

OMB SUPPORTING STATEMENT FOR PROPOSED RULE  
10 CFR PART 50, APPENDIX R  
FIRE PROTECTION MANUAL ACTIONS  
(3150-0011)

Description of the Information Collection

The NRC is proposing to amend its fire protection regulations in 10 CFR Part 50, Appendix R, Paragraph III.G.2, to allow the use of manual actions by nuclear power plant operators to achieve hot shutdown conditions in the event of fires in certain plant areas, provided the actions are evaluated against specific criteria that have been determined to be acceptable by the NRC.

Nuclear power plant fire protection regulations and associated guidelines prescribe fire protection features to ensure that at least one means of achieving and maintaining safe shutdown conditions will remain available during or after any postulated fire. The fire protection regulations applicable to currently licensed nuclear power plants depend on when the plant was licensed. The requirements of Appendix R, Paragraphs III.G, were backfit onto all reactors licensed to operate prior to January 1, 1979, by 10 CFR 50.48(b). The requirements of Appendix R, Paragraphs III.G, do not apply to reactors licensed to operate on or after January 1, 1979; instead, the requirements of GDC-3 and 10 CFR 50.48(a) apply.

10 CFR Part 50, Appendix R, Paragraph III.G.2 specifies three acceptable methods for protecting the safe shutdown capability of one of the redundant shutdown trains from a fire when located in the same fire area as its redundant train by enclosure or separation of cables and equipment. During recent inspections of licensee fire protection programs, concerns have arisen among NRC staff about licensee compliance with fire protection of redundant safe shutdown systems that are located in the same fire areas. NRC staff believes that instead of pursuing upgrading or replacing the Thermo-Lag fire barriers that were originally installed to comply with Appendix R requirements, many licensees utilized operator manual actions to make available a second train of safe shutdown equipment. Such changes must be approved through the exemption process. Since the fire protection regulations were promulgated, the staff has approved a number of exemptions to the technical requirements of Appendix R for pre-January 1, 1979, plants to permit specific operator manual actions as an acceptable alternative to the fire protection requirements.

Under the proposed rule, the existing fire protection regulations at 10 CFR Part 50, Appendix R, Paragraph III.G.2 would be revised to explicitly permit the voluntary use of operator manual actions in lieu of using fire barrier or separation protection to achieve and maintain safe hot shutdown in the event of a fire where redundant trains are located in the same area. The regulations and associated guidance would include generic acceptance criteria on the use of operator manual actions. Use of operator manual actions would be predicated on the requirement that the area where the fires occur has fire detectors and an automatic fire suppression system installed in the fire area and the manual actions relied upon are consistent with all of the proposed criteria. Records documenting compliance with the new optional criteria would be required to be maintained in accordance with 10 CFR 50.48.

The licensee also has the option of complying with the fire protection requirements by employing one of the other three acceptable methods for fire suppression currently contained in Appendix R, Paragraph III.G.2.

The proposed rule would also clarify that the use of operator manual actions would not require NRC approval provided that compliance with the acceptance criteria is documented and demonstrates that the operator manual actions are feasible, reliable, and do not adversely affect the ability to achieve or maintain safe shutdown. The documentation prepared and maintained by the licensee would include: (1) an analysis for each operator manual action which demonstrates its feasibility and reliability, (2) plant procedures for each operator manual action required to achieve and maintain hot shutdown, (3) appropriate training on these procedures for each operator, (4) assurance that all systems and equipment needed to accomplish each operator manual action are operable and readily accessible prior to implementation, and (5) demonstration that each operator manual action required to achieve and maintain the plant in hot shutdown condition can be accomplished consistent with the analysis in (1) above.

A. JUSTIFICATION

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

Section 50.12

This section specifies that the Commission may, upon application by any interested person or upon its own initiative, grant an exemption from the requirements of 10 CFR Part 50. Because licensees would be allowed to use operator manual actions as specified in the proposed rule without applying for an exemption under 10 CFR Section 50.12, fewer exemption requests from the requirements of 10 CFR Part 50 are expected.

Part 50, Appendix R, III.P

A licensee relying on manual actions must:

2.(a). Prepare an analysis for each operator manual action which demonstrates its feasibility and reliability. The analysis should address all variables that may affect the fire time line, methods to ensure functionality of equipment or cables affected by the fire and needed for hot shutdown, and all equipment and communications needed to accomplish operator manual actions.

2.(b). Prepare and maintain plant procedures for each operator manual action required to achieve and maintain hot shutdown.

2.(d). Demonstrate that the analysis can be relied upon by conducting and documenting time-authenticated walkdowns demonstrating that each operator manual action can be accomplished and implementing corrective actions if the walkdown demonstrates that the operator manual actions are not consistent with the analysis. Corrective actions may require revisions to the procedures and/or analysis.

Section 50.48

Section 50.48(b) requires that licensees assess the fire protection program on a regular basis and revise it as appropriate. The requirement is unchanged and only captures the burden for

the proposed recordkeeping. A licensee must document walkdowns and implement corrective actions for those manual actions that are not consistent with the analysis as required by Appendix R. III.P.2.(d). Each change to the manual actions documentation will be maintained by the licensee until the Commission terminates the license. Each superceded revision of the manual actions will be maintained by the licensee for three years from the date that the procedure was superceded.

2. Agency Use of Information

The analysis and documentation associated with operator manual actions and the required annual demonstrations would be reviewed by the NRC inspection staff to ensure the provision of an adequate level of protection of public health and safety, common defense and security, and the environment.

3. Reduction of Burden Through Information Technology

There are no legal obstacles to reducing the burden associated with this information collection. The NRC encourages licensees to maintain electronic records associated with operator manual actions.

4. Efforts to Identify Duplication and Use Similar Information

The records maintained by licensees associated with operator manual actions would not be duplicated by other Federal information collection requirements and would not be available from any other source.

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 Programs or Policy Activities if the Collection is Not Conducted or is Collected Less Frequently

This information is required so that the NRC can determine that operator manual actions will be adequate in the event of a fire emergency. The analysis of and procedures for each operator manual action will be required only when such an action is implemented or revised. The training and demonstration documentation would be required to ensure the continued effectiveness of operator manual actions. 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

The staff consulted with the Nuclear Energy Institute (NEI) to develop an estimate for the

number of hours that would be required to comply with the proposed rule. NEI responded by e-mail to NRC on June 10, 2004. NEI's burden estimate is indicated in the footnote to Table 1.

9. Payment or Gift to Respondents

Not applicable.

10. Confidentiality of Information

Information identified as proprietary or confidential would be handled in accordance with 10 CFR 2.790 of the NRC regulations. However, this information is not usually considered confidential.

11. Justification for Sensitive Questions

This regulation does not request sensitive information.

12. Estimated Industry Burden and Burden Hour Cost

See Table 1 for reporting of the net reporting burden and Table 2 for the net recordkeeping burden.

Table 1: Annual Reporting Requirements

Section	Number of Respondents	Responses per Respondent	Total Annual Responses	Burden Hours per Response	Total Annual Burden	Annual Cost @ \$157/hr
10 CFR 50.12 (Existing Rule)	(8)	1	(8)	360 <sup>1</sup>	(2,880)	(\$452,160)
Annual Burden					(2,880)	(\$452,160)

<sup>1</sup> The December 2003 OMB submission by NRC indicates that an estimated 400 hours (360 hours for reporting and 40 hours for recordkeeping) would be required by a licensee to prepare and maintain exemption requests under 10 CFR 50.12. This estimate was based on responses from power reactor licensees. NEI's estimate of 2,500 hours for the preparation of a fire protection exemption request was based on discussions with licensees and was provided to NRC via e-mail on 6/10/04 (ML043140427). Note: A number in parentheses indicates a decrease in burden.

Table 2: Annual Recordkeeping Requirements

Section	Number of Recordkeepers	Burden Hours per Recordkeeper	Total Burden Hours	Annual Cost @ \$157/hr
10 CFR 50.12	(8)	40	(320)	(\$50,240)
Appendix R: Section III.P 2.(a), (b), and	8 <sup>1</sup>	275	2,200	\$345,400
Appendix R: Section III.P 2.(d)	8 <sup>1</sup>	20	160	\$25,120
10 CFR 50.48 (Additional Records)	19	5	95	\$14,915
Total Annual Burden			2,135	\$335,195

<sup>1</sup> The proposed rule applies to the 52 reactors that were licensed prior to January 1, 1979. Of these reactors, the staff estimates that 8 reactors annually (14 reactors in the first year, 5 reactors in the second year, and 5 reactors in the third year) will take advantage of the rule and develop documentation indicating compliance with regulatory criteria. Some of these plants will apply multiple times as technical and physical improvements are implemented and as regulatory criteria change. Note: A number in parentheses indicates a decrease in burden.

Total Annual Burden: (745) hours (-2,880 hours reporting + 2,135 hours recordkeeping)

13. Estimate of Other Additional Costs

None.

14. Estimated Annualized Cost to the Government

NRC estimates that the NRC costs associated with review of requests for exemptions under 10 CFR Part 50.12 will decrease 110 staff hours per plant annually, for an annual cost savings to the Government of \$138,160 (8 plants x 110 staff hours/plant = 880 staff hours; 880 staff hours x \$157/hr).

15. Reasons for Changes in Burden or Cost

As a result of implementing the proposed rule, the combined estimated burden for 10 CFR 50.12 and 10 CFR Part 50, Appendix R would be a net decrease of 800 hours annually. The proposed rule would reduce the number of exemption requests resulting in a burden reduction of 3,200 hours. The burden to licensees who choose to use operator manual actions in lieu of current Appendix R requirements would be 2,400 hours annually; this effort would be expended in the analysis and documentation of compliance with the proposed rule and annual walkdowns

to demonstrate feasibility and reliability of the procedures.

16. Publication for Statistical Use

The collected information is not published for statistical use.

17. 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

Statistical methods are not used in this collection of information.