

DRAFT SUPPORTING STATEMENT
FOR
10 CFR PART 74
MATERIAL CONTROL AND ACCOUNTING
OF SPECIAL NUCLEAR MATERIAL
(3150-0123)

REVISION

Description of the Information Collection

U.S. Nuclear Regulatory Commission (NRC) regulations in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 70 establish procedures and criteria for the issuance of licenses to receive title to own, acquire, deliver, receive, possess, use, or transfer special nuclear material (SNM). NRC regulations in 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, pursuant to the Atomic Energy Act of 1954, as amended, and Title II of the Energy Reorganization Act of 1974, as amended.

A. Justification

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

Part 74 incorporates recordkeeping and reporting requirements for licensees that possess and use SNM. The records required to be reported or maintained pursuant to sections 10 CFR Part 74 are provided below.

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 §§ 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 special nuclear material 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. Any licensee who is required to submit routine Material Status Reports pursuant to §75.35 of 10 CFR are 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 §§ 74.31, 74.43, or 74.59, as applicable, is identified. Any licensee required to submit inventory change reports pursuant to §75.34 of 10 CFR 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 §§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 §§74.31(c)(5) , 74.33(c)(4), or § 74.43(c)(7). Each licensee subject to the requirements of §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 §74.59(f).

Section 74.19 requires each licensee not subject to §§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 §§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 §74.31(a). To meet these general performance objectives, the MC&A system must include the capabilities as described in §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 a NRC-approved MC&A system that will achieve the general performance objectives as described in §74.33(a). To meet these general performance objectives, the MC&A system must include the capabilities as described in §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 §74.41(a).

Section 74.43 (a)-(c) requires licensees subject to §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 §74.41(a) and the system capabilities as described in

§§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 §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 §74.51(a). To meet these general performance objectives, the MC&A system must provide the capabilities as described in §§74.53, 74.55, 74.57, and 74.59.

Section 74.53 requires licensees subject to §74.51 to monitor internal transfers, storage and processing of SSNM. The process monitoring must achieve the detection capabilities as described in this section.

Section 74.55 requires licensees subject to §74.51 to provide the detection capability as described in this section for laboratory samples containing less than 0.05 formula kilograms of SSNM and any uniquely identified items of SSNM that meet the criteria described in 74.55(a). The licensee is required to verify the presence and integrity of selected items on a periodic basis as described in this section.

Section 74.57(c)-(f)(2) requires licensees subject to §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)-(f), (h) requires licensees subject to §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 §§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.

These sections are deemed necessary 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.

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. 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 90 percent of the potential responses are filed electronically.

4. Effort to Identify Duplication and Use Similar Information

No sources of similar information are available. There is no duplication of requirements. NRC has in place an ongoing program to examine all information collections with the goal of eliminating all duplication and/or unnecessary information collections.

5. Effort to Reduce Small Business Burden

A number of licensees who use special nuclear material 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 special nuclear material 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.

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, NRC will have no way to assess whether licensees are operating within the material control and accounting

requirements and certain other requirements applicable to the possession, use, and transfer of special nuclear material.

Applications for new licenses and amendments may be submitted at any time. Applications for renewal of licenses can be for terms up to ten years. Information submitted in previous applications may be referenced without being resubmitted. The Loss of Material Report required by §74.11 is submitted on the average of three times per year. In all occurrences, the cause is usually found in less than one 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 1320.5(d), Section 74.11 requires that licensees submit reports to the NRC in less than thirty days.

Section 74.11 requires that reports of loss or theft or unauthorized production of SNM must be made within one hour of discovery. This requirement is needed to permit NRC to determine whether there has been a loss or diversion of special nuclear material 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 has been published in the Federal Register.

9. Payments or Gifts to Respondents

Not applicable.

10. Confidentiality of the Information

Confidential and proprietary information is protected in accordance with NRC regulations at 10 CFR 9.17 (a) and 10 CFR 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 9,914 hrs (9,005 recordkeeping hrs + 909 reporting hrs) at a cost of \$2,696,608 (9,005 recordkeeping hrs + 909 reporting hrs x \$272/hr). See tables 1 and 2.

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 9,005 hours, the storage cost for this clearance is \$980 (9,005 hours x 0.0004 x \$272/hour).

14. Estimated Annualized Cost to the Federal Government

A. Review of Licensee Reports

NRC staff review of licensee reports is estimated to take 1,260 hours annually. See table 3.

B. Review of Licensee Records

<u>Avg No. of Inspections/Year</u>	<u>No. of MC&A Inspectors</u>	<u>Record Reviews Hours Per Inspector</u>	<u>Total NRC Inspection Hours</u>
10	2	90	1,800

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 3,060 hrs (i.e., 1,260 + 1,800) @ \$272/hr or \$832,320.

This cost is fully recovered through the assessments to NRC licensees pursuant to 10 CFR Parts 170 and/or 171.

15. Reasons for Changes in Burden or Cost

Since the last submittal, the number of respondents that submitted a Fundamental Nuclear Material Control Plan has decreased from 6 to 5. Therefore, in the reporting requirements, the number of responses changed from 21 to 20. Also, the number of recordkeepers has changed from 110 to 150 to update the number to include all current licensees required to retain records, including operating reactors, research and test reactors, and small licensees. As a result of this adjustment, the number of responses has increased from 131 to 170 (150 recordkeepers plus 20 responses).

There has been an increase in the cost burden because the hourly fee rate has increased from \$259/hr to \$272/hr. 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

For requirements contained in 10 CFR 74, amending the Code of Federal Regulations to display information that, in an annual publication, could become out of date would confuse the public. Additionally, for the information collections contained in the guidance documents NUREG-1065, NUREG/CR-5734, and NUREG-1280, revising the guidance documents merely to update the expiration date unnecessarily expends scarce agency resources.

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 Sections	Number of Respondents	Reponses per Respondent	Total Responses	Burden Per Response	Total Annual Burden Hours	Costs @\$272/hr
74.11	Notification of loss or theft	3	1	3	15	45	12,240
74.13(a)	Submittal of Form 742 and 742C	See OMB Clearance Nos. 3150-0004 & 3150-0058		0			0
74.13(b)	Submittal of Form 742 under Part 75	See OMB Clearance No. 3150-0055		0		0	0
74.15(a)	Submittal of Form 741	See OMB Clearance No. 3150-0003		0		0	0
74.15(b)	Submittal of Form 741	See OMB Clearance No. 3150-0003		0		0	0
74.15(c)	Submittal of Form 741 from foreign source	See OMB Clearance No. 3150-0055		0		0	0
74.15(d)	Submittal of Form 741 under Part 75	See OMB Clearance No. 3150-0055		0		0	0
74.17	Submittal of Form 327	See OMB Clearance No. 3150-0139		0		0	0
74.31(b)	Submittal of a Fundamental Nuclear Material Control Plan	5	1	5	80	400	108,800
74.33 (a),(b), (c)	Submittal of a Fundamental Nuclear Material Control Plan	2	1	2	80	160	43,520
74.41(b)	Submittal of a Fundamental Nuclear Material Control Plan	No Currently Operating Category II Facilities		0		0	0
74.43(c)	Notification and report of significant inventory differences	No Currently Operating Category II Facilities		0		0	0
74.51(c)	Submittal of a Fundamental Nuclear Material Control Plan	2	1	2	100	200	54,400
74.57(c)	Notification of unresolved loss detection alarms	2	1	2	8	16	4,352
74.57(f)(2)	Notification of abrupt loss detection alarms	2	1	2	4	8	2,176
74.59(f)	Notification and report of excessive inventory differences	2	2	4	20	80	21,760
Totals		18		20		909	247,248

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 @\$272/hr	Retention Period
74.19	Records requirements for licensees not subject to Subparts C, D, and E	150	40	6,000	1,632,000	Varies - 3 years to duration of license
74.31(a), (c), & (d)	Records requirements for SNM of low strategic significance	5	195	975	265,200	
74.33(a), (c), & (d)	Records requirements for enrichment licensees	2	415	830	225,760	3 years
74.41(a) and (c) - included in 74.43(d)	Records requirements for SNM of moderate strategic significance	No Currently Operating Category II Facilities	0	0	0	
74.43(a) - Covered under 74.43 (b) & (d)	Records requirements for SNM of moderate strategic significance					
74.43(b)	Records requirements for SNM of moderate strategic significance	No Currently Operating Category II Facilities	0	0	0	3 years
74.43(d)	Records requirements for SNM of moderate strategic significance	No Currently Operating Category II Facilities	0	0	0	Varies - 3 years to duration of license
74.45	Records requirements for SNM of moderate strategic significance	No Currently Operating Category II Facilities	0	0	0	Varies - 3 years to duration of license
74.51(a)	Records requirements for strategic SNM	2	200	400	108,800	3 years
74.57(d)	Records for alarm resolution program	Covered under §74.59(g)				
74.59(b), (c), (d), (e), & (h)	Records requirements for strategic SNM	Covered under §74.59(g)				
74.59(f)	Records requirements for strategic SNM	2	200	400	108,800	3 years
74.59(g)	Records requirements for strategic SNM	2	200	400	108,800	3 years
Totals		150		9,005	2,449,360	

Total Number of Recordkeepers: 150
Total Recordkeeping Hours: 9,005
Total Number of Responses: 170

TOTAL RESPONSES: 170 responses (150 recordkeepers + 20 responses)
TOTAL ANNUAL BURDEN HOURS: 9,914 hrs (9,005 recordkeeping hrs + 909 reporting hrs)
Estimated Cost to the Public to Respond to the Collection: \$2,696,608 (9,914 hrs x \$272/hr).

Table 3
Costs to the Federal Government: Review of Reports

Section	Brief Description of 10 CFR Part 74 Sections	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	
74.13(a)	Submittal of Form 742 and 742C				See OMB Clearance Nos. 3150-0004, 3150-0058
74.13(b)	Submittal of Form 742 under Part 75	1	40	40	
74.15(a) & (b)	Submittal of Form 741				See OMB Clearance No. 3150-0003
74.17	Submittal of Form 327				See OMB Clearance No. 3150-0139
74.31(b)	Submittal of a Fundamental Nuclear Material Control Plan	5	100	500	
74.33(b)	Submittal of a Fundamental Nuclear Material Control Plan	2	100	200	
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		21		1,260	