OMB SUPPORTING STATEMENT FOR PROPOSED RULE AMENDING 10 CFR PARTS 40, 70, 72, 74, and 150 AMENDMENTS TO MATERIAL CONTROL AND ACCOUNTING REGULATIONS

(3150-0123)

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, 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.

The purpose of this rulemaking is to revise and consolidate the MC&A requirements in order to update, clarify and strengthen them. General performance objectives would be made applicable to an additional set of NRC licensees who are authorized to possess more than 350 grams of SNM. Some current exemptions in the MC&A regulations would be removed or modified to strengthen the requirements, and defined terms would be added to clarify the regulations. The MC&A requirements for an Independent Spent Fuel Storage Installation (ISFSI) would be consolidated with MC&A regulations applicable to other types of facilities authorized to possess SNM.

This proposed rule amends information collection requirements contained in 10 CFR Part 74 (3150-0123) that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq). Specifically, recordkeeping requirements have been revised for licensees under Part 74. The proposed changes to 10 CFR Parts 40, 70, and 150 do not contain new or amended information collection requirements.

Changes to 10 CFR Part 72 (3150-0132) are the result of consolidating the location for requirements associated with DOE/NRC Form 741 "Nuclear Material Transaction Report" (3150-0003); DOE/NRC Forms 742, "Material Balance Report" (3150-0004); and DOE/NRC Form 742C, "Physical Inventory Listing" (3150-0058). The proposed rule would change the scope of Part 74 to include a licensee who possesses spent nuclear fuel at an ISFSI and remove the requirement from Part 72. By consolidating the requirements into Part 74, all types of use licensed by the NRC would find applicable MC&A requirements in Part 74 and nowhere else. There would be no change in burden by consolidating the MC&A requirements into Part 74. The location of the requirements associated with these forms is as follows:

Form	Location of Current Requirements associated with the form	Proposed Location for Requirements associated with the form
DOE/NRC Forms 742 (3150- 0004) and 742C (3150-0058)	72.76 and 74.13	74.13
DOE/NRC Form 741 (3150- 0003)	72.78 and 74.15	74.15

The burden associated with each of these DOE/NRC forms is captured under the clearances for the forms; therefore, there is no change in burden to the Part 72 information collection or the Part 74 information collection as a result of this change.

A. JUSTIFICATION

1. <u>Need for and Practical Utility of the Collection of Information</u>

Part 74 of 10 CFR incorporates recordkeeping and reporting requirements for licensees that possess and use SNM. The following sections in 10 CFR Part 74 would be revised and conforming changes would be made in the sections of 10 CFR Parts 40 and 72:

<u>Section 72.72</u> would be revised to change the title from "Material balance, inventory, and records requirements for stored materials" to "Material control and accounting requirements for source material and special nuclear material." The remainder of existing Section 72.72 (a), (b), (c), and (d) would be removed because these requirements are also located in 10 CFR Part 74. Paragraph (a) would be revised to retain the requirements for source material, and would reference 10 CFR 40.61 and 40.64 in this regard. The 10 CFR 74.2 scoping provisions would be revised to include a licensee possessing spent nuclear fuel in an ISFSI. New paragraph (b) would reference MC&A requirements for SNM in 10 CFR Part 74. There is no change in burden by consolidating the MC&A requirements.

<u>Section 72.74</u> requires that a licensee report an accidental criticality or any loss of special nuclear material to the NRC Operations Center by the Emergency Notification System or by telephone within one hour. This information is necessary to promptly inform NRC of particularly serious maloperations or accidents, and is evaluated by NRC to determine whether any immediate response or corrective action may be necessary.

Section 72.74 would be revised to change the title from "Reports of accidental criticality or loss of special nuclear material" to "Reports of accidental criticality." Paragraph (a) would be revised to remove the requirement that any loss of SNM

be reported within 1 hour of discovery. Section 72.74 would retain its reporting requirement for accidental criticality, but a licensee would report under Section 74.11 rather than under Section 72.74. Paragraph (b) would be revised to state that the required one-hour notifications be made to the NRC Headquarters Operations Center via any available telephone system. The outdated reference to the Emergency Notification System would be removed. There is no change in burden by consolidating the MC&A requirements.

Section 72.76 requires each licensee to complete in computer-readable format and submit to the Commission a material status report in accordance with instructions (NUREG/BR - 0007 and NMMSS Report D - 24 "Personal Computer Data Input for NRC Licensees"). This requirement would be consolidated at Section 74.13. Burden for this report is captured under the clearances for DOE/NRC Form 742 and 742C (3150-0004 and 3150-0058). Because the burden is associated with the form, rather than 10 CFR Part 72, there is no change in burden to 10 CFR Part 72.

Section 72.76 would be removed and reserved because an ISFSI licensee would be under the requirements for material status reports in Section 74.13 which contains the same requirements as current Section 72.76.

<u>Section 72.78</u> currently requires that whenever the licensee transfers or receives spent fuel, the licensee shall complete in computer-readable format a Nuclear Material Transaction Report in accordance with instructions (NUREG/BR - 0006 and NMMSS Report D- 24, "Personal Computer Data Input for NRC Licensees").

Section 72.78 would be removed and reserved because an ISFSI licensee would be under the requirements for nuclear material transaction reports in Section 74.15 which contains the same requirements as current Section 72.78. Burden for this report is captured under the clearance for DOE/NRC Form 741 (3150-0003). Because the burden is associated with the form, rather than 10 CFR Part 72, there is no change in burden to 10 CFR Part 72.

<u>Section 74.11 (b)</u> would be revised to state that required licensee notifications be made to the NRC Headquarters Operations Center via any available telephone system within 1 hour of the event, and an outdated reference to the Emergency Notification System would be removed. This change does not affect information collections in this section, but clarifies the method of notification.

Section 74.13 requires each licensee, including nuclear reactor licensees as defined in Sections 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 requirement was previously contained in 10 CFR 72.76 and is cleared by OMB under DOE/NRC Form 742 and 742C (3150-0004 and 3150-

0058). Because the burden is associated with the forms, rather the Part containing the requirement, this does not represent an increase in burden for 10 CFR Part 74.

This section would be revised to incorporate plain language in existing paragraph (a) by specifying eight numbered requirements, and new paragraphs (b), (c), and (e) would be added. Existing paragraph (b) would be designated as paragraph (d). Paragraph (a) (1) through (8) would specify deadlines by which various sets of licensees would be required to submit their material balance reports and physical inventory listing reports. Paragraph (b) would include the reporting instructions that are in existing Section 74.13(a), and would include references to the reporting forms (NUREG/BR-0007 and NMMSS Report D-24, "Personal Computer Data Input for NRC Licensees") referenced in existing Section 74.13(a). Paragraph (c) would retain the provision in existing Section 74.13(a) that the reports may be submitted at other times for good cause with prior NRC approval. Paragraph (d) restates the existing Section 74.13(b) provision regarding reports required under Section 75.35 (pertaining to implementation of the US/IAEA Safeguards Agreement). Paragraph (e) would retain the requirement in existing Section 74.13(a) regarding the resolution of any discrepancies identified during the report review.

<u>Section 74.19</u> requires each licensee to 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. 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.

This section would be revised to change the title to reference recordkeeping, procedures, item controls, and physical inventories. Paragraph (b) would be revised to change the reference to a quantity of SNM exceeding one effective kilogram to instead refer to a quantity greater than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof. Paragraph (d) would be re-designated as paragraph (e) and a new paragraph (d) would be added to require reactor facilities licensed under 10 CFR Part 50 or 52 or ISFSIs licensed under 10 CFR Part 72 to establish, document, implement, and maintain an item control system. The term, item control system, would be newly defined in 10 CFR Part 74.4.

<u>Section 74.31</u> 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.

Paragraph (c)(6) requires the licensee to maintain current knowledge of items when the sum of the time of existence of an item, the time to make a record of the item, and the time necessary to locate the item exceeds 14 days. Store and handle, or subsequently measure, items in a manner so that unauthorized removals of substantial quantities of material from items will be detected. Exempted are items individually containing less than 500 grams of U²³⁵ up to a total of 50 kilograms of U²³⁵, solutions with a concentration of less than 5 grams of U²³⁵ per liter, and items of waste destined for burial or incineration.

This section would be revised by changing paragraph (c)(6) to remove the existing exemptions from a licensee's item control program. The proposed changes in paragraph (c)(6) would remove the 14-day provision in the first sentence. In the second sentence the reference to detecting unauthorized removals of substantial quantities would be changed to require detecting the removal of any quantity of material. The third sentence would be changed to remove the exemption from controlling items individually containing less than 500 grams of uranium-235 up to a total of 50 kilograms of uranium-235.

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.

Paragraph (c)(6) requires the licensee to establish, document, and maintain an item control program that ensures that: (i) current knowledge is maintained of items with respect to identity, uranium and uranium-235 content, and stored location; and (ii) items are stored and handled, or subsequently measured, in a manner so that unauthorized removal of 500 grams or more of uranium-235, as individual items or as uranium contained in items, will be detected. Exempted from the requirements of paragraph (c)(6)(i) and (ii) of this section are licensee-identified items each containing less than 500 grams uranium-235 up to

a cumulative total of 50 kilograms of uranium-235 and items that exist for less than 14 calendar days.

This section would be revised by changing paragraph (c)(6) to remove the existing exemptions from a licensee's item control program. The reference to detecting an unauthorized removal of 500 grams or more of uranium-235 as individual items or as uranium contained in items would be changed to require detecting the removal of any quantity of uranium-235. The exemption from controlling items containing less than 500 grams of uranium-235 up to a cumulative total of 50 kilograms of uranium-235 would be removed. The exemption for items that exist for less than 14 calendar days would be removed. Exemptions would be added to paragraph (c)(6) for items in solution with a concentration of less than 5 grams per liter and for waste items destined for burial or incineration.

<u>Section 74.43</u> requires licensees subject to Section 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.

Paragraph (b)(5) requires the licensee shall establish, document, and maintain an item control program that: (i) provides current knowledge of SNM items with respect to identity, element and isotope content, and stored location; and (ii) assures that SNM items are stored and handled, or subsequently measured, in a manner such that unauthorized removal of 200 grams or more of plutonium or uranium-233 or 300 grams or more of uranium-235, as one or more whole items and/or as SNM removed from containers, will be detected. Paragraph (b) (6) lists exemptions from the requirements of paragraph (b)(5) of this section, as follows: (i) items that exist for less than 14 calendar days and (ii) licensee-identified items each containing less than 200 grams of plutonium or uranium-233 or 300 grams or more of uranium-235 up to a cumulative total of one formula kilogram of strategic SNM or 17 kilograms of uranium-235 contained in uranium enriched to 10.00 percent or more but less than 20.00 percent in the uranium-235 isotope.

This section would be revised by changing paragraph (b)(5) to remove the existing references to detection of the unauthorized removal of 200 grams or more of plutonium or uranium-233 or 300 grams or more of uranium-235 as one or more whole items and/or as SNM removed from containers and instead to add the proposed requirement to detect unauthorized removals of individual items or any quantity of material from items. Paragraph (b)(6) would be revised to remove the current exemptions and instead add the proposed requirement to exempt items in solution with a concentration of less than 5 grams of U-235 per liter and items of waste destined for burial or incineration.

2. Agency Use of Information

In order to promote the common defense and security of SNM the agency would require a licensee to prepare reports that are based on current knowledge of all individual items and complete a physical inventory at certain intervals which would include any and all quantities of material and would require a licensee to retain records of the inventory. Furthermore the agency would require that a licensee be capable of accounting for short-lived material existing for less than 14 days and be capable of detecting unauthorized removal of any quantity of material. The requirement to report immediately, within 1 hour, to the NRC Operations Center any loss or theft or attempted theft or unauthorized production of special nuclear material is necessary to provide sufficient opportunity for the NRC to review facts of such circumstances and make its own determination of the likely consequences.

In order for the United States to fulfill its responsibilities as a participant in the US/IAEA Safeguards Agreement and to satisfy various bilateral agreements for nuclear cooperation with other countries and its domestic safeguards responsibilities, it is necessary for licensees affected by 10 CFR Parts, 40, 72, 74, and 150 to submit accounting reports. The accounting reports for each IAEA material balance area must include material status reports based on a physical inventory of nuclear materials actually present.

3. <u>Reduction of Burden Through Information Technology</u>

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 90 % of the potential responses are filed electronically.

A centralized U.S. Government database is used to track and account for source and special nuclear material, to ensure that it has not been stolen or diverted to unauthorized users. The system contains current and historical data on the possession, use, and shipment of source and special nuclear material within the United States, as well as all exports and imports of such material. The database is jointly funded by the NRC and DOE and is operated under a DOE contract. http://nnsa.energy.gov/aboutus/ourprograms/nuclearsecurity/nmmsshome

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. <u>Consequences to Federal Program or Policy Activities if the Collection Is Not</u> <u>Conducted or is Conducted Less Frequently</u>

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 10 CFR 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. <u>Circumstances That Justify Variation from OMB Guidelines</u>

Contrary to the 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.

Licensees must retain records under 74.19 for the length of the license. The material control and accounting procedures are used by the licensee to carry out its material control and accounting operations and are reviewed by NRC inspectors to ensure the adequacy of the licensee's programs and compliance with NRC regulations. The records are needed for the length of the license as

they are reviewed by the inspection staff to detect diversion of material and to initiate prompt action in the event of a diversion.

10 CFR 72.74 requires that a licensee report an accidental criticality or any loss of special nuclear material to the NRC Operations Center by the Emergency Notification System or by telephone within 1 hour. This immediate notification is necessary to promptly inform NRC of particularly serious maloperations or accidents, and is evaluated by NRC to determine whether any immediate response or corrective action may be necessary.

8. <u>Consultations Outside the Agency</u>

Opportunity for public comment on the information collection requirements has been published in the <u>Federal Register</u>. On May 16, 2011, a preliminary version of the proposed rule language was published in the <u>Federal Register</u> (76 FR 28193) to inform stakeholders of the status of the proposed rulemaking and invite stakeholders to provide informal comments.

9. <u>Payments or Gifts to Respondents</u>

Not applicable.

10. <u>Confidentiality of the Information</u>

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. This order prescribes a uniform system for classifying, safeguarding, and declassifying national security information.

Information submitted through the NMMSS system (information from DOE/NRC Forms 741, 742, and 742C) is accessible only to those who have a need to know, within DOE and NRC.

11. Justification for Sensitive Questions

There are no sensitive questions.

12. Estimated Industry Burden and Burden Hour Cost

The estimated annual cost is \$332,362 (1,213 hours x \$274 per hour). The estimated annual burden is 1,213 hours (524 annualized hours for one time implementation of recordkeeping burden + 689 hours for annual recordkeeping burden). The 1,213 hours for recordkeeping burden is from the item control requirements in proposed Sections 74.19(d), 74.31(c)(6), 74.33(c)(6), and

74.43(b)(5) and (6). Currently no facility is licensed to operate as a Category II facility under Section 74.41. Details are provided in the attached tables.

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 1213 hours, the storage cost for this clearance is \$133 (1213 hours x 0.0004 x \$274/hour).

14. Estimated Annualized Cost to the Federal Government

The amount of NRC inspection effort would not change. Inspectors would evaluate licensee implementation of the changes within the scope of the routine inspection program elements.

The current cost burden in ROCIS for Part 74 is \$818,440 and would not increase with this proposed rule.

15. Reasons for Changes in Burden or Cost

The overall burden would increase due to the new recordkeeping requirement in Section 74.19(d) and the modified recordkeeping requirements in Sections 74.31(c)(6), 74.33(c)(6), and 74.43(b)(5) and (6).

The following four paragraphs summarize the reasons for changing the item control requirements that involve recordkeeping.

- The proposed changes to 10 CFR 74.19(d) would require reactor licensees and ISFSI licensees to establish, document, implement, and maintain an item control system as defined in 10 CFR 74.4. The reactor licensees have already implemented item control systems and would not be impacted by the proposed requirement. The 63 ISFSI licensees would not be significantly impacted by the requirement. The SNM is generally in the form of containerized fuel rods and fuel assemblies that are very large and heavy and require access to and use of large equipment to handle and move. Upon receipt at an ISFSI, the licensee would place the containers of spent nuclear fuel into a dry cask storage installation and seal the installation. At full capacity an installation would not be re-entered and the inventory would be static.
- The proposed changes to 10 CFR 74.31(c)(6) would require each Category III fuel fabrication facility to include currently exempted items in their item control system. The currently exempted items that a licensee would be required to track include items that exist for 14 days or less and

individual items containing less than 500 grams of uranium-235 up to a total of 50 kilograms of uranium-235. It is estimated by the NRC that the changes would impact the three licensees that are currently operating the Category III facilities.

- The proposed changes to 10 CFR 74.33(c)(6)(ii) would require each Category III enrichment facility to include currently exempted items in their item control system. The currently exempted items that a licensee would be required to track include items that exist for less than 14 days and individual items containing less than 500 grams uranium-235 up to a cumulative total of 50 kilograms of uranium-235. It is estimated by the NRC that the changes would impact two licensees that are operating enrichment facilities.
- The proposed changes to 10 CFR 74.43(b)(5) and (6) would require any future Category II facility to include currently exempted items in their item control system. The currently exempted items include items that exist for less than 14 calendar days and individual items containing less than 200 grams of plutonium or uranium-233 or 300 grams or more of uranium-235 up to a total of one formula of kilogram of strategic SNM or 17 kilograms of uranium-235 contained in uranium enriched to 10 percent or more but less than 20 percent in the uranium-235 isotope. Currently there is no facility licensed to operate as a Category II facility.

The following paragraphs provide greater details to justify the changes in the item control requirements.

Existing Sub Parts C and D of 10 CFR Part 74 contain item control provisions applicable to Category III and II facilities that would be modified, and the NRC additionally proposes to add clarifying definitions of two related terms to 10 CFR 74.4. *Item control system* would be defined as meaning a system for tracking the creation, identity, element and isotopic content, location, and disposition of all items, which would enable the licensee to maintain current knowledge of each item in its possession. *Item control area* (ICA) would be defined as meaning a designated administrative area within the controlled access area, in which SNM would be maintained in such a way that, at any time, a count of the items and the related material quantities can be obtained using the accounting system. Control of items moving into, out of, and within an ICA would be indicated by the identity of an item and its assigned material quantity.

Licensees authorized to possess 350 grams of SNM or less would not be made subject to item control requirements. Starting in 2009, such licensees were required to submit material balance and physical inventory reports on an annual basis under 10 CFR 74.13 (or 10 CFR 150.17 for Agreement State licensees). As there have since been no reports of lost SNM items from these licensees, the NRC's view is that imposing item control requirements on them is not necessary.

In a new 10 CFR 74.19(d), the NRC is proposing to require the establishment of

item control systems at reactor facilities licensed under 10 CFR Part 50 or 52, and at ISFSIs licensed under 10 CFR Part 72. This requirement is consistent with guidance developed by the reactor industry in ANSI N15.8 ("Methods of Nuclear Material Control—Material Control Systems—Special Nuclear Material Control and Accounting Systems for Nuclear Power Plants") dated February 18, 2009. In June 2013 the NRC published Regulatory Guide (RG) 5.29, "Nuclear Material Control Systems for Nuclear Power Plants" (Revision 2), which endorses use of the ANSI N15.8 guidance. Requiring item control systems at reactors and ISFSIs would ensure that SNM is adequately accounted for at these sites.

Licensed Category III fuel fabrication and uranium enrichment facilities are already subject to item control requirements under 10 CFR 74.31(c)(6) and 74.33(c)(6), respectively. Similarly, licensees of Category II facilities are subject to item control requirements under 10 CFR 74.43(b)(5) and (6), however, as previously stated there is no facility that is currently licensed to operate as a Category II facility.

These requirements are being modified, in part, by removing from them the exemption provisions for items existing for less than 14 days. These exemptions date from when most facilities did not have, as part of their MC&A programs, automated tracking systems and computer-based accounting systems to help manage their SNM items. Today, licensees have the ability to track items immediately upon creation instead of waiting for hand-written ledgers to be updated. Removing these exemptions eliminates previously exempted items that could contain large quantities of SNM but not be subject to a facility's item control system.

The 10 CFR 74.31(c)(6) and 74.33(c)(6) requirements would further be modified by removing the exemptions for individual items containing less than 500 grams of uranium-235, which may contain a cumulative total of 50 kilograms of uranium-235. Similarly, for a Category II facility, the exemption (in 10 CFR 74.43(b)(6)) for individual items containing less than 200 grams of plutonium or uranium-233; or 300 grams or more of uranium-235 up to a cumulative total of one formula kilogram of strategic SNM; or 17 kilograms of uranium-235 contained in uranium enriched to 10 percent or more but less than 20 percent in the uranium-235 isotope, would be removed.

By not allowing large quantities of SNM to be exempt from a Category III or Category II facility's item control system, a more complete and comprehensive inventory would be achieved. Further, since all licensees are required by existing 10 CFR 74.11 to report the loss of 1 gram or more of SNM, removing these item control exemptions that reference hundreds of grams or kilograms of SNM increases the internal consistency of the MC&A requirements.

Category I facilities are subject to the 10 CFR 74.55 item monitoring requirements, which are not being changed in this rulemaking. Consistent with the present graded approach, these subpart E item monitoring requirements are

Part of the more stringent MC&A program that applies to Category I facilities, and item monitoring differs significantly from item control. Item monitoring differs significantly from item control. As compared to item control requirements applicable to Category II and III facilities, the item monitoring requirements in 10 CFR 74.55 are more stringent and rigorous with respect to the scope of item test frequencies, statistical sampling plans, and detection limits. The NRC has found no problems with the item monitoring programs used by Category I licensees, and therefore no changes to 74.55 are proposed.

The total annual burden for this proposed rule is 1,213 recordkeeping hours. The annual burden for recordkeeping is 1,213 hours (524 one-time implementation hours + 689 annual hours). The total one-time cost of implementation for the item control system requirements in 10 CFR 74.19(d), 74.31(c)(6), 74.33(c)(6), and 74.43(b)(5) and (6) is \$143,576 (524 hours x \$274). The total annualized burden cost for this proposed rule is \$332,362 (1,213 recordkeeping hours x \$274 hours).

16. <u>Publication for Statistical Use</u>

None.

17. Reason for Not Displaying the Expiration Date

Not Applicable.

18. Exceptions to the Certification Statement

There are no exemptions.

B. <u>Collection of Information Employing Statistical Methods</u>

Statistical methods are not used in this collection of information.

Recordkeeping Requirements One-Time Implementation Burden (Annualized) 10 CFR Part 74

Section	Number of Recordkeepers	Hours Per Recordkeeper	Total Annual Burden Hours
74.19(d), Item control system licensees under 10 CFR part 72 (there is no new impact on licensees under parts 50 or 52)	63	1.7	107
74.31(c)(6), Item control system (Category III fuel facility licensees)	3	83.3	250
74.33(c)(6), Item control System (Category III enrichment facility licensees)	2	83.3	167
74.43(b)(5) and (6), Item control system (currently there are no Category II facility licensees)	0	0	0
Total	68		524

Annual Recordkeeping Burden 10 CFR Part 74

Section	Number of Recordkeepers	Hours Per Recordkeeper	Total Annual Burden Hours	Record Retention Period
74.19(d), Item control system licensees under 10 CFR part 72 (there is no new impact on licensees under parts 50 or 52)	63	3	189	duration of license
74.31(c)(6), Item control system (Category III fuel facility licensees)	3	100	300	3 years
74.33(c)(6), Item control System (Category III enrichment facility licensees)	2	100	200	3 years
74.43(b)(5) and (6), Item control system (currently there are no Category II facility licensees)	0	100	0	3 years
Total	68		689	

TOTAL RECORDKEEPING BURDEN FOR 10 CFR PART 74:

One time implementation burden for recordkeeping (annualized):	524 hours
Annual recordkeeping burden:	689 hours
Total:	1,213 hours
Total cost:	\$332,362 (1,213 hours x \$274/hr)