

FINAL OMB SUPPORTING STATEMENT
FOR
10 CFR PART 54
REQUIREMENTS FOR RENEWAL OF OPERATING LICENSES FOR
NUCLEAR POWER PLANTS
3150-0155

Revision

DESCRIPTION OF THE INFORMATION COLLECTION

Part 54 of 10 CFR establishes nuclear power plant operating license renewal requirements. Information collection requirements in 10 CFR Part 54 describe (a) application procedures, (b) information an applicant must submit for U.S. Nuclear Regulatory Commission (NRC) review so that the NRC can determine whether the information meets requirements, and (c) recordkeeping requirements.

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 of 10 CFR 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 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 actions needed to constitute aging management programs, renewal applicants must perform an integrated plant assessment. In this assessment, SSCs 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. As a basis for approval or denial of a renewed license, the NRC will review the application to determine the adequacy of licensee actions taken and to be taken. The inspection, surveillance, testing, and maintenance actions involved in the aging management program include the requirement for recordkeeping and availability of those records to the NRC for review or audit as part of the NRC's regulatory oversight programs.

In addition, each renewed operating license contains a requirement for the licensee to submit a commitment completion review letter to the NRC. License renewal applicants must submit final safety analysis report supplements and these supplements describe certain future inspection

activities to be completed before entering the unit's period of extended operation. NRC issues renewed licenses based on completion of these commitments. As part of the license renewal process NRC inspects licensees to verify complete implementation of these activities. To commence this inspection process, each renewed operating license contains a one-time reporting requirement for the licensee to notify NRC in writing when it completes the commitments. The only licensees subject to this requirement are those that (a) have renewed licenses prior to the clearance period or may receive a renewed license during the clearance period, and (b) will complete implementation of the inspection activities and notify NRC accordingly.

A. JUSTIFICATION

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

Title 10, Part 54, establishes operating license renewal requirements for nuclear power plants and describes the information that licensees must submit to the NRC when applying for a license renewal. The application must contain technical information on how the licensee will manage the detrimental effects of age-related degradation on certain plant SSCs so as to continue the plant's safe operation during the renewal term. The NRC needs this information to determine whether the licensee's actions will be effective in assuring the plant's continued safe operation.

The commitment completion letter required to be submitted by each renewed license serves as notification to the NRC that the licensee has completed the inspection activities described in the final safety analysis report supplement. The NRC needs this notification so that it can inspect the licensee to verify complete implementation of these activities.

Holders of renewed licenses must 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 continuing effective regulatory oversight.

The information collection requirements in 10 CFR, Sections 54.13, 54.15, 54.17, 54.19, 54.21, 54.22, 54.23, 54.33, and 54.37 are described in detail in Supplement 1 to this supporting statement.

2. Agency Use of the Information

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

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 58792), 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. However, respondents currently make no electronic submissions because each individual collection is unique and, therefore, it is difficult to reduce the burden through the use of information technology. Each submission's uniqueness also makes unlikely its development from other compiled information sources.

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

The requirements in 10 CFR 54 apply to licensees who are seeking to extend their current operating licenses for nuclear power plants. These licensees are large entities, such as electric utilities, who do not meet the definition of a small business.

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

The records generated as part of this information collection 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. An applicant is only required to report the information if it seeks to apply for license renewal. If the NRC grants a renewed operating license the recordkeeping requirements are necessary because 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

There are two 10 CFR Part 54 information collection requirements which vary from OMB guidelines:

- (1) Per 10 CFR 54.13(b), within two working days licensees must report to the NRC information having a significant implication for public health and safety or the common defense and security. This reporting period is

necessary so that NRC is promptly informed on such matters. However, after renewing the license of 48 units at 26 sites, the NRC has never received a response to this information collection requirement and, therefore, estimates that future responses, if any, will be reported infrequently.

- (2) Per 10 CFR 54.37, a licensee must keep records throughout the term of a renewed license. This retention period is necessary to make sure data are available for establishing equipment aging trends for managing the detrimental effects of aging on the functionality of certain SSCs, and to maintain an acceptable level of public health and safety.

8. Consultations Outside the NRC

NRC consulted with four licensees regarding the estimated burdens for 10 CFR Part 54 information collections. The licensees NRC contacted have experience in the license renewal process and provided useful feedback on both one-time reporting and recordkeeping burdens. All of the licensees agreed that the actual one-time reporting burden is higher than NRC's previous estimate. The licensees generally agreed with NRC's previous estimate for recordkeeping burden.

On March 24, 2008, the NRC published in the *Federal Register* (73 FR 15542) an opportunity for public comment on this information collection renewal and burden update. The NRC did not receive any comments.

9. Payment of 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

Not applicable.

12. Estimated Industry Burden and Burden Hour Cost

During the present submission's clearance period, respondents will incur burdens for submitting one-time reports and for keeping records. NRC estimates that the paperwork burden may vary widely among nuclear power plant licensees. All nuclear plants are somewhat different and the programs employed by individual plants, while similar, are not identical. NRC's assumptions, methodology, and results for estimating the paperwork burdens follow.

One-Time Reporting Burden

There are two one-time reporting burdens:

- (1) The first one-time reporting burden covers all licensee efforts associated with preparing a license renewal application and submitting amendments to the application during the review process. This burden begins when the licensee collects information to prepare the application and ends when the NRC makes a final decision as to granting the renewed license(s). To calculate the annualized one-time reporting burden, NRC considered the total burden for a single license renewal application, the duration over which an applicant would accrue this burden, and the total number of applications expected to incur portions of their total burden during the clearance period.

First, NRC estimates that each one-time response as a license renewal application will incur approximately 84,150 hours of total burden. This figure is partly based on information received from NRC's consultations with four licensees.

License renewal projects are resource intensive and applicants can prepare applications over a several-year period. Due to these factors, the accrual of burden over time is an important consideration in estimating the total annualized burden for the clearance period. During any given clearance period, some respondents may begin or finish accruing the burden. However, because of the total duration no respondent will accrue the entire burden during a single three-year clearance period. In previous submissions, NRC counted each license renewal application response as a one-time burden expenditure; however, this method does not account for the actual accrual over time.

NRC estimates that an applicant will accrue this one-time reporting burden over a 54-month period. The bulk of the reporting burden will be associated with the preparation and submission of the application to the NRC for review. NRC estimates a smaller amount of time (less than 5 percent of the total burden hours) to submit required amendments during the review process. Applicants submit these amendments, required under 10 CFR 54.21(b), to identify any changes to the facility's current licensing basis each year during the review process, and at least three months before the scheduled completion of NRC's review.

To show the total burden accrual on a monthly basis, NRC estimated that preparation of the application takes 32 months, whereas the review process takes 22 months. The direct basis for the first duration is on information from NRC's outside consultations; the basis for the second duration is NRC's standard 22-month review schedule. NRC publicly communicates this schedule in a fact sheet, "Backgrounder on Reactor License Renewal." This document describes the license renewal process and states, "License renewal is expected to take about 30 months, including the time to conduct an adjudicatory hearing, if necessary, or 22 months without a hearing. In some cases the process is completed on a plant-specific schedule agreed upon with the applicant." The circumstances concerning each license renewal application review are unique, especially with regard to whether the application is subject to the

NRC's hearing process under Part 2, "Rules of Practice for Domestic Licensing Proceedings and Issuance of Orders," of 10 CFR. When NRC prepared this supporting statement, it had either approved or was completing review of 34 license renewal applications, which cover 60 percent of the nation's current fleet of operating commercial nuclear power reactors. Only three of these submitted applications - approximately 13 percent - have been subject to hearings. Further, Part 2 of 10 CFR does not impose information collection burden upon licensees. On this basis, NRC considers the standard 22 month application review schedule an appropriate duration for the second phase. As such, the NRC used this period in estimating the reporting burden for the clearance period. The referenced fact sheet is accessible by Accession No. ML050680253 in NRC's Agencywide Documents Access and Management System (ADAMS) on the NRC's Web site at <http://www.nrc.gov/reading-rm/adams.html>.

NRC approximated how a respondent will accrue the entire one-time burden for each license renewal application response: 81,150 hours to prepare and submit the application over 32 months, or approximately 2,536 hours/month. In addition, licensees will submit two amendments during the 22-month review period, each requiring an average of 1,500 hours to complete (3,000 hours total burden to submit amendments).¹

Finally, to calculate the annualized one-time reporting burden, NRC determined which license renewal application responses would incur portions of their burden during the clearance period. NRC bases license renewal planning on receipt of six new applications per fiscal year; therefore, NRC estimates that it will receive a new license renewal application response about every other month. This planning assumption has been valid beginning with the previous clearance.

Supplement 2 of this supporting statement is a spreadsheet based on the assumptions and estimates described above. The "Industry Burden" spreadsheet displays by month the burdens for all license renewal application responses accruing portions of their total burdens during the clearance period. From this spreadsheet the total burden during the entire clearance period is the sum of all those cells containing monthly burdens within the clearance period start and end dates (September 2008 through August 2011). This sum is 1,514,700 hours which results in an annualized one-time reporting burden of 504,900 hours/year (1,514,700 hours ÷ 3 years).

Calculating this burden by considering each response as a one-time burden expenditure, which NRC did in previous submissions, results in

¹ These time estimates do not include licensee time to respond to NRC requests for additional information. These requests are necessary so that the NRC can obtain all relevant information needed to make a decision on a licensing action request that is fully informed, technically correct, and legally defensible. NRC requests additional information when the applicant does not include the necessary information in its initial submission, or if the necessary information is not in any other docketed correspondence or cannot reasonably be inferred from the information available to the staff. NRC requests for additional information are exempt from the Paperwork Reduction Act because they are nonstandardized follow-up questions designed to clarify responses to a previously approved collection.

the same burden of 504,900 hours/year (6 applications/year x 84,150 hours/application). Therefore, in this submission, using the estimate that NRC will receive six new license renewal application responses per year, the annualized burden is accurately calculated by counting each response as a one-time burden expenditure. Using this method Table 1 at the end of this section summarizes the results for this one-time reporting burden.

- (2) In addition, the NRC is seeking approval for an additional requirement for licensee efforts to prepare and submit commitment completion review letters as required by each renewed license. These respondents are different from those preparing and submitting license renewal applications because NRC has already granted their renewed licenses. In certain situations, NRC allows licensees to submit one application for renewing the operating licenses of several reactor units. However, NRC issues a separate renewed operating license to each reactor unit and each such license contains the requirement to submit a commitment completion review letter. To estimate the number of these letters that it will receive during the clearance period, NRC estimates that a licensee will submit the required letter one year before entering a unit's period of extended operation. NRC then considered these dates for those units that have already received renewed licenses, for those renewals already under review, and for those renewals expected to be submitted based on licensee intent letters. Through this analysis, NRC determined that it will receive 11 one-time responses as commitment completion review letters during the clearance period. Annualizing these responses over the clearance period results in approximately 4 responses per year ($11 \text{ responses} \div 3 \text{ years} \approx 4 \text{ responses/year}$). NRC estimates that each letter will incur a one-time burden of 10 hours.

Finally, NRC estimates that respondents will incur both of these one-time reporting burdens by professional staff at the rate of \$258/hour. A complete summary of the calculations for one-time reporting burden and cost is provided in Table 1.

Recordkeeping Burden

The annual recordkeeping burden covers all licensee efforts associated with retaining, as required by 10 CFR 54.37, information to document compliance with 10 CFR Part 54. This burden begins when NRC grants a renewed license and continues throughout the period of extended operation until the renewed license expires. During the clearance period, the total number of recordkeepers per year will increase as NRC receives more applications and issues more renewed licenses. To estimate the number of recordkeepers, NRC considered each reactor site with renewed operating license(s). Licensees typically submit combined license renewal applications for multiple unit sites so NRC issues the renewed licenses at the same time. Also, NRC estimates that the recordkeeping burden for a multiple unit site is approximately equivalent to the burden for a single unit site.

Next, NRC considered the issuance dates for those sites that have already received renewed licenses, the projected issuance dates for license renewals currently under review, and the renewal applications expected to be submitted based on licensee intent letters. Through this analysis, NRC estimates that there will be 30 recordkeepers per year prior to entering the clearance period; however, during each year of the clearance the number of yearly recordkeepers will increase to 34 in year one, 40 in year two, and 45 in year three. Therefore, during the clearance period, an average of 40 respondents per year will keep records.

Licensees from the outside consultations generally agreed with NRC's recordkeeping burden estimate of 1,000 hours per year. In addition, NRC estimates that this burden will be completed exclusively by professional staff at the rate of \$258/hour. The NRC used the above figures to determine the total burden and cost for recordkeeping. A summary is in Table 2.

13. Estimate of Other Additional Costs

The quantity 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 the recordkeeping burden cost. Therefore, the storage cost for this clearance is estimated to be \$4,128 (40,000 hours x \$258/hour x 0.0004).

14. Estimated Annualized Cost to the Federal Government

The estimated annualized cost to the NRC for 10 CFR Part 54 information collections covers the review of information in each submitted license renewal application. Based on NRC's budget, each application review will cost the Federal government a total of approximately 17,613 hours. Of this amount, 15,979 hours are for professional staff activities like oversight, project management, technical reviews, audits, and legal counsel, and the other 1,635 hours are for clerical support. The NRC will incur professional staff costs at the rate of \$258/hour and clerical staff costs at the rate of \$47/hour. Therefore, the resulting labor cost is \$4,199,427 per application (15,979 hours x \$258/hour + 1,635 hours x \$47/hour). Additionally, each application will cost the Federal government \$785,000 for contractor support and \$46,757 in travel expenses. Therefore, the total cost for review of a single license renewal application is \$5,031,184 (\$4,199,427 + \$785,000 + \$46,757).

As described in Item 12 above, NRC expects to begin review of six license renewal applications per year during the clearance period. Therefore, the resultant estimated annualized cost to the Federal government is \$30,187,104 per year (\$5,031,184/application x 6 applications/year). NRC will incur these costs over 22-month review periods which directly align with those periods when applicants incur costs to support NRC's review. To estimate how the NRC incurs these costs, the "Government Cost" spreadsheet in Supplement 2 shows by month the costs for all license renewal application reviews accruing portions of their total cost during the clearance period. Due to the direct alignment with the applicant burdens during this period, the total annualized cost to the Federal government is also accurately calculated by counting each license renewal

application review as a one-time cost. 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 increased from 148,000 hours (128,000 hours reporting plus 20,000 hours recordkeeping) to 544,940 hours (504,940 hours reporting plus 40,000 hours recordkeeping). The burden increased significantly for several reasons.

Reporting Burden

The reporting burden increased due to three reasons:

- (1) NRC corrected and validated its method for calculating and annualizing the reporting burden for license renewal application responses. Continuing from the last submission, NRC bases license renewal planning on receipt of six new applications per fiscal year. On this basis the annual one-time reporting burden for renewal applications is equal to the number of applications per year multiplied by the burden for a single application.

In this submission, NRC validated this calculation by calculating how license renewal applicants actually incur this reporting burden over an approximate 54-month period. Due to this time frame, during any given clearance period some respondents may begin or finish accruing the burden, however, no respondent will accrue the entire burden during a single three-year clearance period. For this submission NRC prepared a spreadsheet to show by month the burdens for all license renewal application responses accruing portions of their total burdens during the clearance period. From this spreadsheet, the total burden is the sum of all those cells containing monthly burdens within the clearance period start and end dates. Since this is the total burden for the entire clearance period, the annual burden is the total burden divided by three years. This result validates NRC's methodology because it is identical to the result calculated by taking the number of applications per year multiplied by the burden for a single application.

- (2) NRC revised its burden estimate for preparing and submitting a license application. Prior submissions estimate that the application process requires 64,000 reporting hours per application. For this renewal NRC consulted with four licensees to review this estimate's accuracy. The licensees suggested that the previous figure underestimates the true reporting burden for this information collection and agreed that 84,150 hours is a more accurate estimate. NRC used the reporting estimate and its estimated accrual over time to calculate the annual one-time burden for license renewal application responses.
- (3) NRC included a new burden for those licensees that will submit commitment completion review letters. This reporting is not required by regulation but it is a requirement in each renewed license. The previous

submission did not include this burden because, based on the known renewal applications, no reactor units were expected to approach the period of extended operation. In this submission, NRC estimates that approximately four licensees per year will submit commitment completion review letters as their units near the period of extended operation.

Recordkeeping Burden

Although the recordkeeping burden estimate did not change in this submission, the number of recordkeepers increased. Each year, as additional licensees apply for and NRC grants renewed licenses, the number of recordkeepers increases. After receiving a renewed license, a licensee must fulfill its recordkeeping responsibilities. In the last submission, NRC estimated 20 annual recordkeepers per year; however, in this submission NRC estimates that the average number of recordkeepers per year will increase to 40. This estimate is based on issuance dates for those sites that have already received renewed licenses, the projected issuance dates for license renewals currently under review, and the renewal applications expected to be submitted based on licensee intent letters. These additional recordkeepers also increase the total burden.

Finally, the total cost increased as a result of the increases in burden hours and as a result of the increase in the professional staff rate from \$157/hour to \$258/hour.

16. Publication for Statistical Use

This information will not be published for statistical use.

17. Reason for Not Displaying the Expiration Date

The requirements are in regulations published in the *Code of Federal Regulations*. Amending this annual publication to display information that could become obsolete would be unduly burdensome and too difficult to keep current.

18. Exceptions to the Certification Statement

There are no exceptions.

B. COLLECTION OF INFORMATION EMPLOYING STATISTICAL METHODS

Statistical methods are not used in this collection of information.

TABLE 1
ANNUAL REPORTING BURDEN

Section	Number of Respondents	Responses per Respondent	Total Responses	Burden per Response (Hours)	Total Annual Burden (Hours)	Cost at \$258/ hour (\$)
License Renewal Application (54.13, 54.15, 54.17, 54.19, 54.21, 54.22)	6	1	6	84,150	504,900	130,264,200
Environmental Information for License Renewal (54.23, 54.33) [†]	0	0	0	0	0	0
Commitment Completion Letter*	4	1	4	10	40	10,320
Total	10		10		504,940	130,274,520

[†] OMB Clearance No. 3150-0021 covers license renewal environmental information collection burdens.

* The burden hours to submit the Commitment Completion Letters are not shown in the spreadsheet in Supplement 2 because they are from different respondents than those submitting License Renewal Applications.

TABLE 2
ANNUAL RECORDKEEPING REQUIREMENTS

Section	Number of Recordkeepers	Burden per Recordkeeper (Hours)	Total Annual Burden (Hours)	Cost at \$258/ hour (\$)
Retention of Records in an Auditable and Retrievable Form and Final Safety Analysis Report Updates (54.37)	40	1000	40,000	10,320,000

TOTAL ANNUAL BURDEN / COST: 544,940 hours (504,940 hours reporting plus 40,000 hours recordkeeping) / \$140,594,520

TOTAL ANNUAL RESPONDENTS: 50 (10 responses + 40 recordkeepers)

TOTAL ANNUAL RESPONSES: 50 (6 Part 54 license renewal applications + 4 commitment completion letters + 40 recordkeepers)