DRAFT OMB SUPPORTING STATEMENT FOR

NRC FORM 5
OCCUPATIONAL DOSE RECORD FOR A MONITORING PERIOD

(3150-0006)

REVISION

Description 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.

On December 4, 2007, NRC published a *Federal Register* Notice regarding changes to 10 CFR Parts 19, 20 and 50 (72 FR 68043). Specific changes to 10 CFR Part 20 included a definition change to the total effective dose equivalent (TEDE), which allowed NRC licensees to use the effective dose equivalent (for external exposures) in place of the deep dose equivalent in determining the TEDE value. This change to 10 CFR Parts 19, 20 and 50 became effective on February 15, 2008.

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. Pursuant to 10 CFR 20.2104 licensees are required 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.

NRC uses the occupational radiation dose information submitted by licensees as a metric in the NRC's Reactor Oversight Program to evaluate the effectiveness of licensees' radiation protection programs and provides input for inspections of licensees' facilities. The occupational radiation dose data is maintained in the NRC's Radiation Exposure Information and Reporting System (REIRS) database. The REIRS database is the NRC component of a nationwide radiation worker registry which implements the Federal Radiation Protection Guidance for Occupational Exposure approved by the President on January 20, 1987 (52 FR 2822-2834, January 27, 1987). An analysis of this data is published annually in NUREG-0713 "Occupational Radiation Exposure at Commercial Nuclear Power Reactors and Other Facilities" and is used by NRC, other government agencies, and licensees to develop dose trends at licensed facilities.

NRC encourages its licensees to reduce their paperwork burden by transmitting occupational radiation dose data electronically. Regulatory Guide 8.7, Revision 2 (November 2005), "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. In addition, software has been developed that is available from the NRC at no cost to licensees. Licensees with Internet access may download this software free of charge from the NRC's REIRS Web Page at http://www.reirs.com. This software vastly reduces the burden of collecting and maintaining occupational radiation dose information and allows licensees to (1) analyze compiled radiation dose data to improve their radiation protection programs, (2) produce electronic equivalents of NRC Form 5, and (3) upload this information to a disk for submittal to the NRC.

A. JUSTIFICATION

1. Need for and Practical Utility of the Information Collection

In November 2007, NRC sent a final rule to OMB titled, "10 CFR Parts 19, 20, and 50, Occupational Dose Records, Labeling Containers, and the Total Effective Dose Equivalent." Following OMB approval of this rule, on December 4, 2007, NRC published a *Federal Register* Notice regarding changes to 10 CFR Parts 19, 20 and 50 (72 FR 68043). Specific changes to 10 CFR Part 20 included a change to Section 20.2104(a) that no longer requires licensees to attempt to obtain the records of cumulative occupational radiation dose for each worker requiring monitoring under 10 CFR 20.1502 and a change to the definition for the total effective dose equivalent (TEDE) under 10 CFR 20.1003.

As it relates to the change in 10 CFR 20.1003, previously, the definition of the TEDE was the sum of the deep dose equivalent (DDE) to account for external exposure and the committed effective dose equivalent (CEDE) to account for internal exposure. Under the revised rule, the TEDE was redefined by replacing the DDE with the effective dose equivalent for external exposure, hereafter referred to as the EDEX. This change to the TEDE definition will result in a change to NRC Form 5, to include a new field for EDEX.

10 CFR 20.2206 requires seven categories of licensees to submit occupational radiation dose information either on a paper copy of NRC Form 5, an equivalent paper copy of NRC Form 5, or an electronic equivalent to NRC Form 5, to NRC annually for each individual monitored pursuant to 10 CFR 20.1502.

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.

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 80% of the potential responses are filed electronically.

Regulatory Guide 8.7, Revision 2, (November 2005), "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. In addition, the NRC-supplied software, REMIT is available to licensees at no cost. Licensees with Internet access may download this software free of charge from the NRC's REIRS Web site at http://www.reirs.com. This software vastly reduces the burden of collecting and maintaining occupational radiation dose information and allows licensees to verify the NRC Form 5 dose information prior to submitting it electronically to the NRC.

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. For the 2008 calendar year, licensees were required to submit their occupational radiation dose data by April 30, 2009. As of June 2013, **200** licensees submitted annual reports on occupational radiation exposure for the 2012 calendar year, totaling **205,063** records. Of the **200** licensees, 104 were commercial nuclear power reactor licensees and **96** were materials licensees. All 104 commercial nuclear power reactor licensees submitted their occupational radiation dose data electronically, either using the Radiation Exposure Management Information Transmittal (REMIT) software or another compatible electronic format. A total of **193,977** records were received from the 104 commercial nuclear power reactor licensees. Of the **96** materials licensees, **36** electronically submitted their occupational radiation exposure data, via the electronic methods stated above, and **60** submitted their data on paper. The paper records submitted were either NRC Form 5 or an equivalent paper format. A total of **10,547** records were received by the **36** materials licensees that submitted their data electronically and **1,977** records were received from the **60** materials licensees that submitted their data on paper. In total, NRC received **204,524** electronic records and **1,977** paper records for the 2012 calendar year from NRC licensees required to report occupational dose data pursuant to 10 CFR 20.2206(c).

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

NRC's development and maintenance of the REMIT software is a direct effort to reduce the burden on small businesses. REMIT is also used by large businesses to help reduce their paperwork burden. NRC provides the REMIT software, at no cost, to all licensees (both small and large firms) to assist them in their recording, reporting, and maintenance of occupational radiation exposure data. In addition, Section 20.2206(c) specifies that licensees may submit this data via the REIRS Web page at http://www.reirs.com. It is not possible to further reduce the reporting burden on small businesses and still meet the objectives stated in A.1 above.

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 licensee's 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 for the life of the NRC license in accordance with Section 20.2106(f).

8. Consultations Outside the NRC

Opportunity for public comment on the information collection requirements for this clearance package has been published in the Federal Register.

Due to the TEDE definition change, NRC plans to conduct several public meetings with stakeholders to receive input and feedback on this new definition and impacts, if any, to the use of NRC Form 5. NRC provided a presentation at the 30th Annual International Dosimetry and Records Symposium in June 2013. This conference was attended by representatives from the commercial nuclear power industry. Feedback received from licensees indicated that changing the NRC Form 5 to include the EDEX field would provide greater alignment with the TEDE definition in 10 CFR 20.1003. In addition, to comply with the reporting requirements, licensees indicated that an EDEX field is needed on the NRC Form 5.

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 to identify an individual.

11. Justification for Sensitive Questions

There are no sensitive questions.

12. Estimate of Annual Burden

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 190,000 persons are annually monitored at licensees' facilities and generate approximately 215,264 records. Occupational workers that receive a radiation dose at more than one licensee generate more than one record. It was previously estimated that 0.33 hours of clerical time was needed to complete one individual's NRC Form 5, or its electronic or paper equivalent. The addition of the new EDEX field will increase this clerical time from 0.33 hours to 0.58 hours. The annual recordkeeping

burden is approximately 124,852 hours (215,262 records x 0.58 hours/record), 112,507 for reactor licensees and 12,345 for materials licensees. The annual recordkeeping burden cost is approximately $33,959,744 (124,852 hours x $272/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. This reduction in reporting burden is due to the electronic reporting method used by many licensees. As of June 2013, 104 commercial nuclear power reactor licensees and 96 materials licensees submitted occupational radiation exposure information to the NRC. The annual reporting burden to commercial nuclear power reactor licensees is 3,120 hours (104 licensees x 30 hours) and 2,880 hours (96 licensees x 30 hours) to materials licensees. The total reporting burden is 6,000 hours (3,120 hours + 2,880 hours). The reporting burden cost is $848,640 (3,120 hours x $272/hour) to commercial nuclear power reactor licensees and $783,360 (2,880 hours x $272/hour) to materials licensees. The total reporting burden for the 200 licensees is $1,632,000 ($848,640 + $783,360). (See Table 2)

TOTAL: The total burden costs for recordkeeping and reporting are 130,852 hours (115,627 hours for reactor licensees + 15,225 hours for materials licensees) at a cost of $35,591,744 ($31,450,544 reactor licensees + $4,141,200 for materials licensees).

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 $13,584 (124,852 hours x 0.0004 x $272/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, 260 hours of inspection time is spent reviewing such records, at an average of 2.5 hours for each of the 104 reactor sites. The annual cost for reactor inspections of NRC Form 5, or its equivalent, is $70,720 (260 hours x $272/hour).

While the number of reactor sites has been constant, at 104 sites, for the past several years, there are fluctuations in the number of materials licensees. This fluctuation is mainly due to an increase in the number of Agreement States. Agreement States are those States that have entered into formal agreements

with NRC, pursuant to Section 274 of the Atomic Energy Act (AEA), to regulate certain quantities of AEA material at facilities located within their borders. There are currently 37 Agreement States. These 37 Agreement States have regulatory authority over approximately 18,900 materials licensees. However, NRC is responsible for conducting inspections of NRC Form 5, or its equivalent, and supporting records maintained by 4,042 materials licensees. It is estimated that approximately 2,021 hours of inspection time is spent reviewing such records at an average of 0.5 hours for each of the 4,042 materials licensees. The annual cost for materials inspectors to review these forms is $549,712 (2,021 hours x $272/hour).

Annually the total inspection cost is approximately $620,432 ($70,720 for reactor inspections + $549,712 for materials inspections) (See Table 3). These costs are fully recovered through fee assessments to NRC licensees pursuant to 10 CFR Parts 170 and 171.

15. Reasons for Change in Burden

The estimated burden has increased by 62,296 hours from the previous burden of 68,556 hours to 130,852 hours (6,000 reporting plus 124,852 recordkeeping). This burden change is due to an increase in the number of monitored individuals at licensee facilities pursuant to 10 CFR 20.1501. The increase in the number of monitored individuals increases the number of records received by the NRC. In addition to the increase in the number of monitored individuals, there was an increase in the total number of materials licensees that reported occupational dose data to the NRC. The materials licensee data submitted was by NRC materials licensees and Agreement State materials licensees. In the previous clearance, NRC received 173,419 records. As of June 2013, NRC received 215,262 records (204,524 electronic records + 10,738 paper records). In addition, the professional cost per hour has increased from $257/hr to $272/hr.

The number of responses has increased from 4,042 to 4,346. This change is due to the increase in the number of reporting responses and an increase in the number of recordkeepers. In the previous clearance period, there were 194 reporting responses and 3,848 recordkeepers. In this clearance, there are 200 reporting responses and 4,146 recordkeepers. Each recordkeeper has been counted as a single response, regardless of the number of records kept. Therefore, the number of responses is equal to the number of reporting responses plus the number of recordkeepers.

16. Publication for Statistical Use

NRC Form 5 is not published for statistical use.

17. Reason for Not Displaying the Expiration Date.

Not applicable.

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		NUMBER OF RECORDS/ RECORDKEEPER	NUMBER OF RECORDS	BURDEN HOURS/ RECORD	ANNUAL BURDEN HOURS	ANNUAL COST @ $272/HOUR
Reactors	104	1865.16	193,977	0.58	112,507	$30,601,904
Materials	4,042	5.266	21,285	0.58	12,345	$3,357,840
Total	4,146		215,262		124,852	$33,959,744

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 @ $272/HOUR
Reactors	104	1	104	30	3,120	$848,640
Materials	96	1	96	30	2,880	$783,360
Total	200		200		6,000	$1,632,000

Hours: 130,852 hours (6,000 reporting plus 124,852 recordkeeping)
Responses: 4,346 (200 reporting responses plus 4,146 recordkeepers)
Respondents: 4,146 respondents (104 reactors plus 4,042 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 @ $272/HOUR
Reactors	104	2.5	260	$70,720
Materials	4,042	0.5	2,021	$549,712
Totals	4,146		2,281	$620,432