

FINAL SUPPORTING STATEMENT
FOR
TITLE 10 OF THE *CODE OF FEDERAL REGULATIONS* PART 74
MATERIAL CONTROL AND ACCOUNTING
OF SPECIAL NUCLEAR MATERIAL
(3150-0123)

EXTENSION

Description of the Information Collection

"Special nuclear material" (SNM) is defined by Title I of the Atomic Energy Act of 1954 as plutonium, or uranium enriched in the isotopes uranium-233 or uranium-235 but does not include source material¹. The definition includes any other material that the Commission determines to be special nuclear material; however, the U.S. Nuclear Regulatory Commission (NRC) has not declared any other material as special nuclear material. NRC regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 74 establish requirements for material control and accounting (MC&A) of SNM applicable to licensees in general, and also specific performance based regulations for: (1) licensees authorized to possess and use strategic special nuclear material (SSNM), (2) licensees authorized to possess and use SNM of moderate strategic significance, and (3) licensees authorized to possess and use, or produce SNM of low strategic significance.

Under Part 74, licensees are required to conduct the following information collection activities:

- Notify the NRC of loss or theft of SNM,
- Keep records of receipt, inventory (including location and unique identity), acquisition, transfer, and disposal of all SNM in its possession regardless of its origin or method of acquisition,
- Establish an MC&A system, and
- Maintain a quality assurance program.

A. Justification

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

Part 74 of 10 CFR incorporates recordkeeping and reporting requirements for licensees that possess and use SNM. The records required to be reported or maintained pursuant to 10 CFR Part 74 are described in Appendix A of this supporting statement. The submitted information is needed for the timely discovery of inadvertent losses of SNM to the environment, or the theft or diversion of SNM by potentially hostile groups. Either of these events could endanger the public health and safety. The reporting requirements imposed on the licensee are intended to point out record anomalies which might indicate loss of material control, to provide necessary information to resolve identified anomalies, to alert the Commission to the condition, and to supply information that would assist in the recovery of SNM in the event of a confirmed loss. Certain requirements are necessary to satisfy obligations of the United States Government under its agreement with the International Atomic Energy Agency.

¹ Source Material means: (1) Uranium or thorium, or any combination thereof, in any physical or chemical form or (2) ores which contain by weight one-twentieth of one percent (0.05%) or more of: (i) Uranium, (ii) thorium or (iii) any combination thereof. Source material does not include special nuclear material. (10 CFR 40.4)

2. Agency Use of Information

Fundamental Nuclear Material Control Plans that describe how licensees intend to comply with the requirements of the regulations are required to be submitted for review and approval. Approved plans are the basis for inspections by NRC inspectors who must verify that the licensee is in compliance with the performance objectives specified in the regulations. Plan reviews are initiated within 30 days after submittal. The availability of supporting acceptance criteria contributes to expeditious plan reviews. Reports of unresolved inventory differences and abnormalities identified through physical inventories, material control tests, and item monitoring are reviewed by the NRC as soon as possible after receipt. Records of material control tests and anomaly investigation are required to be maintained by the licensees in order that inspectors may determine that performance objectives and commitments have been met.

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. The NRC has issued [Guidance for Electronic Submissions to the NRC](#) which provides direction for the electronic transmission and submittal of documents to the NRC. Electronic transmission and submittal of documents can be accomplished via the following avenues: the Electronic Information Exchange process, which is available from the NRC's "Electronic Submittals" Web page, by Optical Storage Media (e.g. CD-ROM, DVD), by facsimile or by e-mail. It is estimated that approximately 50% of the potential responses are filed electronically by email. Some licensees choose to submit hard copies to the document control center although the NRC allows electronic submissions.

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

A number of licensees who use SNM are small businesses. Since the consequences to the common defense and security or to the health and safety of the public of the improper control or use of a given quantity of SNM are the same for large and small entities, it is not possible to reduce the burden on small businesses by less frequent or less complete accounting or control procedures. NRC staff estimates that 10% of respondents to information collections in 10 CFR Part 74 are small businesses.

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

If the information collection is not conducted, the NRC will have no way to assess whether licensees are operating within the MC&A requirements and certain other requirements applicable to the possession, use, and transfer of SNM.

Applications for new licenses and amendments may be submitted at any time. Applications for renewal of licenses can be for terms up to 10 years. Information submitted in previous applications may be referenced without being resubmitted.

The Loss of Material Report required by 10 CFR Section 74.11 is submitted on the average of three times per year. In all occurrences, the cause is usually found in less than 1 week and is a result of measurement error, accounting error, number transposition, or failure to list all inventory items.

Approximately once a year, the quantity of material which is reported as lost requires further evaluation and a submission of a detailed report and proposed action plan to the NRC. Less frequent reporting would preclude the NRC from being notified in time to provide rapid response and quick assistance in achieving timely resolution.

7. Circumstances Which Justify Variation from the Office of Management and Budget Guidelines

Contrary to the Office of Management and Budget (OMB) Guidelines in 5 CFR Paragraph 1320.5(d), Section 74.11 requires that licensees submit reports to the NRC in less than 30 days in accordance with the reporting requirement specified in the subject regulation.

Section 74.11 of 10 CFR requires that reports of loss or theft or unauthorized production of SNM must be made within 1 hour of discovery. This requirement is needed to permit NRC to determine whether there has been a loss or diversion of SNM or unauthorized production of material and to assist in initiating prompt action for recovery of such material.

8. Consultations Outside the Agency

Opportunity for public comment on the information collection requirements for this clearance package was published in the *Federal Register* on August 19, 2020, 85 FR 51070. Five nuclear fuel cycle facilities that are subject to the requirements of 10 CFR Part 74 were contacted by email as part of the public consultation process. No additional responses or comments were received as a result of the FRN or the staff's direct solicitation of comment.

9. Payments or Gifts to Respondents

Not applicable.

10. Confidentiality of the Information

Confidential and proprietary information is protected in accordance with NRC regulations of 10 CFR Paragraph 9.17 (a) and 10 CFR Paragraph 2.390 (b).

Certain information designated as classified National Security Information is prohibited from public disclosure in accordance with Executive Order 12958.

11. Justification for Sensitive Questions

There are no sensitive questions.

12. Estimated Burden and Burden Hour Cost

The estimated burden for licenses to respond to 10 CFR Part 74 is 8,909 hours (8,240 recordkeeping hours + 669 reporting hours) at a cost of \$2,476,702 (8,240 recordkeeping hours + 669 reporting hours x \$278/hour). See Tables 1 and 2.

The \$278 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 2019 (84 FR 22331, May 17, 2019).

13. Estimate of Other Additional Costs

The NRC has determined that the quantity of records to be maintained is roughly proportional to the recordkeeping burden and; therefore, can be used to calculate approximate records storage costs. 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. Because the recordkeeping burden is estimated to be 8,240 hours, the storage cost for this clearance is \$916 (8,240 hours x 0.0004 x \$278/hour).

14. Estimated Annualized Cost to the Federal Government

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.

A. Review of Licensee Reports

The NRC staff review of licensee reports is estimated to take 920 hours annually. See Table 3.

B. Review of Licensee Records

Average number of inspections/yr	Number of MC&A inspectors	Record reviews per inspector	Total NRC Inspection Hours
10	2	90	1800

The annual cost for NRC licensing and inspection staff to review the records and reports required by 10 CFR Part 74 is estimated to be 2,720 hours (i.e., 920 + 1,800) @ \$278/hour or \$756,160.

15. Reasons for Changes in Burden or Cost

The burden has increased from 8,869 hours to 8,909 hours, an increase of 40 hours. Since the last submittal, the number of recordkeepers increased by 1, resulting in an overall increase in the estimated burden for 10 CFR Part 74 information collections.

NRC staff reviewed and updated the total number of recordkeepers under 10 CFR Part 74 to ensure the total includes reactor licensees, independent spent fuel storage installations, and research and test reactors subject to 10 CFR Part 74. As a result of this review, the count of recordkeepers increased from 156 to 157. As a result of this adjustment, the number of responses has changed from 173 (156 recordkeepers plus 17 responses) to 174 (157 recordkeepers plus 17 responses).

There has been an increase in the cost burden because the hourly fee rate has increased from \$265/hour to \$278/hour. Therefore, the reporting and recordkeeping burdens were updated to reflect the new hourly fee rate.

16. Publication for Statistical Use

None.

17. Reason for Not Displaying the Expiration Date

The recordkeeping and reporting requirement for this information collection are associated with regulations and are not submitted on instruments such as forms or surveys. For this reason, there are no data instruments on which to display an OMB expiration date. Further, amending the regulatory text of the CFR to display information that, in an annual publication, could become obsolete would be unduly burdensome and too difficult to keep current.

18. Exemptions to the Certification Statement

There are no exemptions.

B. Collections of Information Employing Statistical Methods

Statistical methods are not used in this collection of information.

Table 1: Reporting Requirements

Section	Brief Description of 10 CFR Part 74 Requirements	Number of Respondents	Reponses per Respondent	Total Responses	Burden Per Response	Total Annual Burden Hours	Cost @ \$278/hr
74.11	Notification of loss or theft	3	1	3	15	45	\$ 12,510
74.31(b)	Submittal of a Fundamental Nuclear Material Control Plan	3	1	3	80	240	\$ 66,720
74.33 (a),(b), (c)	Submittal of a Fundamental Nuclear Material Control Plan	1	1	1	80	80	\$ 22,240
74.41(b)	Submittal of a Fundamental Nuclear Material Control Plan	No Currently Operating Category II Facilities	-	-	80	-	\$ -
74.43(c)	Notification and report of significant inventory differences	No Currently Operating Category II Facilities	-	-	80	-	\$ -
74.51(c)	Submittal of a Fundamental Nuclear Material Control Plan	2	1	2	100	200	\$ 55,600
74.57(c)	Notification of unresolved loss detection alarms	2	1	2	8	16	\$ 4,448
74.57(f)(2)	Notification of abrupt loss detection alarms	2	1	2	4	8	\$ 2,224
74.59(f)	Notification and report of excessive inventory differences	2	2	4	20	80	\$ 22,240
Totals		6		17		669	\$ 185,982

Table 2: Recordkeeping Requirements						
Section	Brief Description of 10 CFR Part 74 Sections	Number of Recordkeepers	Average Annual Burden Per Recordkeeper	Total Annual Burden (Hrs)	Cost @\$278/hr	Retention Period
74.19	Records requirements for licensees not subject to Subparts C, D, and E	151	40	6,040	\$ 1,679,120	Varies - 3 years to duration of license
74.31(a), (c), & (d)	Records requirements for SNM of low strategic significance	3	195	585	\$ 162,630	3 years
74.33(a), (c), & (d)	Records requirements for enrichment licensees	1	415	415	\$ 115,370	3 years
74.41(a) and (c) - included in 74.43(a),(b),(d), and 74.45	Records requirements for SNM of moderate strategic significance	No Currently Operating Category II Facilities	60	-	\$ -	3 years
74.51(a)	Records requirements for strategic SNM (establish MC&A system)	2	200	400	\$ 111,200	3 years
74.57(d) and 74.59(b), (c), (d), (e), (f) & (h)	Records requirements for strategic SNM, quality assurance and accounting requirements(including alarm resolution program)	2	200	400	\$ 111,200	3 years
74.59(g)	Records requirements for strategic SNM (auditable records)	2	200	400	\$ 111,200	3 years
Totals		157		8,240	\$ 2,290,720	

TOTAL RESPONDENTS: 157

TOTAL RESPONSES: 174 responses (157 recordkeepers + 17 reporting responses)

TOTAL ANNUAL BURDEN HOURS: 8,909 hrs (8,240 recordkeeping hrs + 669 reporting hrs)

Estimated Cost to the Public to Respond to the Collection: \$2,476,7032 (8,909 hrs x \$278/hr).

Table 3: Costs for the Federal Government: Review of Reports					
Section	Brief Description of 10 CFR Part 74	No. of Licensee Responses Annually	NRC Staff Time to Review Responses	Total Annual Hours	Comments
74.11	Notification of loss or theft	3	20	60	
74.31(b)	Submittal of a Fundamental Nuclear Material Control Plan	3	100	300	
74.33(b)	Submittal of a Fundamental Nuclear Material Control Plan	1	100	100	
74.41(b)	Submittal of a Fundamental Nuclear Material Control Plan				No Currently Operating Category II Facilities
74.43(c)	Submittal of report of significant inventory differences				No Currently Operating Category II Facilities
74.51(c)	Submittal of a Fundamental Nuclear Material Control Plan	2	150	300	
74.57(c)	Submittal of report of unresolved loss detection alarms	2	10	20	
74.57(f)(2)	Submittal of report of abrupt loss of SSNM	2	10	20	
74.59(f)	Submittal of report of excessive inventory differences	4	30	120	
TOTALS		17		920	

APPENDIX A

DESCRIPTION OF INFORMATION COLLECTION REQUIREMENTS IN 10 CFR PART 74 MATERIAL CONTROL AND ACCOUNTING OF SPECIAL NUCLEAR MATERIAL (3150-0123)

Section 74.11 requires each licensee who possesses one gram or more of contained uranium-235, uranium-233, or plutonium to notify the NRC Operations Center within 1 hour of discovery of any loss or theft or other unlawful diversion of SNM which the licensee is licensed to possess, or any incident in which an attempt has been made to commit a theft or unlawful diversion of SNM. The requirement to report within 1 hour of discovery does not pertain to measured quantities of SNM disposed of as discards or inventory difference quantities. Each licensee who operates a uranium enrichment facility is required to notify the NRC Operations Center within 1 hour of discovery of any unauthorized production of enriched uranium. For centrifuge enrichment facilities the requirement to report enrichment levels greater than that authorized by license within 1 hour does not apply to each cascade during its start-up process, not to exceed the first 24 hours.

Section 74.13 (a)(b) requires each licensee, including nuclear reactor licensees as defined in Sections 50.21 and 50.22 of 10 CFR, possessing, or who had possessed in the previous reporting period, at any one time and location, SNM in a quantity totaling one gram or more of contained uranium-235, uranium-233, or plutonium to complete and submit, in computer-readable format Material Balance Reports, DOE/NRC Form 742, concerning SNM that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost. The Physical Inventory Listing Report, DOE/NRC Form 742C, must be submitted with each Material Balance Report. Reporting burden for DOE/NRC Form 742 and 742C are covered under OMB Clearance Nos. 3150-0004 and 3150-0058, respectively. Any licensee who is required to submit routine Material Status Reports pursuant to 10 CFR Section 75.35 is required to prepare and maintain these reports only as provided in that section, as more fully described in OMB Clearance No. 3150-0055.

Section 74.15 (a)-(d) requires each licensee who transfers or receives SNM in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium to complete in computer-readable format a Nuclear Material Transaction Report, DOE/NRC Form 741. In addition, each licensee who adjusts the inventory in any manner, other than for transfers and receipts, is required to submit a Nuclear Material Transaction Report, in computer-readable format, to coincide with the submission of the Material Balance report. Each licensee who receives one gram or more of contained uranium-235, uranium-233, or plutonium from a foreign source is required to complete in a computer-readable format both the supplier's and receiver's portion of the Nuclear Material Transaction Report. In order to assure the accurate identification and measurement of the material received, the licensee is required to perform independent tests, and indicate these test results on the receiver's portion of the form. Each licensee who ships SNM in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium to a foreign recipient is required to complete in computer-readable format the supplier's portion of the Nuclear Material Transaction Report. The licensee is required to complete the receiver's portion only if a significant shipper-receiver difference as described in 10 CFR Sections 74.31, 74.43, or 74.59, as applicable, is identified. Reporting burden for DOE/NRC Form 741 is covered under OMB Clearance No. 3150-0003. Any licensee required to submit inventory change reports pursuant to 10 CFR Section 75.34 is required to prepare and submit these reports only as provided in that section, as more fully described in OMB Clearance No. 3150-0055.

Section 74.17 requires each licensee subject to the requirements of Sections 74.31, 74.33, or 74.41(a) of this part to submit a completed Special Nuclear Material Physical Inventory Summary Report on NRC Form 327 not later than 60 calendar days from the start of each physical inventory required by Sections 74.31(c)(5), 74.33(c)(4), or 74.43(c)(7). Each licensee subject to the requirements of Section 74.51 is required to submit a completed NRC Form 327 not later than 45 calendar days from the start of each physical inventory required by Section 74.59(f). Reporting burden for NRC Form 327 is included in OMB Clearance No. 3150-0139.

Section 74.19 requires each licensee not subject to Sections 74.31, 74.33, 74.43, or 74.59 to keep records showing the receipt, inventory (including location and unique identity), acquisition, transfer, and disposal of all SNM in its possession regardless of its origin or method of acquisition. These records must be retained as long as the licensee retains possession of the material and for 3 years following transfer of the material. Each record of transfer of SNM to other persons must be retained by the licensee who transferred the material until the Commission terminates the license authorizing the licensee's possession of the material. Each record relating to material control or material accounting that is required by 10 CFR Part 74 or by license condition must be maintained and retained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified by regulation or license condition, the licensee is to retain the record until the Commission terminates the license that authorizes the activity that is subject to the recordkeeping requirement. Each licensee authorized to possess SNM in a quantity exceeding one effective kilogram at any one time are required to establish, maintain, and follow written material control and accounting procedures. The licensee shall retain these procedures until the Commission terminates the license that authorizes possession of the material and retain any superseded portion of the procedures for 3 years after the portion is superseded. Each licensee not subject to Sections 74.31, 74.33, 74.43, or 74.59, who is authorized to possess SNM in a quantity greater than 350 grams contained in uranium-235, uranium-233, or plutonium, or any combination thereof, is required to perform physical inventories at intervals not to exceed 12 months. The records associated with each of these physical inventories must be retained until the Commission terminated the license that authorized the possession of SNM.

Section 74.31(a)-(d) requires each licensee who is authorized to possess and use more than one effective kilogram of SNM of low strategic significance, excluding sealed sources, at any site or contiguous sites subject to control by the licensee, other than a production or utilization facility licensed pursuant to Part 50 or 70 of 10 CFR, or operations involved in waste disposal, to implement and maintain a Commission-approved MC&A system that will achieve the general performance objectives as described in Section 74.31(a). To meet these general performance objectives, the MC&A system must include the capabilities as described in Section 74.31(c). The licensee is required to establish and maintain records that demonstrate that the general performance objectives and system capabilities have been met and maintain these records for at least 3 years, unless a longer retention time is required by 10 CFR Part 75.

Section 74.33(a)-(c) requires each licensee who is authorized to possess equipment capable of enriching uranium or operate an enrichment facility, and produce, possess, or use more than one effective kilogram of SNM of low strategic significance at any site or contiguous sites, subject to control by the licensee, to establish, implement, and maintain an NRC-approved MC&A system that will achieve the general performance objectives as described in Section 74.33(a). To meet these general performance objectives, the MC&A system must include the capabilities as described in Section 74.33(c). The licensee is required to establish and maintain records that demonstrate that the general performance objectives and system capabilities have been met and maintain these records for at least 3 years, unless a longer retention time is required by 10 CFR Part 75.

Section 74.41(a)-(c) requires each licensee who is authorized to possess SNM of moderate strategic significance or SNM in a quantity exceeding one effective kilogram of SSNM in

irradiated fuel reprocessing operations other than as sealed sources and to use this material at any site other than a nuclear reactor licensed pursuant to Part 50 of 10 CFR; or as reactor irradiated fuels involved in research, development, and evaluation programs in facilities other than irradiated fuel reprocessing plants; or an operation involved with waste disposal, to establish, implement, and maintain a Commission-approved MC&A system that will achieve the performance objectives as described in Section 74.41(a).

Section 74.43 (a)-(c) requires licensees subject to Section 74.41 to maintain the internal control, inventory, and recordkeeping capabilities as described in this section. The licensee must establish records that will demonstrate that the general performance objectives of Section 74.41(a) and the system capabilities as described in Sections 74.43 and 74.45 have been met, and maintain these records for at least 3 years, unless a longer retention time is required by 10 CFR Part 75.

Section 74.45 requires licensees subject to Section 74.41 to establish and maintain the measurement and measurement control capabilities as described in this section.

Section 74.51(a)-(c) requires each licensee who is authorized to possess five or more formula kilograms of SSNM and to use such material at any site, other than a nuclear reactor licensed pursuant to Part 50 of 10 CFR, an irradiated fuel reprocessing plant, an operation involved with waste disposal, or an independent spent fuel storage facility licensed pursuant to Part 72 of 10 CFR to establish, implement, and maintain a Commission-approved MC&A system that will achieve performance objectives as described in Section 74.51(a). To meet these general performance objectives, the MC&A system must provide the capabilities as described in Sections 74.53, 74.55, 74.57, and 74.59.

Section 74.57(c)-(f)(2) requires licensees subject to Section 74.51 to provide the MC&A alarm resolution capabilities as described in this section. Licensees are required to resolve the nature and cause of any MC&A alarm within approved time periods. Each licensee is required to notify the NRC Operations Center by telephone of any MC&A alarm that remains unresolved beyond the time period specified for its resolution in the licensee's fundamental nuclear material control plan. Notification must occur within 24 hours except when a holiday or weekend intervenes in which case the notification must occur on the next scheduled workday.

Section 74.59 (b)-(h) requires licensees subject to Section 74.51 to provide the quality assurance and accounting capabilities described in this section. These capabilities include management structure; personnel qualification and training; measurements and measurement control; physical inventory; accounting; and internal control. The licensee is required to establish and maintain records that demonstrate that requirements of Sections 74.53, 74.55, 74.57, and 74.59 have been met and retain those records for at least 3 years, unless a longer retention time is required by 10 CFR Part 75.

APPENDIX B

GUIDANCE DOCUMENTS FOR INFORMATION COLLECTION REQUIREMENTS IN
 TITLE 10 OF THE *CODE OF FEDERAL REGULATIONS* PART 74
 MATERIAL CONTROL AND ACCOUNTING
 OF SPECIAL NUCLEAR MATERIAL
 (3150-0123)

Document	ADAMS Accession Number
NUREG-1280, Revision 1, "Standard Format and Content Acceptance Criteria for the Material Control and Accounting (MC&A) Reform Amendment"	ML031340295
NUREG-1065, Revision 2, "Acceptable Standard Format and Content for the Fundamental Nuclear Material Control (FNMC) Plan Required for Low Enriched Uranium Facilities"	ML031340288
NUREG/CR-5734, "Recommendations to the NRC on Acceptable Standard Format and Content for the Fundamental Nuclear Material Control (FNMC) Plan Required for Low Enriched Uranium Facilities"	ML031340297