

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

EXTENSION WITH BURDEN 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 licenses 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 and are provided below.

Section 74.11 requires each licensee who possesses one gram or more of contained uranium-235, uranium-233, or plutonium shall notify the NRC Operations Center within 1 hour of discovery of any loss or theft or other unlawful diversion of special nuclear material 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 special nuclear material. The requirement to report within 1 hour of discovery does not pertain to measured quantities of special nuclear material disposed of as discards or inventory difference quantities. Each licensee who operates an uranium enrichment facility shall 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 requires each licensee, including nuclear reactor licensees as defined in §§ 50.21 and 50.22 of this chapter, possessing, or who had possessed in the previous reporting period, at any one time and location, special nuclear material in a quantity totaling one gram or more of contained uranium-235, uranium-233, or plutonium shall complete and submit, in computer-readable format Material Balance Reports concerning special nuclear material that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost. This prescribed computer-readable report replaces the DOE/NRC form

742 which has been previously submitted in paper form. The Physical Inventory Listing Report must be submitted with each Material Balance Report. This prescribed computer-readable report replaces the DOE/NRC Form 742C which has been previously submitted in paper form.

Section 74.15 requires each licensee who transfers or receives special nuclear material in a quantity of one gram or more of contained uranium-235, uranium-233, or plutonium shall complete in computer-readable format a Nuclear Material Transaction Report. In addition, each licensee who adjusts the inventory in any manner, other than for transfers and receipts, shall submit a Nuclear Material Transaction Report, in computer-readable format, to coincide with the submission of the Material Balance report.

Section 74.17 requires each licensee subject to the requirements of §§ 74.31 or 74.33 of this part shall 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) or 74.33(c)(4). Using an appropriate method listed in § 74.6, the licensee shall report the inventory results by plant and total facility to the Director of the NRC's Office of Nuclear Material Safety and Safeguards.

Section 74.19 requires each licensee shall keep records showing the receipt, inventory (including location and unique identity), acquisition, transfer, and disposal of all special nuclear material in its possession regardless of its origin or method of acquisition. (2) Each record relating to material control or material accounting that is required by the regulations in this chapter 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 shall retain the record until the Commission terminates the license that authorizes the activity that is subject to the recordkeeping requirement.

Section 74.31 requires each licensee who is authorized to possess and use more than one effective kilogram of special nuclear material 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 this chapter, or operations involved in waste disposal, shall implement and maintain a Commission approved material control and accounting system that will achieve the following objectives: (1) Confirm the presence of special nuclear material; (2) Resolve indications of missing material; and (3) Aid in the investigation and recovery of missing material.

Section 74.33 requires each licensee who is authorized by this chapter to possess equipment capable of enriching uranium or operate an enrichment facility, and produce, possess, or use more than one effective kilogram of special nuclear material of low strategic significance at any site or contiguous sites, subject to control by the licensee, shall establish, implement, and maintain a NRC-approved material control and accounting system that will achieve the following objectives: (1) Maintain accurate, current, and reliable information of and periodically confirm the quantities and locations of source material and special nuclear material in the licensee's possession; (2) Protect against and detect production of uranium enriched to 10 percent or more in the isotope U₂₃₅;

(3) Protect against and detect unauthorized production of uranium of low strategic significance; (4) Resolve indications of missing uranium; (5) Resolve indications of production of uranium enriched to 10 percent or more in the isotope U₂₃₅ (for centrifuge enrichment facilities this requirement does not apply to each cascade during its start-up process, not to exceed the first 24 hours); (6) Resolve indications of unauthorized production of uranium of low strategic significance.

Section 74.41 requires each licensee who is authorized to possess special nuclear material (SNM) of moderate strategic significance or SNM in a quantity exceeding one effective kilogram of strategic special nuclear material 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 this chapter; 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, shall establish, implement, and maintain a Commission-approved material control and accounting (MC&A) system that will achieve the performance objectives.

Section 74.43 requires licensees subject to § 74.41 shall maintain the internal control, inventory, and recordkeeping capabilities required in paragraphs (b) Internal controls, (c) Inventory control and physical inventories and (d) Recordkeeping of this section.

Section 74.45 requires licensees subject to § 74.41 of this part shall establish and maintain the measurement and measurement control capabilities required by paragraphs (b) Measurements and (c) Measurement control. To maintain measurement quality and to estimate measurement uncertainty values of this section.

Section 74.51 requires each licensee who is authorized to possess five or more formula kilograms of strategic special nuclear material (SSNM) and to use such material at any site, other than a nuclear reactor licensed pursuant to part 50 of this chapter, an irradiated fuel reprocessing plant, an operation involved with waste disposal, or an independent spent fuel storage facility licensed pursuant to part 72 of this chapter shall establish, implement, and maintain a Commission approved material control and accounting (MC&A) system that will achieve other objectives.

Section 74.57 Licensees subject to § 74.51 shall provide the MC&A alarm resolution capabilities described in paragraphs (b) through (f) of this section. (b) Licensees shall resolve the nature and cause of any MC&A alarm within approved time periods. (c) Each licensee shall 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. The licensee may consider an alarm to be resolved.

Section 74.59 Licensees subject to § 74.51 shall provide the quality assurance and accounting capabilities described in paragraphs (b) through (h) of this section. (1) Establish and maintain a management structure that includes clear overall responsibility for planning, coordinating, and administering material

control and accounting functions, independence of material control and accounting functions from production responsibilities, and separation of functions such that the activities of one individual or organizational unit serve as controls over and checks of the activities of others.

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 was published in the *Federal Register* on July 7, 2011 (76 FR 39907). No comments were received.

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). However, no information normally considered confidential or proprietary is requested.

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

Table 1 - Reporting Requirements

| Section | Brief Description of 10 CFR Part 74 Sections | Number of Respondents | Responses per Respondent | Total No. of Responses | Burden per Response | Total Annual Burden Hours | Cost @ \$259/Hr |
|---------------------|----------------------------------------------------------|----------------------------------------------|--------------------------|------------------------|---------------------|---------------------------|-----------------|
| 74.11 | Notification of loss or theft | 3 | 1 | 3 | 15 | 45 | 11,655 |
| 74.13 (a) | Submittal of Form 742 and 742C | See OMB Clearance Nos. 3150-0004 & 3150-0058 | | 0 | | 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 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 | 6 | 1 | 6 | 80 | 480 | 124,320 |
| 74.33 (a), (b), (c) | Submittal of a Fundamental Nuclear Material Control Plan | 2 | 1 | 2 | 80 | 160 | 41,440 |

| | | | | | | | |
|---------------|--------------------------------------------------------------|-----------------------------------------------|---|-----------|-----|------------|----------------|
| 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 | 51,800 |
| 74.57(c) | Notification of unresolved loss detection alarms | 2 | 1 | 2 | 8 | 16 | 4,144 |
| 74.57(f)(2) | Notification of abrupt loss detection alarms | 2 | 1 | 2 | 4 | 8 | 2,072 |
| 74.59(f) | Notification and report of excessive inventory differences | 2 | 2 | 4 | 20 | 80 | 20,720 |
| Totals | | 19 | | 21 | | 989 | 256,151 |

Recordkeeping Requirements

| Section | Brief Description of 10 CFR Part 74 Sections | Number of Recordkeepers | Average Annual Burden per Recordkeeper | Total Annual Burden (Hrs) | Cost @ \$259/Hr | Retention Period |
|-----------------------------------------|------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------|---------------------------|-----------------|-----------------------------------------|
| 74.19 | Records requirements for licensees not subject to Subparts C, D, and E | 110 | 40 | 4,400 | 1,139,600 | Varies - 3 years to duration of license |
| 74.31(a), (c), & (d) | Records requirements for SNM of low strategic significance | 6 | 195 | 1,170 | 303,030 | 3 years |
| 74.33 (d) | Records requirements for enrichment licensees | 2 | 415 | 830 | 214,970 | 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 | Duration of license |

| | | | | | | |
|---------------------------------------------------------|-----------------------------------------------------------------------------|--------------------------------------------------------|-----|--------------|------------------|--------------------------------------------------|
| 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 | 103,600 | 3 years |
| 74.43(b) | Records requirements for SNM of moderate strategic significance | No Currently Operating Category II Facilities | 0 | 0 | 0 | |
| 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 | 103,600 | 3 years |
| 74.59(g) | Records requirements for strategic SNM | 2 | 200 | 400 | 103,600 | 3 years |
| Totals | | 110 | | 7,600 | 1,968,400 | |

Total Number of Recordkeepers: 110
Total Recordkeeping Hours: 7,600
Total Number of Responses: 131

TOTAL NUMBER OF RESPONSES FOR PART 74:
131 responses (110 recordkeepers + 21 responses)

TOTAL ANNUAL BURDEN HOURS FOR PART 74:
8,589 hrs (7,600 recordkeeping hrs + 989 reporting hrs)

Estimated Cost to the Public to Respond to the Collection:

The estimated annual cost to licensees to respond to the collection requirements is \$2,224,551 (7,600 recordkeeping hrs + 989 reporting hrs x \$259/hr).

13. Estimate of Other Additional Costs

NRC has determined that the records storage costs is roughly proportional to the recordkeeping burden cost. Based on a typical clearance, the records storage cost has been determined to be equal to 0.0004 percent of the recordkeeping burden cost. Therefore, the records storage cost for this clearance is \$787 (7,600 recordkeeping hours x \$259/hr x 0.0004).

14. Estimated Annualized Cost to the Federal Government

A. Review of Licensee 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 | 6 | 100 | 600 | |
| 74.33(a),(b), (c) | 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 loss of SSNM | 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 | | 22 | | 1,360 | |

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 3,160 hrs (i.e., 1,360 + 1,800) @ \$259/hr or \$818,440.

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

In the last submittal for this information collection, responses were not included in the recordkeeping as a response. The current submission has correctly identified all responses, including licensees reporting information to the NRC as well as those required to retain records. As a result of this adjustment, the number of responses has increased from 110 to 131 (110 recordkeepers plus 21 responses).

The number of respondents was correctly calculated in the previous submission and there was no change in the reporting and recordkeeping burden. However, there has been an increase in the cost burden because the hourly fee rate has increased from \$238/hr to \$259/hr.

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. Collection of Information Employing Statistical Methods

Statistical methods are not used in this collection of information.