section 50.48(f) provides that a fire protection program that complies with NFPA 805 shall be deemed to comply with the requirements of this paragraph. This revision to paragraph 50.48(f) contains no new recordkeeping or information requests but makes clear that licensees who have adopted NFPA 805 may continue to comply with NFPA 805 as they transition into decommissioning.

Sections 2.6 and 2.2.10 of NFPA 805 require licensees to conduct a monitoring program to ensure that the availability and reliability of the fire protection systems and features are maintained at acceptable levels, to assess the performance of the fire protection program in meeting the performance criteria, and to ensure that the assumptions in the engineering analysis remain valid. The methods for monitoring are required to consider plant operating experience and industry operating experience. The monitoring program requires corrective actions be taken if the acceptable levels of availability, reliability or performance are not met. The purpose of the monitoring program requirement is to ensure that the plant fire protection configuration and procedures continue to meet NFPA 805 nuclear safety and radiological release performance criteria, safety margins, and fire protection defense-in-depth characteristics over time.

Sections 2.7.1, 2.7.2 and 2.7.3 of NFPA 805 provide requirements for program documentation, configuration control, and analytical quality. They require the licensee to document and maintain all NFPA 805 analyses and evaluations, including assumptions and results, in an organized manner for future review, throughout the lifetime of the plant. Further, they require the establishment and maintenance of a "fire protection program design basis document" including fire

hazard identification and nuclear safety capability assessment for all fire areas, with references to comprehensive supporting documentation. Lastly, they require an independent review of each analysis, calculation or evaluation, verification and validation of numerical methods, appropriate limitations on use of engineering methods and numerical models, and appropriate qualification and competence of personnel who apply engineering analyses and numerical models. The purpose of these requirements is to ensure that the analytical origin and safety bases of plant systems, features, and procedures put in place under NFPA 805 may be understood by all cognizant parties.

2. Agency Use of the Information

The documentation and reporting required by the final rule provide the specific information required by the NRC: (1) to ensure that the applicable fire protection requirements pertaining to each licensee complying with NFPA 805 fire protection requirements are clearly understood by the NRC and the licensee; (2) to ensure that the analytical origin and safety bases of plant procedures and features put in place under NFPA 805 are clearly understood; (3) to ensure that the post-NFPA 805 changeover fire protection licensing basis is logical, technically adequate, and internally consistent; (4) to provide an appropriate level of licensee knowledge of the plant licensing basis for complying with NFPA 805; (5) to ensure that risk-informed and performance-based alternatives used by licensees are adequate to meet the NFPA 805 nuclear safety and radiological release performance criteria, maintain safety margins, and maintain fire protection defense-in-depth; and (6) to ensure that the plant fire protection configuration and procedures continue to meet the NFPA 805 nuclear safety and radiological release performance criteria, safety margins, and fire protection defense-in-depth characteristics over time.

3. Reduction of Burden Through Information Technology

There are no legal obstacles to licensees reducing the burden associated with this information collection requirement through the use of information technology. The use of computers, electronic information submittal, and e-mail is encouraged.

4. Effort to Identify Duplication and Use Similar Information

The Information Requirements Control Automated System (IRCAS) was searched for duplication, and none was found.

5. Effort to Reduce Small Business Burden

The NRC has determined that the affected entities are not small entities or businesses as those terms are used in the Regulatory Flexibility Act.

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

If information collection requirements associated with fire protection were not conducted, or were conducted less frequently, the U.S. Nuclear Regulatory Commission would not be able to fulfill its commercial light water reactor oversight responsibilities under the Atomic Energy Act of 1954 or the Energy Reorganization Act of 1974. Specifically, the NRC would find it difficult to determine whether commercial light water reactor licensees that choose to comply with NFPA 805 are conducting their activities so as to ensure adequate public health and safety, maintain safety margins, and maintain fire protection defense-in-depth.

7. Circumstances Which Justify Variation from OMB Guidelines

The records required by the final rule must be maintained until the license is terminated to ensure that the necessary information described in Section 1 above is available for review by the U.S. Nuclear Regulatory Commission to ensure compliance with health and safety, safety margin and fire protection defense-in-depth requirements.

8. Consultation Outside the NRC

Draft rule language and the NFPA 805 Rulemaking Plan were posted on the NRC public Rulemaking Forum web site for public comment and noticed in the *Federal Register* in December, 2001. Updated draft proposed rule language was posted on the NRC public Rulemaking Forum web site in April and again in May, 2002. No comments on the reporting and recordkeeping requirements were received in response to any of these communications.

The opportunity for public comment on the proposed rule and its information collection burdens was published in a *Federal Register* notice November 1, 2002 (67 FR 66578). A comment was received on the reporting and recordkeeping requirements indicating that the burden was over-estimated by a factor of at least three. The burden estimate was found to actually have been over-estimated by a factor of approximately four as a result of combining the estimated costs of four plants adopting NFPA 805 annually. The OMB clearance package was revised accordingly to correct the error.

9. Payment or Gift to Respondents

Not applicable.

10. Confidentiality of Information

Not Applicable

11. Justification for Sensitive Questions

None.

12. Estimated Burden and Burden Hour Cost

The net total licensee burden and cost increase for 10 CFR Part 50 is 49,116 hours and \$7,662,096 per year for reporting and recordkeeping (given the NRC staff estimates of four plants changing to NFPA 805 fire protection requirements per year and two licensees requesting to use alternatives to NFPA 805 per year). Although this number cannot be estimated with any certainty, the NRC staff estimates that, within approximately 10 years from publication of the final rule, 25 plants will have changed over to NFPA 805 fire protection requirements (with 12 having changed over during the first three years). Under this estimate, the remaining plants are not expected to change over to these voluntary requirements during their operating lifetimes.

13. Estimate of Other Additional Costs

There are no other additional costs.

14. Estimated Annualized Cost to the Federal Government

As stated in paragraph 12 above, an NRC staff estimate is that 25 licensees may ultimately adopt NFPA 805 fire protection requirements. Each license amendment request for transition to NFPA 805 fire protection requirements will be examined for administrative completeness (e.g., an adequacy review and appropriate agency action on the licensee listing of orders, license conditions, and technical specifications which must be revised or superseded). The analyses supporting initial transition to NFPA 805 fire protection requirements, and the documents subject to program documentation and configuration control, will be reviewed during the current routine inspection process and, therefore, will incur minimal incremental cost to the government. The technical bases for plant modifications and procedure changes, as well as licensee decisions that existing fire protection configurations and procedures remain adequate under the new fire protection requirements, will not need to be reviewed during the license amendment review process. The review costs would be fully recovered through fee assessments to licensees pursuant to 10 CFR Parts 170 and/or 171.

15. Reasons for Changes in Burden or Cost

The NRC is offering to licensees what it believes to be a less prescriptive, more flexible, more risk-informed, and more technologically advanced means of achieving light water reactor fire safety. The NRC anticipates that, over the operating life of each adopting reactor plant, fewer requests for exemptions and deviations (under 10 CFR 50.12) will be submitted by reactor licensees that have changed over to NFPA 805 fire protection requirements. [Currently, the NRC staff reviews approximately 12 fire protection exemption or deviation requests

each year for which licensees expend an average of 400 burden hours each.] This burden hour reduction, plus cost reductions associated with reduced maintenance, operating and training costs for fire protection features which have been determined to be unnecessary, are expected to induce licensees to make the transition to NFPA 805 fire protection requirements.

The burden and cost reflected for the final rule clearance package has been revised downwards from 183,956 hours at a cost of \$28,697,136 to 49,116 hours at a cost of \$7,662,096, based on an industry comment that the burden had been over-estimated at least four-fold.

16. Publication for Statistical Use

None.

17. Reason for not Displaying the Expiration Date

The requirement will be 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

Not applicable.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Statistical methods are not used in the collection of information.

Table 1 Annual Reporting Requirements - 10 CFR Part 50

<u>Section</u>	<u>Report</u>	<u>Number of Respondents¹</u>	<u>Responses Per Respondent</u>	<u>Total Responses</u>	<u>Burden Per Response</u>	<u>Total Annual Burden Hours</u>	<u>Cost @ \$156/Hr</u>
Enforcement Discretion Policy	Letter of Intent To Adopt NFPA 805	4	1	4	40	160	24,960
Enforcement Discretion Policy	Letter of Intent To Cancel Adoption of NFPA 805	None Expected	-	-		-	-
50.48(c)(2)(vii) and 50.48(c)(4)	Alternatives to Compliance License Amendment Request (submitted under 10 CFR 50.90)	2	1	2	526	1052	164,112
50.48(c)(3)(i)	NFPA 805 Adoption License Amendment Request (submitted under 10 CFR 50.90)	4	1	4	526	2104	328,224
TOTAL FOR PART 50 REPORTING		6	2	10		3316	\$517,296

(1) It is estimated that four Letters of Intent and four license amendments to comply with NFPA 805 fire protection requirements will be submitted to the NRC each year. It is estimated that two alternatives to NFPA 805 fire protection requirements license amendments will be submitted to the NRC each year. No Letters of Intent to cancel compliance with NFPA 805 are expected.

Table 2A One Time Recordkeeping Requirements (Annualized) - 10 CFR Part 50

<u>Section</u>	<u>Record</u>	<u>Number of Recordkeepers</u>	<u>Hours per Recordkeeper</u>	<u>Total Annual Burden Hours</u>	<u>Cost@ \$156/Hr</u>
50.48(c)(2)(vii) and 50.48(c)(4)	NFPA 805 Alternative Methodology or Analytical Approach Implementation	2	400	800	124,800
50.48(c)(3)(ii)	NFPA 805 Methodology- Implementation (Fire Protection Configuration Re-analysis)	4	11,250	45,000	7,020,000
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NET TOTAL FOR PART 50 ONE TIME RECORDKEEPING:		6	11,650	45,800	\$7,144,800

Table 2B Ongoing Annual Recordkeeping Requirements - 10 CFR Part 50¹

		<u>Total Number of Recordkeepers</u>	<u>Hours per Recordkeeper</u>	<u>Total Annual Burden Hours</u>	<u>Cost@ \$156/Hr</u>
805 Sections 2.7.1, 2.7.2 and 2.7.3	Program Documen- tation, Reactor Plant Configuration Control, and Analytical Quality	25 (25)	5000 (5000)	125,000 (125,000)	19,500,000 (19,500,000)
805 Sections 2.6 and 2.2.10	Monitoring Program for Availability and Reliability, Program Performance, and Assumption Validity	25 (25)	2000 (2000)	50,000 (50,000)	7,800,000 (7,800,000)
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NET TOTAL FOR PART 50 ONGOING RECORDKEEPING:		0	0	0	\$0

- (1) The level of effort to accomplish the fire protection program documentation, configuration control, analytical quality and monitoring requirements under NFPA 805 is roughly equivalent to the level of effort currently expended by licensees to manage their current fire protection programs (reference: NRC Information Notice 77-002). Therefore, the added burden of NFPA 805 in these areas is approximately equivalent to the relieved burden, for no incremental cost associated with the rule-making. (Relieved burden shown in parenthesis).

TOTAL INCREASE IN BURDEN/COST FOR 10 CFR PART 50 (Table 1 and Tables 2A and 2B): 49,116 hours/\$7,662,096