

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:

1. 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.
2. 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).
3. The data are used within the NRC Reactor Oversight Process for inspection planning and in the Significance Determination Process.
4. The data permit an evaluation of radiation exposure to transient individuals.
5. 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.
6. The data provide facts for answering Congressional and administration inquiries and for responding to questions raised by the public.
7. The data are used to provide radiation exposure histories to individuals who were exposed to radiation at NRC-licensed facilities.
8. 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 97 percent of the potential responses are filed electronically. This estimate is based on 2018 calendar year data<sup>1</sup> and staff experience. NRC staff does not anticipate that the percentage of electronic submissions will change during the upcoming clearance

---

<sup>1</sup> In total, NRC received **169,750** electronic records and **5,250** paper records for the 2018 calendar year from NRC licensees required to report occupational dose data pursuant to 10 CFR 20.2206(c).

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 of these 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 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 May 1, 2020 (85 FR 25478). The NRC contacted three potential respondents within the nuclear industry via email and received one comment back by phone.

A Nuclear Energy Institute representative responded with the following: "The form is necessary for the NRC to perform its functions and for industry to be in compliance with reporting requirements, so it's a very good thing that the form is being updated." The way in which the information collected is as efficient and clear as it can be, and the burden estimate is appropriate.

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 4,146 potential respondents (98 reactors plus 4,048 materials licensees).

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 159,988 persons are annually monitored at licensees' facilities and generate approximately 174,907 records.

Occupational workers that receive a radiation dose at more than one licensee generate more than one record. Burden for recordkeeping is estimated to be 0.58 hours (approximately 35 minutes). The annual recordkeeping burden is

approximately 101,446 hours (174,907 records x 0.58 hours/record), the annual recordkeeping burden cost is approximately \$28,201,988 (101,446 hours x \$278/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 4,048 potential respondents, 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 2018 monitoring year (the most current data available), 182 licensees submitted occupational radiation exposure information to the NRC. The total reporting burden is 5,460 hours. (182 licensees x 30 hours/licensee). The total reporting burden for the 182 licensees is \$1,517,880 (5,460 hours x \$278/hour) (See Table 2).

TOTAL: The total burden costs for recordkeeping and reporting are 106,906 hours at a cost of \$29,719,868.

### 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 \$11,287 (101,500 hours x 0.0004 x \$278/hour).

### 14. Estimated Annualized Cost to the NRC

The NRC cost is incurred by inspectors reviewing the information on NRC Form 5, or its equivalent, and supporting records maintained by licensees. Annually, 245 hours of inspection time is spent reviewing such records, at an average of 2.5 hours for each of the 98 active reactor sites. The annual cost for reactor inspections of NRC Form 5, or its equivalent, is \$68,110 (245 hours x \$278/hour).

The number of operating reactor sites has declined from 99 sites to 98 sites. NRC is additionally responsible for conducting inspections of NRC Form 5, or its equivalent, and supporting records maintained by 4,048 materials licensees. It is estimated that approximately 2,024 hours of inspection time is spent reviewing such records at an average of 0.5 hours for each of the 4,048 materials licensees. The annual cost for materials inspectors to review these forms is \$562,672 (2,024 hours x \$278/hour).

Annually the total inspection cost is approximately \$630,782 (\$68,110 for reactor inspections + \$562,672 for materials inspections) (See Table 3).

15. Reasons for Change in Burden

The burden decreased by 18,467 hours from 125,373 hours to 106,906 hours. The majority of this change can be attributed to a reduction in the number of monitored individuals reported by operating reactors. The NRC staff used the most recent data from the REIRS system (2018) to generate burden estimates for this supporting statement. The number of reported monitored individuals decreased from 184,635 in the last clearance to 150,214 in the current submission. This is consistent with a trend in which reactors are reporting fewer monitored workers annually. From 2015 onward, operating reactors have reported fewer monitored individuals each year. 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 2018 used in these estimates.

Additionally, the hourly fee rate increased from \$265/hr to \$278/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 @ \$278/HOUR
Reactors	98	1,532.8	150,214	0.58	87,124	\$24,220,472
Materials	4,048	6.1	24,693	0.58	14,322	\$3,981,516
Total	4,146		174,907		101,446	\$28,201,988

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 @ \$278/HOUR
Reactors	98	1	98	30	2,940	\$817,320
Materials	84	1	84	30	2,520	\$700,560
Total	182		182		5,460	\$1,517,880

Hours: 106,906 hours (5,460 reporting plus 101,446 recordkeeping)

Responses: 4,328 (182 reporting responses plus 4,146 recordkeepers)

Respondents: 4,146 respondents (98 reactors plus 4,048 materials licensees)

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 @ \$278/HOUR
Reactors	98	2.5	245	\$68,110
Materials	4,048	0.5	2,024	\$562,672
Totals	4,146		2,269	\$630,782

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