FINAL OMB SUPPORTING STATEMENT
FOR
NRC FORM 5
OCCUPATIONAL DOSE RECORD FOR A MONITORING PERIOD

(3150-0006)

EXTENSION

Description of the Information Collection

The NRC Form 5, "Occupational Dose Record for Monitoring Period," is used by NRC to compile and analyze occupational radiation dose information to assess the effectiveness of licensees' radiation protection programs and uses this information for planning inspections at licensee's facilities. NRC also uses this information to ensure that licensees are complying with the appropriate regulations to protect worker and public health and safety. Section 20.2206(c) requires licensees to submit their occupational radiation dose data, covering the preceding year, to NRC, on or before April 30 of each year. NRC Form 5 specifies the use of the individual's name, social security number or other unique identification, date of birth, and sex. This information is necessary to ensure the proper identification of the individual. NRC uses REIRView, a dose record data validation software, that assists in verification of file format of annual dose records submitted to the Radiation Exposure Information and Reporting System (REIRS).

A. JUSTIFICATION

1. Need for and Practical Utility of the Information Collection

The purpose of Title 10 of the *Code of Federal Regulations* Part 20 (10 CFR Part 20) is to establish "Standards for Protection Against Radiation." 10 CFR Part 20 provides requirements to persons licensed by the U.S. Nuclear Regulatory Commission (NRC) to receive, possess, use, transfer, or dispose of byproduct, source, or special nuclear material or to operate a production or utilization facility under parts 30 through 36, 39, 40, 50, 52, 60, 61, 63, 70, or 72. In addition, 10 CFR Part 20 applies to persons required to obtain a certificate of compliance or an approved compliance plan under 10 CFR Part 76, "Certification of Gaseous Diffusion Plants."

Pursuant to 10 CFR 20.1502, licensees are required to monitor exposures to radiation and radioactive material at levels to demonstrate compliance with the occupational dose limits in 10 CFR 20.1201. 10 CFR 20.2104 requires licensees to determine the occupational radiation dose received by their employees for whom monitoring was required under 10 CFR 20.1502 during the current year to demonstrate compliance with the occupational dose limits specified in 10 CFR 20.1201. Section 20.2206(a) specifies seven categories of licensees that are required to report occupational radiation dose information to NRC annually and section 20.2206(b) allows licensees to submit this information in paper format on

NRC Form 5, “Occupational Dose Record for a Monitoring Period,” or in an equivalent paper or electronic format.

10 CFR 20.2106 requires that each licensee shall maintain records of doses received by all individuals for whom monitoring was required pursuant to § 20.1502, and records of doses received during planned special exposures, accidents, and emergency conditions. These records are maintained on NRC Form 5 or in clear and legible records with the same information. These records include, when applicable:

- The deep-dose equivalent to the whole body, lens dose equivalent, shallow-dose equivalent to the skin, and shallow-dose equivalent to the extremities;
- The estimated intake of radionuclides (see § 20.1202);
- The committed effective dose equivalent assigned to the intake of radionuclides;
- The specific information used to assess the committed effective dose equivalent pursuant to § 20.1204(a) and (c), and when required by § 20.1502;
- The total effective dose equivalent when required by § 20.1202; and
- The total of the deep-dose equivalent and the committed dose to the organ receiving the highest total dose.

The licensee must maintain the records on NRC Form 5 until the Commission terminates the license.

10 CFR 20.2206 requires that seven categories of licensees submit an annual report of the results of individual monitoring carried out by the licensee for each individual for whom monitoring was required by § 20.1502 during that year. These categories include commercial nuclear power reactors and test reactor facilities; industrial radiographers; fuel processors (including uranium enrichment facilities), fabricators, and reprocessors; manufacturing and distribution of byproduct material; independent spent fuel storage installations; facilities for land disposal of low-level waste; and geologic repositories for high-level waste.

The licensee may submit additional data for individuals for whom monitoring was provided but not required. The licensee shall use Form NRC 5 or electronic media containing all the information required by Form NRC 5. The report covering the preceding year is due on or before April 30.

2. Agency Use of Information

NRC compiles and analyzes occupational radiation dose information to assess the effectiveness of licensees’ radiation protection programs and uses this information for planning inspections at licensee’s facilities. NRC also uses this information to ensure that licensees are complying with the appropriate regulations to protect worker and public health and safety. In addition, NRC publishes NUREG-0713, “Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities,” annually, to provide the public and other agency stakeholders with information regarding routine occupational radiation exposures to radiation and radioactive material that occur in connection with certain NRC-licensed activities.

In addition, the information supplied on NRC Form 5 “Occupational Dose Record for a Monitoring Period” is used to generate the NRC Form 4, “Cumulative Occupational Dose History,” a summation of an individual’s occupational exposure (OMB clearance 3150-0005). 10 CFR Part 20.2104(d) requires licensees to record an individual’s prior occupational dose on an NRC Form 4, or its equivalent, and this record must show each period in which the individual received occupational exposure to radiation or radioactive material and must be signed by the individual who received the exposure.

In addition, the NRC staff uses this data for the following purposes:

- The data permit the evaluation of trends, both favorable and unfavorable, from the viewpoint of the effectiveness of overall NRC/licensee radiation protection and as low as is reasonably achievable (ALARA) efforts by licensees.

- The data assist in the evaluation of the radiological risk associated with certain categories of NRC-licensed activities and are used for comparative analyses of radiation protection performance (e.g., U.S./foreign, boiling-water reactors/pressurized-water reactors [BWRs/PWRs], civilian/military, facility/facility, nuclear industry/other industries).

- The data are used within the NRC Reactor Oversight Process for inspection planning and in the Significance Determination Process.

- The data permit an evaluation of radiation exposure to transient individuals.

- The data are used to establish priorities for the use of NRC health physics resources: research, standards development, regulatory program development, and inspections conducted at NRC-licensed facilities.

- The data provide facts for answering Congressional and administration inquiries and for responding to questions raised by the public.

- The data are used to provide radiation exposure histories to individuals who were exposed to radiation at NRC-licensed facilities.

- The data provide information that may be used to conduct epidemiologic studies.

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. It is estimated that 96 percent of the potential responses are filed electronically. This estimate is based on 2021

calendar year data[1] and staff experience. NRC staff does not anticipate that the percentage of electronic submissions will change during the upcoming clearance period.

Regulatory Guide 8.7, Revision 4, (May 2018), "Instructions for Recording and Reporting Occupational Radiation Dose Data," provides licensees with guidance regarding the recommended format for both paper and electronic submission of occupational radiation dose data. The electronic reporting guidance provided in this document is intended to reduce the reporting burden on licensees. The NRC has developed a software tool to allow licensees to review their electronic data files prior to submitting the data to the NRC. The software can be downloaded at no cost to licensees from the NRC's REIRS Web site at https://www.reirs.com/. REIRView Validation software validates the data and format in accordance with the current regulatory guidance. The software also allows the licensees to review all errors and warnings identified in the submittal and view a summary of the data to verify dose distribution and totals. Once verified, the licensee may submit the file using the secure File Submission web page. The File Submission web page allows licensees to electronically submit their files through an encrypted file submission system. The web portal meets all cyber security requirements to protect Personally Identifiable Information (PII) as defined by the National Institute of Standards and Technology (NIST) publication 800-122.

Section 20.2206(c) requires licensees to submit their occupational radiation dose data, covering the preceding year, to NRC, on or before April 30 of each year.

4. Effort to Identify Duplication and Use Similar Information

No sources of similar information are available. There is no duplication of requirements.

5. Effort to Reduce Small Business Burden

NRC provides REIRView, a dose record data validation software, at no cost to licensees. REIRView assists in verification of file format of annual dose records submitted to the REIRS system. NRC also supports the secure File Submission Web page. Both are found on the REIRS Web site at https://www.reirs.com/. The NRC staff estimates that 3 percent of respondents may be small businesses.

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

If the requirements of Section 20.2206(c) were not met by licensees, or if the collection was conducted less frequently than on an annual basis, NRC would not receive information about the radiation exposures received by occupational workers at NRC-licensed facilities. As previously mentioned, 10 CFR 20.2206 is the only regulation that requires licensees to submit occupational radiation

[1] In total, NRC received **135,632** electronic records and **5,029** paper records for the 2021 calendar year from NRC licensees required to report occupational dose data pursuant to 10 CFR 20.2206(c).

exposure information to the NRC. NRC uses this information to ensure that occupational radiation workers are receiving occupational radiation doses that comply with the occupational dose limits in 10 CFR 20.1201. If the NRC did not require this information collection, the agency would not be able to communicate with its stakeholders on how licensees' radiation protection programs are working to ensure that radiation exposures to occupational workers, and to the public, are being kept as low as is reasonably achievable (ALARA).

In addition, the REIRS database and NUREG-0713 are the two tools used to identify occupational workers who work at multiple licensees throughout a calendar year and receive occupational radiation doses from multiple licensee facilities. For these types of occupational workers, also known as transient workers, it is important to know their annual occupational radiation doses and ensure that licensees are instituting processes and practices to ensure that these types of workers do not exceed the regulatory occupational dose limits in 10 CFR 20.1201.

7. Circumstances Which Justify Variation from OMB Guidelines

Records associated with the NRC Form 5 must be retained by the licensee for the life of the NRC license in accordance with Section 20.2106(f). Maintaining the records for the life of the NRC license assists in several of the routine uses of the System of Records NRC-27, such as evaluating radiation exposure received by individuals and advising standards for protection against ionizing radiation resulting from activities conducted under licenses issued by the NRC.

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 August 30, 2023 (88 FR 59949). A nuclear power facility licensee, a research broad-scope materials licensee, and a university research reactor licensee were contacted by telephone. No responses or comments were received as a result of the FRN or the staff's direct solicitation of comment.

9. Payment or Gifts 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).

NRC Form 5 specifies the use of the individual's name, social security number or other unique identification, date of birth, and sex. This information is necessary to ensure the proper identification of the individual.

In accordance with Section 20.2106(d), NRC Form 5 falls under privacy protection. NRC Form 5 is protected from public disclosure because of the personal information this form requires identifying an individual.

There is a Privacy Act System of Records Notice for the NRC's Radiation Exposure Information and Reporting System (REIRS). The System of Records Notice for REIRS, NRC-27, was last published on December 27, 2019 (84 FR 71536) and can be found under https://www.nrc.gov/docs/ML2002/ML20022A245.pdf.

This system of records allows the NRC to provide REIRS data to states, government agencies, and organizations that conduct health studies research. Requests for access to REIRS data follow a multi-step process. Agencies interested in performing statistical or other evaluations of the data must first send a request to the REIRS project manager (PM) in the Office of Nuclear Regulatory Research. The PM reviews the request for consistency with the authorized uses of the data under the Privacy Act. Data in the REIRS system are stored in a secure server at Oak Ridge Associated Universities (ORAU). Any agencies requesting REIRS data must provide evidence of the ability to protect Personally Identifiable Information (PII) in the data request. Once the PM approves the request for data, a request is made to the ORAU technical and security staff to provide an additional review to ensure PII is protected before any data is transferred to the requesting entity.

The NRC has an interagency agreement with the U.S. Department of Energy (DOE) to provide REIRS data and to receive data from DOE's Radiation Exposure Management System (REMS).

11. Justification for Sensitive Questions

There are no sensitive questions.

12. Estimate of Annual Burden

There are an estimated 4,404 potential respondents (93 reactors plus 4,311 materials licensees including licensees not subject to 20.2206(a)).

Recordkeeping

10 CFR 20.2106 specifies the recordkeeping requirements, recordkeeping frequency, and privacy protection requirements for the licensees that are required to annually submit, either using NRC Form 5 or its equivalent paper or electronic format, occupational radiation exposure data pursuant to 10 CFR 20.2206. It is estimated that approximately 252 licensees report to REIRS approximately 175,000 records.

Burden for recordkeeping is estimated to be 0.58 hours (approximately 35 minutes). The annual recordkeeping burden is approximately 101,500 hours (175,000 records x 0.58 hours/record), the annual recordkeeping burden cost is approximately $29,435,000 (101,500 hours x $290/hour) (See Table 1).

Reporting

10 CFR 20.2206 specifies seven categories of licensees that are required to annually submit their occupational workers' radiation exposure data. It is estimated that approximately 30 hours is needed to prepare, review, authorize, and submit this information to NRC, using NRC Form 5 or its paper or electronic equivalent. Although there are currently 4,404 recordkeepers, only the licenses belonging to the seven categories are required to report their data; the others may voluntarily report if they choose to do so. For the 2021 monitoring year (the most current data available), 252 licensees submitted occupational radiation exposure information to the NRC. This number includes 161 required licenses and 91 licenses who voluntarily reported. The total reporting burden is 7,560 hours. (252 licensees x 30 hours/licensee). The total reporting burden for the 252 licensees is $2,192,400 (7,560 hours x $290/hour) (See Table 2).

TOTAL: The total burden costs for recordkeeping and reporting are 109,060 hours at a cost of $31,627,400.

The $290 hourly rate used in the burden estimates is based on the Nuclear Regulatory Commission's fee for hourly rates as noted in 10 CFR 170.20, "Average cost per professional staff-hour." For more information on the basis of this rate, see the Revision of Fee Schedules; Fee Recovery for Fiscal Year 2022 (87 FR 37214, June 22, 2022).

13. Estimate of Other Additional Cost

In addition to the recordkeeping and reporting burdens, a storage burden is also associated with the information collection of occupational radiation exposure data. The quantity of records to be maintained and stored is roughly proportional to the recordkeeping burden. Based on the number of pages maintained for a typical clearance, records storage costs have been determined to be equal to 0.0004 times the recordkeeping burden cost. The storage cost for this clearance is estimated to be $12,651 (109,060 hours x 0.0004 x $290/hour).

14. Estimated Annualized Cost to the NRC

The staff has developed estimates of annualized costs to the Federal Government related to the conduct of this collection of information. These estimates are based on staff experience and subject matter expertise and include the burden needed to review, analyze, and process the collected information and any relevant operational expenses.

The NRC cost is incurred by inspectors reviewing the information on NRC Form 5, or its equivalent, and supporting records maintained by licensees. Annually, 233 hours of inspection time is spent reviewing such records, at an average of 2.5 hours for each of the 93 active reactor sites. The annual cost for reactor inspections of NRC Form 5, or its equivalent, is $67,570 (233 hours x $290/hour).

The number of operating reactor sites has declined from 98 sites to 93 sites. NRC is additionally responsible for conducting inspections of NRC Form 5, or its equivalent, and supporting records maintained by 4,311 materials licensees. It is estimated that approximately 2,156 hours of inspection time is spent reviewing such records at an average of 0.5 hours for each of the 4,311 materials licensees. The annual cost for materials inspectors to review these forms is $625,240 (2,156 hours x $290/hour).

Annually the total inspection cost is approximately $692,810 ($67,570 for reactor inspections + $625,240 for materials inspections) (See Table 3).

15. Reasons for Change in Burden

The burden increased by 2,154 hours from 106,906 hours to 109,060 hours. The majority of this change can be attributed to an inclusion of the burdens associated with reporting for materials licensees that voluntarily report to REIRS. The increase in reporting hours by materials licensees was mitigated by a decrease in the number of operating reactors and fewer monitored workers being annually reported. Additionally, there is a trend for materials licensees to be regulated under Agreement State agreements. When doing so, the licensee may choose to report to REIRS, but are not required to do so under NRC regulations. Based on experience and industry knowledge, the NRC anticipates that the number of monitored individuals during the upcoming clearance period will be similar to the data from 2021 used in these estimates.

Additionally, the hourly fee rate increased from $278/hr to $290/hr.

16. Publication for Statistical Use

NRC publishes NUREG-0713, “Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities,” annually, to provide the public and other agency stakeholders with information regarding routine occupational radiation exposures to radiation and radioactive material that occur in connection with certain NRC-licensed activities.

The NRC staff currently provides REIRS data to the National Institute of Occupational Safety and Health at the Centers for Disease Control and Prevention on an ad hoc basis. Additional data is provided to support DOE’s Low Dose Research Program’s Million Worker Health Study. This data—used in conjunction with data from DOE and the U.S. Department of Defense—provides a rich source of information for health studies research, health statistics, and epidemiological studies of value to regulatory agencies responsible for protecting the public and workers from the potential harmful effects of radiation exposure.

17. Reason for Not Displaying the Expiration Date

The expiration date is displayed on NRC Form 5.

18. Exceptions to the Certification Statement

Not applicable.

B. COLLECTIONS OF INFORMATION EMPLOYING STATISTICAL METHODS

Statistical methods are not employed in the collection of information.

TABLE 1

RECORDKEEPING INFORMATION COLLECTION BURDEN ASSOCIATED WITH NRC FORM 5

NUMBER OF RECORDKEEPERS		MONITORED WORKERS PER RECORD-KEEPER	NUMBER OF RECORDS	BURDEN HOURS/ RECORD	ANNUAL BURDEN HOURS	ANNUAL COST @ $290/HOUR
Reactors	93	1,545	143,699	0.58	83,345	$24,170,172
Materials	4,311	7	31,301	0.58	18,155	$5,264,828
Total	4,404		175,000		101,500	$29,435,000

TABLE 2

REPORTING INFORMATION COLLECTION BURDEN ASSOCIATED WITH NRC FORM 5

		RESPONSES PER RESPONDENT	NUMBER OF RESPONSES	BURDEN PER RESPONSE	ANNUAL BURDEN HOURS	ANNUAL COST @ $290/HOUR
Reactors	93	1	93	30	2,790	$809,100
Materials	68	1	68	30	2,040	$591,600
Materials - licensees not subject to 20.2206(a)	91	1	91	30	2,730	$791,700
Total	252		252		7,560	$2,192,400

Hours: 109,060 hours (7,560 reporting plus 101,500 recordkeeping)
Responses: 4,656 (252 reporting responses plus 4,404 recordkeepers)
Respondents: 4,404 respondents (93 reactors plus 4,311 materials licensees which includes voluntary submissions from materials licensees not subject to 20.2206(a))

TABLE 3

ESTIMATED ANNUALIZED COST TO THE NRC FOR REVIEW OF REPORTS AND CONDUCT OF INSPECTIONS ASSOCIATED WITH NRC FORM 5

		STAFF HOURS PER LICENSEE	STAFF BURDEN HOURS	ANNUAL COST @ $290/HOUR
Reactors	93	2.5	233	$67,570
Materials	4,311	0.5	2,156	$625,240
Totals	4,404		2,389	$692,810

GUIDANCE DOCUMENTS ASSOCIATED WITH

NRC FORM 5
OCCUPATIONAL DOSE RECORD FOR A MONITORING PERIOD

3150-0006

Title	Accession Number
Regulatory Guide 8.7, Revision 4 “Instructions for Recording and Reporting Occupational Radiation Dose Data”	ML17221A245