

Section 22

FINAL SUPPORTING STATEMENT FOR LIMITATIONS ON THE USE OF HIGHLY ENRICHED URANIUM (HEU) IN DOMESTIC NON-POWER REACTORS

10 CFR 50.64, 50.64(b)(1), 50.64(c)(1), 50.64(c)(2)(i), 50.64(c)(2)(ii) and 50.64(c)(2)(iii)

DESCRIPTION OF THE INFORMATION COLLECTION

Section 50.64(b)(1) limits the use of highly enriched uranium (HEU) fuel in non-power reactors. This regulation requires that new non-power reactors use low enriched uranium (LEU) fuel unless the applicant demonstrates a "unique purpose" as defined in 50.2. Moreover, section 50.64(b)(2) requires that existing non-power reactors replace HEU fuel with acceptable LEU fuel when available.

Section 50.64(c)(1) states any request by a licensee for a determination that a non-power reactor has a unique purpose as defined in 50.2 should be submitted with supporting documentation to the Director of the Office of Nuclear Reactor Regulation.

Section 50.64(c)(2)(i) requires that licensees authorized to possess and use HEU fuel submit to the NRC written documentation containing a schedule of when a Safety Analysis Report will be submitted and when other events will take place in the conversion from HEU to LEU fuel. This documentation should be updated annually until the Safety Analysis Report is submitted. This documentation containing the schedule will be based upon the availability of replacement fuel acceptable to the NRC and consideration of other factors such as the availability of shipping casks, financial support, and reactor usage.

Section 50.64(c)(2)(ii) requires the licensee authorized to possess and use HEU fuel to submit a statement to the NRC that Federal Government funding for conversion to LEU is not available (with supporting documentation) in lieu of the requirement of section 50.64(c)(2)(i) above. If this statement of non-availability of Federal Government funding is submitted, the licensee will be required to resubmit a proposal for meeting the requirements of 50.64(b)(2) or (3) at 12-month intervals.

Section 50.64(c)(2)(iii) requires that the proposal include, to the extent required to effect the conversion, all necessary changes in the license, facility, or procedures. Supporting safety analyses should also be provided so as to meet the schedule established for conversion.

A. JUSTIFICATION

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

A Commission policy statement published August 24, 1982 (47 FR 37007), explains NRC's interest in reducing the use of HEU in non-power reactors. This interest stems from NRC's licensing responsibility for both domestic use and for export of HEU and concern about risks of theft or diversion of this material.

The policy statement also describes a continuing program to develop and demonstrate the technology that will facilitate the use of reduced enrichment fuels. The reduced enrichment for non-power reactors (RERTR) program was initiated by the Department of Energy (DOE) and is managed by the Argonne National Laboratory. Its objective is to prove the ability of new LEU fuels to replace existing HEU fuel without significant changes to existing reactor cores or facilities, or significant decrease in performance characteristics of the reactors.

Information shows that a major consideration is the cost of conversion. NRC shares the licensees' expressed view that conversion costs should largely or entirely be financed by the Federal government. Historically, the DOE and its predecessor agencies have provided significant support to non-power reactor programs. The availability of Federal support will be considered in determining the availability of LEU fuel and final schedules for conversion.

Section 50.64, "Limitations on the Use of Highly Enriched Uranium (HEU) in Domestic Non-power Reactors," is intended to reduce the risk of theft or diversion of HEU fuel used in non-power reactors. The reduction in domestic use of HEU fuel may encourage similar action by foreign research reactor operations, and thereby reduce the amount of HEU fuel in international use.

2. Agency Use of Information

A respondent may request of the NRC a unique purpose exemption with supporting information pursuant to 10 CFR 50.64(c)(1). The NRC will use the information to make a determination that the nuclear non-power reactor has a unique purpose as defined in 10 CFR 50.2.

A respondent will develop and submit to the NRC pursuant to 10 CFR 50.64(c)(2) a proposed schedule for meeting the requirements of 10 CFR 50.64(b)(2) or (3). This schedule must be updated annually until the Safety Analysis Report is submitted. The proposed schedule must be based upon availability of replacement fuel acceptable to the Commission and consideration of other factors such as the availability of shipping casks, financial support, and reactor usage. NRC will use the proposed schedule plus the results of the successful accomplishment of the tasks set out in DOE's RERTR program and the development of commercially available replacement fuel to determine a final schedule.

The proposed schedule for meeting the requirements of 10 CFR 50.64(c)(2) will require a comparison between the licensee's existing fuel design and fuels developed or projected for development under the documented RERTR program. Coordination with NRC to formulate proposed schedules for regulatory review and with DOE to develop fuel procurement and supporting equipment schedules will be required.

NRC will review the supportive safety analyses required by the provisions of Section 50.64(c)(2)(iii). Subsequent to this review, the Director of the Office of Nuclear Reactor Regulation will issue an appropriate enforcement order directing both the conversion and, to the extent consistent with protection of public health and safety, any necessary changes to the license, facility, or procedures.

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 100% of the potential responses are filed electronically.

4. Effort to Identify Duplication and Use Similar Information

No sources of similar information are available. 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 information collection affects universities, a corporation and a government agency. None of these respondents are small businesses.

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

Information to justify use of HEU or to schedule its discontinuance is necessary to protect the health and safety of the public.

7. Circumstances which Justify Variation from OMB Guidelines

This information collection does not vary from OMB guidelines.

8. Consultations Outside the NRC

Opportunity for public comment on the information collection requirements for this clearance package was published in the Federal Register on May 14, 2013 (78 FR 28244). No comments were received.

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

Not applicable.

12. Estimated Industry Burden and Burden Hour Cost

Burden estimates discussed below are based on industry experience. Total industry burden is 1,100 hours at a cost of \$301,400 (1,100 hours x \$274/hr).

Reporting:

Section 50.64(c)(1). Approximately 10 hours each are required each year for the 2 "unique purpose" applicants to respond to Commission requests for additional supporting documentation for a "unique purpose" determination. This burden will be approximately 20 hours (2 x 10 hours).

Section 50.64(c)(2)(i). Approximately 10 hours each are required for 4 respondents to develop and submit the annual updated documentation to NRC. (All licensees other than those reporting under 10 CFR 50.64(c)(2)(ii) have completed the requirements of this section.) This burden will be approximately 40 hours (4 x 10 hours).

Section 50.64(c)(2)(ii). Approximately 10 hours each are required for 4 respondents to develop and submit the annual updated documentation to NRC. This burden will be approximately 40 hours (4 x 10 hours).

Section 50.64(c)(2)(iii). It is anticipated that over the three-year clearance period approximately 1,000 hours (333.33 hours annually) will be expended by 3 of the 4 licensees reporting under Section 50.64(c)(2)(i) to prepare and provide appropriate safety analyses as specified in Section 50.64(c)(2)(iii). The staff does not anticipate the remaining licensee will develop a safety analysis during this reporting period. Therefore, approximately 1,000 hours (1,000 hours x 3 licensees divided by 3) would be expended annually for this effort.

Table 1
Non-power Reactor Reporting Burden

Section	Respondents	Responses per Respondent	Total Responses	Burden per Response	Total Burden	Cost @ \$274/hr
50.64(c)(1)	2	1	2	10	20	\$5,480
50.64(c)(2)(i).	4	1	4	10	40	\$10,960
50.64(c)(2)	4	1	4	10	40	\$10,960

(ii).						
50.64(c)(2)	3	1	3	333.3	1000	\$274,000
(iii)						
Total	4		13		1,100	\$301,400

13. Estimate of Other Additional Cost

There are no additional costs.

14. Estimated Annualized Cost to the Federal Government

Section 50.64(c)(1)(i). NRC staff time for making a determination for each of the two "unique purpose" reactor requests will require approximately 10 hours for a total staff burden for 2 requests of 20 hours annually.

Section 50.64(c)(2). NRC staff time for consideration of a schedule proposed by a non-power reactor licensee and determination of a final schedule will require approximately 47 hours for each of 4 licensees annually for a total of 188 hours.

In addition, it is anticipated that approximately 500 hours will be expended by the NRC for 3 of the 4 licensees to review their safety analyses over the three-year clearance period. The staff does not anticipate the remaining licensee will develop a safety analysis during this reporting period. Therefore, approximately 500 hours (500 x 3 licensees divided by 3) would be expended annually for this effort.

The four licensees subject to 50.64(c)(2)(ii) will require 10 hours of staff burden each for 40 hours annually.

As summarized in Table 2, the total burden is 748 hours at a cost of \$204,952.

Table 2
Costs to the Federal Government

Section	Total Reports Reviewed	Burden per Report	Total Burden	Cost at \$274/hr
50.64(c)(1)	2	10	20	\$5,480
50.64(c)(2)	4	47	188	\$51,512
50.64(c)(2)(ii)	4	10	40	\$10,960
50.64(c)(2)(iii) Safety analyses	1 ¹	500	500	\$137,000
Total	10		748	\$204,952

¹ The NRC will review safety analyses for 3 licensees during the clearance period, which averages to one safety analyses review annually.

15. Reasons for Changes in Burden or Cost

There has been no change in the level of effort required or the number of submissions anticipated by the agency. However, the burden for safety analyses conducted under 50.64(c)(2)(iii) is now correctly captured as a reporting requirement, because these analyses must be provided to the NRC. Previously, burden for this requirement was captured as recordkeeping.

In addition, there has been an increase in the overall cost as a result of an increase in the fee rate from \$257 to \$274 per hour.

16. Publication for Statistical Use

The collected information is not published for statistical purposes.

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

Not applicable.