

FINAL SUPPORTING STATEMENT FOR 10 CFR PART 54  
"REQUIREMENTS FOR RENEWAL OF OPERATING LICENSES FOR  
NUCLEAR POWER PLANTS"

(OMB Clearance No. 3150-0155)  
*Renewal with Burden Update Request*

DESCRIPTION OF THE INFORMATION COLLECTION

10 CFR Part 54 establishes the requirements that an applicant for renewal of a nuclear power plant operating license must meet, the information that must be submitted to the NRC for review so that the agency can determine whether those requirements have in fact been met, the application procedures, and record keeping requirements.

A. JUSTIFICATION

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

The regulatory philosophy underlying 10 CFR Part 54 is founded on two key principles. The first principle of license renewal is that, with the possible exception of the detrimental effects of aging on the functionality of certain systems, structures, and components (SSCs), and possibly a few other issues related to safety only during the period of extended operation, the regulatory process is adequate to ensure that the licensing bases of all currently operating plants provide and maintain an acceptable level of safety so that operation will not be inimical to public health and safety or the common defense and security. This regulatory process, modified for the period of extended operation to include the management of the detrimental effects of aging on the functionality of certain SSCs, ensures that the licensing bases will provide and maintain an acceptable level of safety. Part 54 focuses the Commission's review on this one safety issue but provides leeway for the Commission to consider, on a case-by-case basis, other issues unique to extended operation.

The second and equally important principle is that each plant's current licensing basis (CLB) must be maintained during the renewal term, in part through a program of age-related degradation management for certain SSCs as defined in 10 CFR Part 54.

To determine the necessary actions that are needed to constitute aging management programs, renewal applicants must perform an integrated plant assessment (IPA). In this assessment, SSCs that are within the scope of license renewal are identified and screened to determine which SSCs require actions to manage the detrimental effects of age-related degradation. The required aging management actions are then identified, described, and justified. The applicant is required to report in its application the screening methods used, the list of structures and components requiring aging management for extended operation resulting from the screening, and the aging management actions that

have been or will be taken, together with their bases. The NRC will review the application to determine the adequacy of the licensee actions taken and to be taken, as a basis for approval or denial of a renewed license. The inspection, surveillance, testing, and maintenance actions involved in the aging management program include the requirement for record keeping and availability of those records to the NRC for review or audit as part of the NRC's regulatory oversight programs.

The specifics of the information collections and the reasons for them are as follows:

10 CFR 54.13(b) requires each applicant to notify the Commission of information identified by the applicant as having, for the regulated activity, significant implication for public health and safety or the common defense and security. Notification by the applicant must be made within two working days of identifying the information. The NRC needs this information so that it may take appropriate actions, as required, to protect the public's health and safety.

10 CFR 54.15, Specific Exemptions, permits, in accordance with 10 CFR 50.12, the NRC to grant exemptions from the requirements of 10 CFR 54 upon application by any interested person or upon its own initiative. The information specified in 10 CFR 50.12 is required so that NRC can determine whether an exemption is warranted.

10 CFR 54.17, Filing of Application, requires the filing of an application for a renewed license in accordance with Subpart A of 10 CFR Part 2 and 10 CFR 50.4 and 50.30. This section establishes the procedural aspects of the filing. The information to be included in the application is addressed in 10 CFR 54.19, 54.21, 54.22 and 54.23, discussed below.

10 CFR 54.17(g) requires the applicant for a renewed license to agree in writing that it will not permit any individual access to Restricted Data or classified National Security Information until an investigation has been approved for such access under the provisions of 10 CFR Parts 25 and/or 95. This information is necessary to assist the Commission in determining that permitting such persons access to Restricted Data or classified National Security Information will not endanger the common defense and security.

10 CFR 54.19, Contents of Application - General Information, requires applicants for license renewal to provide the general information specified in 10 CFR 50.33(a) through (e), (h), and (i). The application may incorporate this information by reference. The NRC needs this information to establish the continued validity, during the renewal term, of general information applicable during the original license.

10 CFR 54.19(b) requires each application to include conforming changes to the standard indemnity agreement, 10 CFR 140.92, Appendix B. This is needed to account for the expiration term of the proposed renewed license.

10 CFR 54.21, Contents of Application - Technical Information, requires applicants for license renewal to provide information as follows:

10 CFR 54.21(a) requires an IPA. The IPA must:

- Identify and list those SSCs subject to an aging management review.
- Describe and justify the methods used to identify those SSCs that require aging management review. The NRC needs this information to be able to conclude that additional aging management attention is directed to SSCs that require it because they are important and can undergo age-related degradation during the renewal term.
- Demonstrate the adequacy of actions taken or to be taken to manage the detrimental effects of aging on functionality. The NRC needs this information to be satisfied that the actions will be effective in assuring the continued safe operation of the plant.

10 CFR 54.21(b) requires the application to contain CLB changes during NRC review of the application. Each year following submittal of the license renewal application and at least 3 months before scheduled completion of the NRC review, the applicant must submit an amendment to the renewal application that identifies any change to the CLB of the facility that materially affects the contents of the license renewal application, including the FSAR supplement. The NRC needs this information to determine the acceptability of these changes from the pertinent safety standpoints.

10 CFR 54.21(c)(1) requires the applicant to provide a list of time-limited aging analyses for SSCs that conform to the definition provided in 10 CFR 54.3 and a demonstration that the analyses remain valid for the period of extended operation, that they have been projected to the end of the period of extended operation, or the effects of aging on the intended function(s) will be adequately managed for the period of extended operation. The NRC needs this information to determine whether those SSCs meet the requirements for license renewal.

10 CFR 54.21(c)(2) requires a listing of all plant-specific exemptions granted pursuant to 10 CFR 50.12 and in effect that are based on time-limited aging analyses as defined in 10 CFR 54.3. An evaluation must be provided that justifies the continuation of these exemptions for the period of extended operation. The NRC needs this information to determine whether continuing these exemptions is justified.

10 CFR 54.21(d) requires applicants to include in the application an FSAR

supplement for the facility. This supplement must contain a summary description of the programs and activities for managing the effects of aging and the evaluation of time-limited aging analyses for the period of extended operation as determined by 54.21(a) and (c). The NRC needs this information to determine whether the licensee's actions for managing the effects of aging provide reasonable assurance that the facility's operations during the extended period of operation can be conducted without endangering public health and safety.

10 CFR 54.22, Contents of Application - Technical Specifications, requires applicants to include in the renewal application any technical specification changes or additions necessary to manage the effects of aging during the period of extended operation. The justification for these changes or additions must be contained in the license renewal application. The NRC needs this information to determine the acceptability of these changes from the pertinent safety standpoints.

10 CFR 54.23, Contents of Application - Environmental Information, requires each application for license renewal to include a supplement to the environmental report that complies with Subpart A of 10 CFR Part 51. The NRC requires this information to determine whether the environmental consequences of the continued operation of the facility during the renewal term will continue to be acceptable. The burden associated with the environmental data is incorporated under the burden for 10 CFR Part 51.

10 CFR 54.33(c) requires each application for license renewal to include those conditions to protect the environment that were imposed pursuant to 10 CFR 50.36(b) and that are part of the CLB for the facility at the time of issuance of the renewed license. The NRC requires this information to protect the environment during the term of the renewed license. The burden associated with the environment data is incorporated under the burden for 10 CFR part 51.

10 CFR 54.37, Additional Records and Record Keeping Requirements, establishes retention and update requirements.

10 CFR 54.37(a) requires holders of renewed licenses to retain in an auditable and retrievable form for the term of the renewed operating license, all information and documentation required to document compliance with 10 CFR Part 54. The NRC needs access to this information for effective continuing regulatory oversight.

10 CFR 54.37(b) requires, after the renewed license is issued, licensees to include in the FSAR update required by 10 CFR 50.71(e) any SSCs newly identified that would have been subject to an aging management review or evaluation of time-limited aging analyses in accordance with 54.21. This FSAR update must describe how the effects of aging will be managed such that the intended function(s) will be effectively maintained during the period of extended operation. The FSAR update contains information on all of the changes made by the licensee to the plant since the original FSAR was submitted or, as appropriate, since the last FSAR was submitted. The NRC needs access to this information for effective continuing regulatory oversight.

2. Agency Use of the Information

The information will be used by the applicants for and holders of renewed nuclear power plant operating licenses as a basis for the establishment and conduct of their aging management programs. The NRC will use the information in its regulatory oversight to determine whether the continued operation of the nuclear power plants during the renewal term will provide reasonable assurance of the adequate protection of public health and safety and the common defense and security.

3. Reduction of Burden Through Information Technology

There are no legal obstacles to reducing the burden associated with this information collection. The NRC encourages applicants and licensees 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 0% of the potential responses are filed electronically.

4. Effort to Identify Duplication and Use Similar Information

Information collection requirements of 10 CFR Part 54 do not duplicate other Federal information collection requirements and are not available from any source other than applicants or licensees. NRC has in place an on-going 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

Not applicable.

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

The records generated as a result of 10 CFR Part 54 would be partly provided at the time of application for renewal and made partly available on a continual basis during the period of extended operation. Reporting of information is required only as identified under A.I, above. Less frequent collection would increase the risk that programs for managing the effects of aging would not be sufficiently current to assure maintenance of the current licensing basis during the period of extended operation.

7. Circumstances Which Justify Variation from OMB Guidelines

The two-day reporting period required by 10 CFR 54.13(b) varies from OMB guidelines but is necessary so that the Commission is informed promptly of information having a significant implication for public health and safety or the common defense and security.

The record keeping requirements of 10 CFR Part 54.37 exceed OMB's requirements by mandating that records be kept for the duration of the renewed license. A retention period for the full term of the renewed license is necessary to ensure that data are available for establishing equipment aging trends.

8. Consultations Outside the NRC

NRC consulted with five licensees regarding the estimated burden relating to the information collections contained in this document.

Opportunity to comment on the information collection has been published in the Federal Register on April 18, 2005 (70 FR 20183). No comments were received.

9. Payment of Gift to Respondents

Not applicable.

10. Confidentiality of Information

No confidential information is required, except for proprietary information which would be handled in accordance with 10 CFR 2.390 of NRC's regulations.

11. Justification for Sensitive Questions

Not applicable.

12. Estimated Industry Burden and Burden Hour Cost

There are currently 6 annual respondents subject to Part 54 requirements - 18 applicants (6 applicants annualized) plus 11 current recordkeepers for previous and current applications. Therefore, the estimated number of annual respondents is 17 (11 applications currently under review plus an additional 6 annual respondents). The paperwork burden is estimated to vary widely among nuclear power plant licensees. All nuclear plants are somewhat different and the programs employed by individual plants, while similar, are not exactly the same.

NRC calculates that an application for license renewal will incur approximately 94,000 burden hours. Of this, 64,000 hours are attributed to one-time reporting for an annualized burden of 21,333 hours over the clearance period. The remaining 30,000 hours represent a recurring annual recordkeeping burden that is incurred over the 30-year renewal term, or an annual recordkeeping burden of 1000 hours per reactor. Therefore, the annualized burden for an application submitted during the clearance period is 22,333 hours (21,333 reporting + 1,000 recordkeeping hours). NRC estimates that 18 renewal applications will be received during this clearance period. Eleven applications are currently under review. Therefore, the total annualized burden to industry is expected to be 148,000 hours at a cost of approximately \$23.2 million (6 applications X 21,333 hours + 20,000 hours recordkeeping for an average of 20 recordkeepers annually X \$157/hr).

13. Estimate of Other Additional Costs

The quality of records to be maintained is roughly proportional to the recordkeeping burden. Based on the number of pages maintained for a typical clearance, the records storage cost has been determined to be equal to 0.0004 times of the recordkeeping burden cost. Therefore, the storage cost for this clearance is estimated to be \$1,821 (29,000 hours X \$157/hour X .0004).

14. Estimated Annualized Cost to the Federal Government

The NRC paperwork burden for 10 CFR Part 54 is estimated to be about 19,855 staff-hours for the review of each license renewal application based on revised budget models for the latest projected schedule. Of this amount, about 18,688 staff-hours are expected to be incurred as part of the review of the licensee's application submittal for an annualized burden of 6,229 hours over the clearance period. The balance of the NRC's estimated effort, about 1,167 staff-hours, will be spent for each plant with a renewed license in year 40 of its operating license to verify that commitments made by the licensee to complete aging management activities prior to entering the period of extended operation were actually completed. Based on the known renewal applications to be received, no plant will reach year 40 of its operating license during the clearance period.

The staff estimates that during this 3-year clearance period the NRC will receive 18 license renewal applications and complete the review of 11 previously received license renewal applications. It is also assumed that during this 3-year



clearance period, that none of the 11 plants receiving a renewed license will reach 40 years of operation requiring the commitment completion review. Based on this estimated number of applications newly and previously received, the total annualized Federal cost is expected to be \$17.4 million (227.6 FTE X 1460 hours per FTE X \$157/hour ÷ 3).

These costs are fully recovered through fee assessments to NRC licensees pursuant to 10 CFR Parts 170 and/or 171.

15. Reasons for Changes in Burden or Cost

The overall burden estimate decreased from 432,333 hours (405,333 reporting and 27,000 recordkeeping hours) to 148,000 hours (128,000 reporting and, 20,000 recordkeeping hours). However, there is no change in the estimated burden per respondent for reporting or recordkeeping.

The last time this information collection was approved by OMB, the number of responses was not annualized for calculating the burden. The respondent burden was calculated based on the number of respondents (19), estimated during the 3-year clearance rather than the annualized number of respondents (6). This resulted in an overstatement of burden hours by 3 times the actual burden.

When the one-time respondent burden was calculated for this collection, the error in the number of annual respondents was discovered and corrected. Due to the correction of this error, the amount of overall burden for this package decreased by 284,333 hours.

There has been an increase in the overall cost as a result of an increase in the rate from \$150/hr to \$157/hr.

16. Publication for Statistical Use

None.

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

Not applicable.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

Not applicable.

Table 12.1 Annualized Reporting Burden

Section	No. Of Respondents	Responses per Respondent	Number of Responses	Burden Hours per Response	Total Annual Burden Hours	Cost at \$157/hr
54.13(b)	6	1	6	225	1,350	\$211,950
54.15 (included in 50.12)					0	
54.17(Subpart A of 10 CFR Part 2 and 10 CFR 50.4 and 50.30) (included in 10 CFR 54.19, 54.21, 54.22 and 54.23)					0	
54.17(g) (included 10 CFR Part 25 and/or 95)					0	
54.19 (included in 10 CFR 50.33 (a) through (e), (h), and (i))					0	
54.19(b) (included in 10 CFR 140.92, Appendix B)					0	
54.21	6	1	6	20,052	120,312	\$18,888,984
54.21(a) (included in 54.21)					0	
54.51(b) (included in 54.21)					0	
54.21(c)(1) (included in 54.21)					0	
54.21(c)(2) (included in 10 CFR 50.12 and 10 CFR 54.3) (included in 54.21)					0	
54.21(d) (included in 54.21)					0	
54.22	6	1	6	1,056	6,336	\$994,752
54.23 (included in 10 CFR Part 51)					0	
54.33(c)(included 10 CFR 50.36(b) and 10 CFR Part 51)					0	
TOTAL	6		18		128,000	\$20,096,000



Table 12.2 Annualized Recordkeeping Burden

Section	No. Of Recordkeepers	Burden Hours per Recordkeeper	No. Of Records per Recordkeeper	Total Annual Burden Hours	Cost at \$157/hr
54.21(a) (included in 54.21)				0	
54.51(b) (included in 54.21)				0	
54.37(a)	20	1,000	1	20,000	\$3,140,000
54.37(b) (included in 10 CFR 50.71(e) and 54.21)				0	
TOTAL	20			20,000	\$3,140,000

TOTAL BURDEN HOURS: 148,000(128,000 hrs. reporting + 20,000 hrs recordkeeping)  
TOTAL BURDEN HR. COST: \$23,236,000(148,000 hrs x \$157/hrs.)  
TOTAL RESPONSES: 26 (6 responses + 20 recordkeeper hours)  
TOTAL RESPONDENTS: 17(11 currently plus an additional 6 annually)