[7590-01-P]

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 40, 70, 72, 74, and 150

RIN: 3150-AI61

[NRC-2009-0096]

Amendments to Material Control and Accounting Regulations

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is proposing to amend its regulations for material control and accounting (MC&A) of special nuclear material (SNM). The goal of this rulemaking is to revise and consolidate the MC&A requirements in order to update, clarify and strengthen the regulations. These regulations apply to NRC licensees who are authorized to hold SNM. The MC&A requirements also apply to certain licensees within the jurisdiction of the Agreement States who hold SNM in quantities less than a critical mass, and who submit material status reports to the NRC. The MC&A requirements for an independent spent fuel storage installation (ISFSI) would be consolidated with MC&A regulations applicable

to all other facilities authorized to hold SNM. The general MC&A provisions applicable to all SNM licensees would be revised to include performance objectives. 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. A two-person rule would be added to strengthen certain MC&A requirements for tamper-safing, performing physical inventories, transferring SNM, or any handling of SNM that is not under an active control measure or monitoring or surveillance condition. Plain language revisions would also be made. Guidance documents would be updated as necessary to reflect these proposed changes.

DATES: Submit comments on the rule by (insert 75 days from date of publication in the *Federal Register (FR)*). Submit comments specific to the information collections aspects of this rule by (insert date 30 days from date of publication in the FR). The NRC will consider all comments received on or before this date. Comments received after the above dates will be considered if it is practical to do so.

ADDRESSES: Please include Docket ID NRC-2009-0096 in the subject line of your comments. Comments submitted in writing or in electronic form will be posted on the NRC Web site and on the Federal Rulemaking Web site, *http://www.regulations.gov*. Because your comments will not be edited to remove any identifying or contact information, the NRC cautions you against including any information in your submission that you do not want to be publicly disclosed. The NRC requests that any party soliciting or aggregating comments received from other persons for submission to the NRC inform those persons that the NRC will not edit their comments to remove any identifying or contact information and, therefore, they should not

include any information in their comments that they do not want publicly disclosed. You may submit comments by any one of the following methods:

- **Federal Rulemaking Web site:** Go to *http://www.regulations.gov* and search for documents filed under Docket ID NRC-2009-0096**.** Address questions about NRC dockets to Carol Gallagher; telephone: 301-492-3668; e-mail: *Carol.Gallagher@nrc.gov*.
- **Mail comments to:** Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, ATTN: Rulemakings and Adjudications Staff.
- **E-mail comments to:** *Rulemaking.Comments@nrc.gov*. If you do not receive a reply e-mail confirming that we have received your comments, contact us directly at 301-415-1677.
- **Hand deliver comments to:** 11555 Rockville Pike, Rockville, Maryland 20852, between 7:30 a.m. and 4:15 p.m. Federal workdays (telephone: 301-415-1677).
- **Fax comments to:** Secretary, U.S. Nuclear Regulatory Commission at 301-415-1101.

You can access publicly available documents related to this notice using the following methods:

- **NRC's Public Document Room (PDR):** The public may examine and have copied, for a fee, publicly available documents at the NRC's PDR, O1-F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.
- **NRC's Agencywide Documents Access and Management System (ADAMS):** Publicly available documents created or received at the NRC are available online in the NRC Library at *http://www.nrc.gov/reading-rm/adams.html*. From this page, the public can gain entry into ADAMS, which provides text and image files of the NRC's public documents. If you do not have access to ADAMS or if there are problems in accessing

the documents located in ADAMS, contact the NRC's PDR reference staff at 1-800-397-4209, 301-415-4737, or by e-mail to *pdr.resource@nrc.gov*. The proposed rule package is available electronically under ADAMS Accession Number ML112101421.

- **Federal rulemaking Web site:** Public comments and supporting materials related to this notice can be found at *http://www.regulations.gov* by searching on Docket ID NRC-2009-0096.

FOR FURTHER INFORMATION CONTACT: Thomas Young, Office of Federal and State Materials and Environmental Management Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, telephone: 301-415-5795, e-mail: Thomas.Young@nrc.gov.

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I. Introduction and Background

The NRC plans to amend Parts 40, 70, 72, 74, and 150 to Title 10 of the *Code of Federal Regulations* (10 CFR) to consolidate the MC&A provisions in 10 CFR Part 74. Conforming changes would be made to 10 CFR Parts 40, 70, 72 and 150. The changes are intended to update, clarify, and strengthen MC&A requirements.

The existing 10 CFR Part 74 regulations are organized in a graded fashion. General MC&A reporting and recordkeeping requirements in Subpart B apply to all licensees authorized to hold SNM under 10 CFR Part 70. Licensees authorized to hold SNM of "low strategic significance" (defined in 10 CFR 74.4) are subject to the more rigorous MC&A requirements in Subpart C. Such licensees operate what are known as Category III facilities, which include licensed uranium enrichment facilities and the three fuel fabrication facilities supplying fresh fuel assemblies to commercial power reactors. Licensees authorized to hold SNM of "moderate strategic significance" (defined in 10 CFR 74.4) are subject to the MC&A requirements in Subpart D, and are authorized to operate Category II facilities (no such facilities now operate). The most rigorous MC&A requirements are in Subpart E, and apply to licensees authorized to hold a "formula quantity" (defined in 10 CFR 74.4) of strategic special nuclear material (SSNM). Such 10 CFR Part 70 licensees operate what are known as Category I facilities. Only two such facilities now operate, and they fabricate fuel for use by the U.S. Navy and in research and test reactors. One potential Category I facility may operate in the future as a mixed oxide fuel fabrication facility.

In 2008, the NRC developed an MC&A rulemaking plan (SECY-08-0059 Rulemaking Plan: Part 74 - Material Control and Accounting of Special Nuclear Material, ML080580307) and submitted it to the Commission for its consideration. The Commission in the Staff Requirements Memorandum (SRM) for SECY-08-0059 (ML090360473) authorized both specific and general changes to be made to 10 CFR Part 74 as summarized below.

- Relocate the Nuclear Materials Management and Safeguards System (NMMSS)-related reporting requirements for ISFSIs that are currently located in 10 CFR Part 72. These 10 CFR Part 72 requirements duplicate requirements in existing Subpart B of 10 CFR Part 74. In this regard, revisions are proposed to 10 CFR 72.72 and 72.74, and 10 CFR 72.76 and 72.78 would be deleted. Revisions would be made at 10 CFR 40.64 and 150.17(b) to remove references there to 10 CFR Part 72 material status reports.
- Revise 10 CFR Part 74 to make it clear what requirements apply to different types of facilities because although the Subpart B general provisions apply to almost all facilities that are authorized to possess and use SNM, some licensees have expressed confusion as to what requirements apply to a particular facility. To address this matter, the staff proposes to revise the 10 CFR Part 74 definitions of *formula quantity, special nuclear material of moderate strategic significance*, and *SNM of low strategic significance* by conforming them to the existing definitions in 10 CFR Parts 70 and 73, making clear that these classes of SNM are what is referred to, respectively, as Category I, II and III quantities of material. Licensees authorized to hold Category I material are subject to the 10 CFR Part 74 Subpart E requirements, while licensees authorized to hold Category II and III material are subject to the Subpart D and C requirements, respectively. To further clarify these divisions, the staff proposes to add Appendix A ("Categories of SNM") to 10 CFR Part 74, as described below.

- Include general performance objectives (GPOs) that would apply to all licensees authorized to hold SNM, rather than having such objectives apply only to licensees authorized to hold Category I, II and III quantities of material, as is the case under the existing MC&A requirements. Examples of GPOs stated in Option 4 of SECY-08-0059 include the need to confirm the presence of SNM and to resolve indications of missing material. The general performance objectives that would apply to all licensees authorized to hold SNM are stated in proposed 10 CFR 74.3. Performance objectives specific to enrichment facilities would be retained and are stated in proposed 10 CFR 74.33(a) requirements. Current performance objectives specific to Category I fuel fabrication facilities are retained in the proposed revisions to the existing 10 CFR 74.51(a) requirements.
- Add basic system capabilities such as item controls that would apply to all licensees that are authorized to possess and use SNM. Existing item control requirements in 10 CFR Part 74 Subparts C, D, and E would remain unchanged. Less rigorous item control requirements that would apply to all licensees authorized to hold SNM are stated in proposed 10 CFR 74.19(c)(1).
- Delete or modify some item control exemption provisions in 10 CFR 74.31(c)(6), 74.33(c)(6), and 74.43(b)(6).
- Include definitions for new terms and clarify the definitions of some terms. In this regard, the staff proposes to add defined terms for *accounting, custodian, item control area, item control system, material balance area, material control and accounting,* and *two-person rule.* The staff proposes to revise the defined terms for *formula quantity, SNM of moderate strategic significance*, and *SNM of low strategic significance*, as discussed above.

- Add requirements related to the two-person rule, to ensure that two qualified and authorized individuals are present for tamper-safing, performing physical inventories, transferring SNM, or handling any SNM that is not under an active control measure or monitoring or surveillance condition. Category I licensees are presently subject to checks and balances (reflecting the two-person rule concept) in their MC&A programs as required by 10 CFR 74.51(b)(1), 74.59(b)(1), and (h)(3). To strengthen the MC&A requirements for Category III and II facilities, a two-person rule would be added in proposed revisions to 10 CFR 74.31(c)(6), 74.33(c)(6), and 74.43(c)(9). For Category I facilities, the two-person rule is stated in proposed 10 CFR 74.59(h)(6).
- Strengthen requirements related to tamper-safing containers and vaults. A tamper-safing program is already part of the MC&A requirements for Category II and I facilities(10 CFR 74.43(c)(3) and 74.59(f)(2), respectively) and similar tamper-safing requirements would be made applicable to the Category III fuel fabrication and uranium enrichment facilities as set forth in proposed 10 CFR 74.31(c)(9) and 74.33(c)(9).

The Commission also approved other miscellaneous changes, including plain language revisions. Such changes and revisions are reflected in the proposed regulations, and include replacing the existing references to the fundamental nuclear material control (FNMC) plan with references to an MC&A plan. The staff's view is that FNMC is an outdated term and does not include "accounting." Thus, it does not fully describe the accounting aspects of an MC&A program. Another miscellaneous change is the proposed deletion from 10 CFR Part 74 of the defined term, *effective kilograms of special nuclear material*, in order to clarify the quantities of material that are referenced in 10 CFR Part 74. Quantities of SNM would be expressed in gram units to simplify the accounting requirements in 10 CFR Part 74 and provide consistency with

the existing Part 74 definitions of the various types of SNM, all of which specify quantities in gram units. The term would remain in 10 CFR Parts 40, 70, 75, 76, and 110, for the implementation of the US/International Atomic Energy Agency (IAEA) Safeguards Agreement.

Other proposed changes include revising 10 CFR 150.17(a) to conform with the proposed plain language revisions to 10 CFR 74.13. No substantive changes are being proposed in this regard and licensees holding SNM under a license from an Agreement State would continue to submit material status reports to the NRC via the NMMSS. References to due dates and reporting frequencies would be made more uniform by expressing most timeframes in terms of calendar days (e.g., 7, 30, 60, 65, 95, 185, or 370 calendar days). The interval for the number of months assigned to a licensee management assessment of the MC&A program would be retained (e.g., 12 months, 18 months, or 24 months). The retention period for records would be retained (e.g., 3 years). An Appendix A, "Categories of Special Nuclear Material," would be added to 10 CFR Part 74. The appendix would be based on existing Appendix M to 10 CFR Part 110, and would show the SNM quantity limits for Category I, Category II, and Category III facilities. The new appendix would also show the corresponding Subpart in 10 CFR Part 74 for each category, and the formulae to calculate any combination of SSNM within the quantity limits for a category. A conforming change would be made to replace the reference to 10 CFR 74.51(c) with 10 CFR 74.51(b) because the paragraph designation about implementation of an MC&A plan would then be consistent with the other cites listed in 10 CFR 70.32(c)(1)(i) and (iii) that refer to paragraph (b) in 10 CFR 74.31, 74.33, and 74.41.

SECY-09-0082 ("Update on Reprocessing Regulatory Framework – Summary of Gap Analysis," ML091520280), dated May 28, 2009, included the NRC staff's recommendation that the existing 10 CFR 74.51(a) exemption for an irradiated fuel reprocessing plant be removed as part of this rulemaking. Proposed 10 CFR 74.51(a)(2) reflects the removal of this exemption.

The NRC placed on www.regulations.gov a preliminary version of the proposed rule language to inform stakeholders of the status of the proposed rulemaking and invited stakeholders to provide informal comments by June 30, 2011. Thirteen comment letters were received by this date, and were considered. Public input at this stage helped to develop the proposed rule.

II. Discussion

To further describe this proposed rulemaking a series of questions and answers is set forth below.

A. *Whom would this action affect?*

All NRC licensees authorized to hold SNM would be affected by the proposed rule. For example, the proposed revisions to 10 CFR 74.19(c) would require all SNM licensees to establish, document, implement, and maintain an *item control system* (as newly defined in 10 CFR 74.4).

Agreement State licensees authorized to hold SNM are subject to 10 CFR 150.17. The proposed changes to 10 CFR 150.17 are plain language revisions and conform with the proposed changes to 10 CFR 74.13. These changes do not require any action by the Agreement State licensees.

B. Why do the requirements need to be revised?

Many of the current MC&A requirements were developed over 20 years ago and need to be updated to include commonly used terms and to include currently exempted items under the proposed item control system requirements. The requirements for licensees that do not fall

under Category I, II, or III need to be revised to add general performance objectives that would be implemented to deter, detect, or aid in responding to any loss, theft, diversion or misuse of SNM. The NRC's view is that all MC&A regulations governing SNM held by NRC licensees should be in 10 CFR Part 74 in order to provide a focal point and a complete framework/ umbrella for controlling and accounting for all SNM under NRC oversight.

C. When would these actions become effective?

The NRC expects that the final rule would be published within 12 months of when this proposed rule is being published for comment. The revisions to the regulations would become effective after publication of the final rule.

D. What are the changes to the general performance objectives?

General performance objectives (GPOs) currently apply only to licensees that are subject to the MC&A requirements in Subparts C, D, or E of 10 CFR Part 74. Proposed 10 CFR 74.3 in Subpart A sets forth GPOs that would be applicable to all NRC licensees authorized to hold SNM. The proposed 10 CFR 74.3 provisions are based on the existing GPOs and are meant to capture all elements that a general MC&A program should address. The 10 CFR 74.3 GPOs describe activities to deter, detect, or aid in responding to any loss, theft, diversion or misuse of SNM. The existing GPO provisions in 10 CFR 74.31, 74.33, 74.41, and 74.51 would be revised to refer to 10 CFR 74.3, but GPOs that are unique to uranium enrichment facilities and Category I fuel fabrication facilities would be retained in 10 CFR 74.33 and 74.51.

E. Are sealed sources included in the general performance requirements for Category II and III facilities?

Yes. The current exclusion for sealed sources in the 10 CFR 74.31 and 74.41 GPO provisions would be relocated to Appendix A (Note 1) to clarify that the sealed sources would not be considered for determining whether a facility is a Category III facility or a Category II facility. The change would be consistent with the current requirements, which were intended to exclude sealed sources from the material quantity calculations used to determine whether a facility is a Category III facility subject to Subpart C requirements, or a Category II facility subject to the Subpart D requirements of 10 CFR Part 74. However, sealed sources would be within the scope of the proposed 10 CFR 74.3 GPOs. Sealed sources would continue to be subject to a licensee's MC&A program.

F. Why would newly defined terms be added to 10 CFR 74.4?

Certain terms are commonly used by licensees in their internal procedures implementing their MC&A systems, plans and programs, including *accounting, custodian, material control and accounting*. Defining these terms in NRC regulations would clarify the requirements and improve understanding of the regulations. Section 74.4 would provide the specific meaning for these terms that appear in the MC&A requirements. Other newly defined terms (*material balance area, item control area,* and *two-person rule*) and their related requirements are deemed necessary to strengthen the MC&A requirements, by making any diversion or misuses of SNM less likely, and would be expected to aid in the investigation and recovery of any SNM that is lost.

G. Why would the term "effective kilograms of special nuclear material" be removed from 10 CFR Part 74?

Doing so would allow quantities of SNM specified in 10 CFR Part 74 to be expressed in gram units which would simplify the accounting requirements and provide consistency with the existing definitions of *formula quantity, special nuclear material of low strategic significance,* and *special nuclear material of moderate strategic significance* which specify quantities in gram units. References to one effective kilogram in the GPO provisions of 10 CFR 74.31, 74.33, and 74.41 would be revised to instead reference gram units of material. The new Appendix A would also use gram units. The term would remain in 10 CFR Parts 40, 70, 75, 76, and 110, for the implementation of the US/IAEA Safeguards Agreement.

H. Why would Appendix A to 10 CFR Part 74 be added?

Appendix A would be added to clarify the definitions and quantities and units of various categories of SNM. Similar information is provided in existing Appendix M to 10 CFR Part 110 and would be appended to 10 CFR Part 74 as well for the convenience of licensees, NRC staff, and members of the public. Appendix A would clarify the elements, isotopic composition, and quantities of material that Category I, Category II, and Category III facilities are authorized to hold. Notes would be included to clarify that sealed sources are excluded from the quantity limits that are used to determine the category of a facility. An additional note is included that spent nuclear fuel is reduced one category level while the radiation exposure exceeds 1 Sievert (Sv) per hour (100 rads per hour) at 1 meter, unshielded. Formulae are included to calculate a quantity of material for Category I, Category II or Category III.

Why would references to the MC&A "system" be changed to the MC&A "program," and why would "MC&A plan" replace "FNMC plan?"

Portions of existing 10 CFR Part 74 that refer to the MC&A "system" (e.g., 10 CFR 74.31(c), 74.33(a), and 74.51(a)) would be revised to instead refer to the MC&A "program." The term "program" better describes the over-arching, comprehensive set of methods licensees use to control and track SNM, and using "program" avoids confusion with the required material measurement systems (e.g., 10 CFR 74.31(c)(2), 74.33(c)(3), and 74.59(d)) that are part of the overall MC&A program. Similarly, existing references to the overall "system" capabilities would be changed to "program" capabilities. The existing requirements referring to an item control program (e.g., 10 CFR 74.31(c)(6), 74.33(c)(6) and 74.43(b)(5)) would be revised to instead refer to an item control system.

Replacing the existing references to the FNMC plan with references to an MC&A plan is necessary in the NRC staff's view because FNMC is an outdated term and does not include "accounting." Thus, it does not fully describe the accounting aspects of the MC&A program, and is not consistent with the general title of Part 74 ("Material Control and Accounting of Special Nuclear Material"). The term MC&A plan is not intended to be an exact name that licensees are required to use and licensees will not be required to change the names of their existing plans.

I. *What would change in the reporting requirements to NMMSS, including those that ISFSIs are subject to?*

The proposed addition of numbered subsections to 10 CFR 74.13(a) would make these reporting requirements easier to read and understand. The plain language revisions make no substantive changes to the existing requirements.

The NMMSS reporting requirements for an ISFSI currently in § 72.76 for material status reports and in § 72.78 for nuclear material transaction reports are duplicated in §§ 74.13 and

74.15, respectively. Proposed 10 CFR 74.2 would include existing ISFSIs within the scope of 10 CFR Part 74. Accordingly, §§ 72.76 and 72.78 would be removed from 10 CFR Part 72. The requirements in § 72.72 for storage of source material (SM) and SNM would be revised to direct a licensee to refer to §§ 40.61 and 40.64 for SM and to Subparts A and B in 10 CFR Part 74 for SNM.

J. Why would a two-person rule be added?

The two-person rule would be added to strengthen the MC&A requirements by making the unauthorized diversion of material less likely. The two-person rule would also better ensure that correct procedures are used, that covered actions are completed correctly by qualified and authorized personnel and that information about the actions is accurately documented. A licensee subject to Subpart C, D, or E would be required to have two qualified and authorized individuals involved for tamper-safing, performing physical inventories, transferring SNM, or handling any SNM that is not under an active control measure or monitoring or surveillance condition.

K. Why would requirements be added to designate material balance areas (MBAs), item control areas (ICAs), and custodians for these areas?

The MC&A requirements would be strengthened by specifically defining the terms for MBA and ICA and custodians and by consistently requiring licensees under Subparts C, D, and E to designate MBAs and ICAs and custodians for these areas. The terms are widely used in the regulated community and 10 CFR Part 74 would be clarified by setting forth the specific meaning for the terms in 10 CFR 74.4. A licensee would be required to designate MBAs and

ICAs and assign custodial responsibilities for these areas to provide internal controls to deter or detect any diversion or misuse of SNM at the licensee's facility.

L. Why would calendar days be inserted into 10 CFR Part 74?

To clarify 10 CFR Part 74, references to due dates and reporting frequencies would be made more uniform by expressing most timeframes in calendar days. Using calendar days avoids the existing uncertainty over whether weekends and holidays are counted in determining whether or not a licensee has taken timely action. The proposed clarifications are intended to make Part 74 more internally consistent with existing 10 CFR 74.33(c)(4), which requires that annual static physical inventories be taken "at least every 370 calendar days." Existing Part 74 provisions referencing six-month intervals would be changed to "185 calendar days."

M. Will the implementation guidance documents be updated for the MC&A program?

The following guidance documents are being revised and updated in conjunction with the rulemaking effort. In addition, a guidance document for Category II facilities (SNM of Moderate Strategic Significance) would be updated and issued with the existing guidance documents below. All revised NUREG guidance documents will be available for public comment in parallel with the scheduled publication of the proposed rule.

i. NUREG-1280, "Standard Format and Content Acceptance Criteria for the MC&A Reform Amendment,"

ii. NUREG-1065, "Acceptable Standard Format and Content for the Fundamental Nuclear Material Control (FNMC) Plan Required for Low-Enriched Uranium Facilities,"

iii. 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 Enrichment Facilities,"

iv. NUREG/BR-0096, "Instructions and Guidance for Completing Physical Inventory Summary Report."

N. Would there be changes for item controls or physical inventories?

Subpart B in 10 CFR Part 74 would be revised to include a new requirement in 10 CFR 74.19(c) stating that each licensee who is authorized to possess, at any one time and site location, any quantity of contained uranium-235, uranium-233, or plutonium, or any combination thereof must establish, document, implement, and maintain an item control system as defined in 10 CFR 74.4.

Existing 10 CFR 74.19(c) requires a licensee authorized to possess SNM in a quantity greater than 350 grams of contained uranium-235 or uranium-233 or plutonium or any combination thereof to conduct a physical inventory of all SNM it in its possession at intervals not to exceed 12 months. Proposed 10 CFR 74.19(c) would require a licensee authorized to possess any quantity of contained uranium-235 or uranium-233 or plutonium or any combination thereof to conduct a physical inventory of all SNM in its possession under the license at intervals not to exceed 370 calendar days. Currently a licensee possessing greater than 1 gram of SNM is required to submit to NMMSS annual material status reports under 10 CFR 74.13 and nuclear material transaction reports under 10 CFR 74.15. To prepare accurate reports to NMMSS, a licensee would rely on the physical inventory that would account for any quantity of SNM.

Some of the current exemption provisions for item controls would be removed. Specifically, the exemption provisions in 10 CFR 74.31(c)(6), 74.33(c)(6)(ii) and 74.43(b)(6) for items existing 14 days or less in Category III and II facilities would be removed. The 14-day

exemption was put in the current regulations at a time when most Category III licensees did not have computer inventory controls and instead relied on manual ledger entries. In other words, the current regulation aligned the risk with what the licensees could do in a production environment.

However, over the last several years, licensees have implemented business systems that track SNM containing items through the use of bar codes and entries to computer systems. This has had the secondary benefit of giving these licensees the ability to track individual items and total inventory in near real time. Licensees have demonstrated this ability numerous times during inspections by NRC staff.

Current requirements in 10 CFR Part 74 recognize the importance of conducting timely inventories and reporting the results by requiring the reporting of shipments and receipts of a gram or more of material in 10 days (see 10 CFR 74.15) and through the reporting of lost, stolen, or diverted SNM of a gram or more within one hour (10 CFR 74.11).

NRC inspections have identified cases where there were “near-misses” associated with current exemptions. Removal of the exemptions from the item control requirements would align this particular regulation with other requirements in 10 CFR Part 74 to better ensure common defense and security is maintained through accurate SNM item bearing inventories. These proposed regulatory changes would not be expected to impact licensees significantly since they already have in-house systems that track such items in near real time.

Additionally, for Category III facilities, the exemption provisions (in 10 CFR 74.31(c)(6), and 74.33(c)(6)(ii)) for individual items containing less than 500 grams of uranium-235, up to a total of 50 kilograms of uranium-235, would be removed. 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. These exemptions were identified for removal in SECY-08-0059. Item control requirements that exclude kilogram amounts of material are not consistent with protection of the common defense and security.

O. Why would an exception be added to 10 CFR 74.15(b)(2)?

The exception from performing independent tests when receiving unirradiated fuel rods or unirradiated fuel assemblies would be included to clarify the requirement for licenses under 10 CFR Parts 50 or 52. Similarly the requirement would be clarified for a licensee under 10 CFR Part 70 receiving SNM contained in a sealed source that will not be opened. The NRC inspection program had indicated that typically a licensee will verify the contents of such shipments by reviewing the shipping papers and visual inspection of the material because independent testing, e.g., destructive testing or sampling has been impractical for determining the contents of the shipment being received.

P. What should I consider as I prepare my comments to the NRC?

When submitting your comments, remember to:

i. Identify the rulemaking (RIN 3150-A161); ([NRC-2009-0096]).

ii. Explain why you agree or disagree; suggest alternatives and substitute language.

iii. Describe any assumptions and include technical information or data that you used.

iv. If you estimate potential costs or burdens, explain how you arrived at your estimate in sufficient detail to allow for it to be reproduced.

v. Provide specific examples to illustrate your concerns, and suggest alternatives.

vi. Explain your views as clearly as possible.

vii. Make sure to submit your comments by the comment period deadline identified.

viii. The NRC is particularly interested in your comments concerning the issues in Section II about item controls, two-person rule, designating MBAs, ICAs and custodial responsibilities for these areas. Section V of this document contains a request for comment on the compatibility designations for the proposed rule; Section VI contains a request for comments on the use of plain language; Section VIII contains a request for comments on the draft environmental assessment; Section IX contains a request for comments on the information collection requirements; Section X contains a request for comments on the draft regulatory analysis; and Section XI contains a request for comments on the impact of the proposed rule on small businesses.

III. Discussion of Proposed Amendments by Section

Section 40.64 Reports.

Paragraph (b)(1) would be revised to remove the reference to 10 CFR Part 72.

Section 70.32 Conditions of licenses.

Paragraphs (c)(1)(i) and (iii) would be revised to replace the reference to § 74.51(c) with § 74.51(b). These sections were revised to provide consistent organization for Subparts C, D, and E in 10 CFR Part 74 and a conforming change would be completed in 10 CFR 70.32(c)(1)(i) and (iii).

Section 72.72 Material control and accounting requirements for source material and special nuclear material.

The title of the section would be revised from “Material balance, inventory, and records requirements for stored materials” to “Material control and accounting requirements for source material and special nuclear material.” Paragraph (a) would be revised to only reference requirements for source material, and would reference § 40.61 and § 40.64 in this regard. The remainder of existing § 72.72 (a), (b), (c), and (d) would be removed because these requirements are duplicated in 10 CFR Part 74. As discussed above, the § 74.2 scoping provisions would be revised to include ISFSIs.

New paragraph (b) would reference MC&A requirements for SNM in 10 CFR Part 74.

Section 72.74 Reports of accidental criticality.

The title of this section would be revised 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. ISFISs would be subject to 10 CFR 74.11(a) with regard to any loss of SNM that must be reported within 1 hour of discovery. Section 72.74 would retain its reporting requirement for accidental criticality.

Paragraph (b) would be revised to state that 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.

Section 72.76 Material status reports.

This section would be removed and reserved and in this regard § 72.9 would be changed.

Section 72.78 Nuclear material transaction reports.

This section would be removed and reserved and in this regard § 72.9 would be changed.

Section 74.2, Scope.

The last sentence of paragraph (a) would be revised to bring licensees who possess spent nuclear fuel at ISFSIs within the scope of the MC&A reporting and recordkeeping requirements in 10 CFR Part 74.

Section 74.3, General performance objectives.

This section would be added to require all licensees who are authorized to hold SNM to implement and maintain a MC&A program that achieves the general performance objectives listed in paragraphs (a) through (e).

Section 74.4, Definitions.

This section would be revised to remove the definition, *Effective kilograms of special nuclear material.* This section would be revised to add definitions for the following terms: *Accounting, Custodian, Item control area, Item control system, Material balance area, Material control and accounting*, and *Two-person rule*. The definitions of the following terms would be revised to conform with the existing definitions of these terms in 10 CFR Parts 70 and 73, and to refer to Appendix A of this part: *Formula quantity, SNM of low strategic significance*, and *SNM of moderate strategic significance*.

Section 74.11, Reports of loss or theft or attempted theft or unauthorized production of special nuclear material.

Paragraph (b) 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.

Section 74.13, Material status reports.

As discussed further below, plain language revisions would be made to 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 § 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 § 74.13(a).

Paragraph (c) would retain the provision in existing § 74.13(a) that the reports may be submitted at other times for good cause with prior NRC approval.

As indicated above, paragraph (d) restates the existing § 74.13(b) provision regarding reports required under section 75.35 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement).

Paragraph (e) would retain the requirement in existing § 74.13(a) regarding the resolution of any discrepancies identified during the report review.

Section 74.15, Nuclear material transaction reports.

Paragraph (b)(2) would be revised by adding an exception that independent testing is not required for receipt of unirradiated fuel rods, unirradiated fuel assemblies, or sealed sources containing SNM that will not be opened.

Section 74.19, Recordkeeping, procedures, item controls, and physical inventories.

This section's title would be revised to reference written MC&A procedures, item controls, and physical inventories.

Paragraph (b) would be revised to replace "one effective kilogram" with "a quantity of 350 grams or more of contained uranium-235, uranium-233, or plutonium, or any combination thereof." For plain language reasons, the other existing requirements in paragraph (b) about

written MC&A procedures, retention of the procedures and superseded portions of the procedures, would be redesignated in new paragraphs (b)(1), (2), and (3).

Paragraph (c) would be revised to replace “350 grams” with “any quantity” of SNM, and would be further divided into three paragraphs. Paragraph (c)(1) would be added to make item control system requirements applicable to all holders of SNM. Paragraph (c)(2) retains the requirement for conducting a periodic physical inventory of SNM at intervals not to exceed 370 calendar days. Paragraph (c)(3) retains the requirement to keep records of the physical inventories performed.

Section 74.31 Nuclear material control and accounting for special nuclear material of low strategic significance.

The general performance objectives applicable to Category III facilities would be set forth in proposed § 74.3 as discussed above. Revised § 74.31(a)(1) would incorporate the § 74.3 performance objectives by reference, thereby replacing the performance objectives set forth in existing § 74.31(a)(1)-(3). Proposed paragraph (a)(2) would retain elements of the exemption in existing § 74.31(a) applicable to production or utilization facilities, and any licensee operations involving waste disposal. Proposed paragraph (a)(2) would add an exemption for ISFSIs, thereby making it consistent with existing § 74.51(a).

Paragraph (b) would be revised by replacing the reference to “a fundamental nuclear material control (FNMC) plan” with a reference to “a MC&A plan.” The plan would need to achieve the general performance objectives in § 74.3, and meet the program capability requirements set forth in revised § 74.31(c) as discussed below.

The introductory language of paragraph (c) would be revised to state that the MC&A plan must: include the capabilities described in paragraphs (c)(1) through (11); and achieve the performance objectives in § 74.3. Paragraph (c)’s title would be changed from “System

capabilities" to "Program capabilities." Existing paragraphs (c)(1) – (3) would remain unchanged. Paragraph (c)(4) would be clarified to state the standard error as the standard error of the inventory difference (SEID). The paragraph (c)(5) physical inventory timing provisions would be clarified by changing "60 days" to "60 calendar days." Paragraph (c)(6) would be revised by referencing the item control system defined in § 74.4. The 14-day provision in the first sentence of the existing requirement would be removed. The reference to detecting "unauthorized removals of substantial quantities of material from items" in the second sentence would be changed to require detecting the removal of "any quantity of material." In the third sentence, the existing exemption from the detection requirements for "items individually containing less than 500 grams of uranium-235 up to a total of 50 kilograms of uranium-235" would be removed. The wording of paragraph (c)(7) would be revised to state as follows: "Conduct and document shipper-receiver difference comparisons for all SNM receipts on a total shipment basis, and on an individual batch basis when required by 10 CFR Part 75 of this chapter, and ensure that any shipper-receiver difference that is statistically significant and exceeds twice the estimated standard deviation of the difference estimator and 500 grams of uranium-235 is investigated and resolved." Paragraph (c)(8) would be revised by referencing the MC&A "program" rather than the MC&A "system."

Paragraphs (c)(9), (10), and (11) would be added to require that the MC&A program include, respectively: tamper-safing procedures; use of the two-person rule; and the designation of material balance areas, item control areas, and custodians responsible for these areas.

Section 74.33 Nuclear material control and accounting for uranium enrichment facilities authorized to produce special nuclear material of low strategic significance.

The general performance objectives applicable to Category III uranium enrichment facilities would be set forth in proposed § 74.3 as discussed above, and revised § 74.33(a) would reflect this. The general performance objectives stated in existing paragraphs (a)(1) – (9) would be replaced by new paragraphs (a)(1) – (4), which would only reference source material. These general performance objectives would parallel those set forth in proposed § 74.3, which would apply only to SNM. New paragraph (a)(5) retains elements of existing paragraph (a)(8), and retains the exemption for centrifuge enrichment facilities stated in existing (a)(5).

Paragraph (b) would be revised by replacing the reference to "a fundamental nuclear material control (FNMC) plan" with a reference to "a MC&A plan." The plan would need to achieve the general performance objectives in § 74.3, the performance objectives in paragraph (a) as discussed above, and meet the program capability requirements set forth in revised § 74.33(c) as discussed below.

The introductory language of paragraph (c) would be revised to state that the MC&A plan must: include the capabilities described in paragraphs (c)(1) through (11); and achieve the performance objectives (as referenced above). Paragraph (c)'s title would be changed from "System features and capabilities" to "Program capabilities." Existing paragraphs (c)(1) – (2) would remain unchanged. Paragraph (c)(3)(ii) would be clarified to include the acronym SEID in a parenthetical. Paragraph (c)(4)(i) would be clarified by changing "65 days" to "65 calendar days." Paragraph (c)(4)(ii) would be clarified by changing "60 days" to "60 calendar days." Paragraph (c)(5) would be revised by adding "resolving" at the end of the introductory sentence to read, "A detection program, independent of production, that provides high assurance of detecting and resolving:" Paragraph (c)(6) would be revised by deleting its existing (i)-(ii) subsections. Paragraph (c)(6) would instead reference the item control system defined in § 74.4. The requirement to have such an item control system replaces the existing

§ 74.33(c)(6)(i) requirement. The reference to detecting the "unauthorized removal of 500 grams or more of uranium-235" in existing § 74.33(c)(6)(ii) would be changed to require detecting the removal of "any quantity of uranium-235." The existing exemption in § 74.33(c)(6)(ii) from the detection requirements for items containing "less than 500 grams of uranium-235 up to a cumulative total of 50 kilograms of uranium-235," and for items that "exist for less than 14 calendar days," would be removed. This exemption would be replaced with a provision exempting items in solution with a concentration of less than 5 grams per liter, and waste items destined for burial or incineration (the proposed wording here tracks the portion of the § 74.31(c)(6) exemption that is being retained).

Paragraph (c)(7) would be clarified to state the requirements to conduct and document shipper-receiver difference comparisons for all SM and SNM receipts on a total shipment basis and on an individual batch basis when required by 10 CFR Part 75 of this chapter, and that any shipper-receiver difference that is statistically significant and exceeds twice the estimated standard deviation of the difference and 500 grams of uranium-235 must be investigated and resolved. Paragraph (c)(8) would be revised by referencing the MC&A "program" rather than the MC&A "system."

Paragraphs (c)(9), (10), and (11) would be added to require that the MC&A program include, respectively: tamper-safing procedures; use of the two-person rule; and the designation of MBAs, ICAs, and custodians responsible for these areas.

Section 74.41 Nuclear material control and accounting for special nuclear material of moderate strategic significance.

The general performance objectives applicable to Category II facilities would be set forth in proposed § 74.3 as discussed above. Revised § 74.41(a)(1) would incorporate the § 74.3 performance objectives by reference, thereby replacing the performance objectives set forth in

existing § 74.41(a)(1)-(4). Proposed paragraph (a)(2) would retain elements of the exemption in existing § 74.41(a) applicable to production or utilization facilities, licensees using reactor irradiated fuels for research purposes, and any licensee operations involving waste disposal. Paragraph (b) would be revised by replacing the reference to "a fundamental nuclear material control (FNMC) plan" with a reference to "a MC&A plan." The plan would need to achieve the general performance objectives in § 74.3, meet the program capability requirements set forth in § 74.41(c), and the requirements of §§ 74.43 and 74.45 as discussed below. Paragraph (b)'s title would be changed from "Implementation schedule" to "Implementation," and the existing (b)(1)-(2) subsections would be consolidated into a single section consistent with the format used in existing § 74.31(b).

Paragraph (c) would be revised by changing its title from "System capabilities" to "Program capabilities." The reference in existing § 74.41(c) to the "MC&A system" would be changed to the "MC&A plan," which must achieve the performance objectives in § 74.3, and include the capabilities described in §§ 74.43 and 74.45. The existing § 74.41(c)(1)-(2) checks and balances requirements remain the same.

Section 74.43 Internal controls, inventory, and records.

Paragraph (b)(3) would be revised to replace the title, "FNMC plan" with "MC&A plan." Paragraph (b)(5) would be revised by replacing the term "item control program" with "item control system" as newly defined in § 74.4. The current paragraphs (b)(5)(i) and (b)(5)(ii) would be consolidated into proposed paragraph (b)(5). The current detection requirement in paragraph (5)(ii) would be revised to require the detection of "unauthorized removals of individual items or any quantity of material (as defined in § 74.4) from items," replacing the existing reference to 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." Paragraph (b)(6) would be revised to replace the exemptions stated in the current requirement. Only "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" would be exempt from the detection requirements described above. The reference to "shipper-receiver comparisons" in existing paragraph (b)(7) would be clarified to state "shipper-receiver difference comparisons."

Paragraph (c)(3) would be clarified by removing the phrases, "if tamper-safe seals are to be used for assuring the validity of prior measurements," and "showing the date and time of seal application." These changes are proposed so that the tamper-safing requirements in Subparts C, D, and E of 10 CFR Part 74 will be worded in a consistent manner.

Paragraphs (c)(9) and (10) would be added to provide requirements that the MC&A plan capabilities must include, respectively, adherence to the two-person rule, and provide for the designation of MBAs, ICAs, and assigning custodial responsibilities for these areas.

Section 74.45 Measurements and measurement control.

Paragraph (c)(4) would be clarified by spelling out the acronym SEID as the "standard error of the inventory difference."

Section 74.51 Nuclear material control and accounting for strategic special nuclear material.

The general performance objectives applicable to Category I facilities would be set forth, in part, in proposed § 74.3 as discussed above. Revised § 74.51(a)(1) would incorporate the § 74.3 performance objectives by reference. Additionally, proposed § 74.51(a)(1)(i) – (iii) would set forth the performance objectives stated in existing § 74.51(a)(2)-(4).

Proposed paragraph (a)(2) would retain the exemptions in existing § 74.51(a) applicable to production or utilization facilities, ISFSIs, and any licensee operations involving waste disposal, but would remove the exemption for an irradiated fuel reprocessing plant. The removal of this exemption is in accordance with the NRC staff's recommendation in its

regulatory framework gap analysis for irradiated fuel reprocessing documented in SECY-09-0082. The licensee of any future irradiated fuel reprocessing facility would likely hold quantities of strategic SNM that need to be subject to the highest level of MC&A safeguards and security requirements, to ensure that this material would be adequately protected.

To make the organization of requirements for Category I and Category III fuel fabrication facilities more consistent, changes in existing 10 CFR 74.51(b) and (c) are proposed, as discussed below, that would align the format with that used in existing 10 CFR 74.31(b) and (c). Thus, 10 CFR 74.51(b) would be retitled, "Implementation," and would contain elements of existing 10 CFR 74.51(c). Proposed 10 CFR 74.51(b) would refer to an "MC&A plan" rather than a "FNMC plan," for the reasons discussed above. The MC&A plan would need to achieve the general performance objectives in §§ 74.3 and 74.51(a), and meet the requirements of §§ 74.53, 74.55, 74.57, and 74.59.

Proposed 10 CFR 74.51(c) would be retitled, "Program capabilities," and would contain elements of existing § 74.51(b). In addition to the MC&A plan requirements discussed in revised 10 CFR 74.51(b) above, 10 CFR 74.51(c) would require that the plan incorporate checks and balances that are sufficient to detect falsification of data and reports that could conceal diversion of SNM or strategic SNM (SSNM). A plain language change to simplify paragraph (c)(1) would revise "An individual" to "A single individual." A plain language change to simplify paragraph (c)(2) would revise "Collusion between an individual with MC&A responsibilities and another individual who has responsibility or control within both the physical protection and the MC&A systems" to "Collusion between two individuals, one or both of whom have authorized access to SNM or SSNM."

Section 74.51(d) would be revised to replace “FNMC” plan with “MC&A” plan. Additionally, the times to perform physical inventories would be expressed in terms of calendar days.

Section 74.53 Process monitoring.

Paragraph (a)(3) would be clarified to replace “a consecutive three-month period” with “a period of 95 calendar days.” Paragraph (a) (4) would be clarified to replace “any seven-consecutive-day period” with “a period of 7 calendar days.”

Paragraph (c)(1) would be clarified to replace “monthly” with “at intervals not to exceed 30 calendar days.”

Section 74.57 Alarm resolution.

Paragraph (c) would be revised to replace “fundamental nuclear material control plan” with “MC&A plan.”

Section 74.59 Quality assurance and accounting requirements.

In paragraph (e)(7), the requirement to correct SSNM measurement differences “accumulated over a six-month period” would be clarified to instead reference “a period not to exceed 185 calendar days.”

In paragraph (f)(1), the requirement to perform a physical inventory “every six calendar months” would be clarified to instead reference “every 185 calendar days,” and “45 days” would be clarified to specify “45 calendar days.” The paragraph (f)(2)(i) tamper-safing provision would be revised by adding at its end the phrase “and which include control of access to, and distribution of, unused seals and records,” in order to make this provision consistent across Subparts C, D, and E of 10 CFR Part 74.

With respect to required internal controls regarding how frequently scrap material must be measured, paragraph (h)(2)(ii) would be clarified by replacing “six months” with

"185 calendar days." Paragraph (h)(5) would be revised by adding at its beginning a requirement to designate MBAs and ICAs, in order to make this provision consistent across Subparts C, D, and E of 10 CFR Part 74.

Paragraph (h)(6) would be added to require use of the two-person rule for conducting tamper-safing operations, physical inventories, transfer of SNM, and for any handling of SNM that is not under an active control measure or monitoring or surveillance condition.

Appendix A to 10 CFR Part 74—Categories of Special Nuclear Material.

Appendix A would be added to provide a table stating the elements, isotopic composition, and quantities of material that Category I, Category II, and Category III facilities are authorized to hold. Notes are included to state that sealed sources are excluded from the quantity limits in the table and that spent nuclear fuel is reduced one category level while the radiation exposure exceeds 1 Sv per hour (100 rads per hour) at 1 meter, unshielded. Formulae are included to calculate a quantity of SSNM for Category I, Category II or Category III.

Section 150.17 Submission to Commission of nuclear material status reports.

The requirements in paragraph (a) would be clarified by arranging the requirements into numbered subsections (a)(1), (2), (3), and (4). The revised introductory paragraph would clarify the requirement to submit both a Material Balance Report and a Physical Inventory Listing Report to the NMMSS in accordance with the instructions in paragraph (a)(1). The reports would be due between January 1 and March 31 of each year.

Paragraph (a)(1) would include the reporting instructions that are in the current requirements in paragraph (a) and would state that individual reports must be prepared for each Reporting Identification Symbol account using the information in NUREG/BR-0007 and NMMSS Report D-24, "Personal Computer Data Input for NRC Licensees." Paragraph (a)(2) would

include the provision that is currently in paragraph (a) stating that the NRC may permit reports to be submitted at other times for good cause. Paragraph (a)(3) would include the statement in existing paragraph (b) regarding the submittal of reports under 10 CFR 75.35 (pertaining to implementation of the US/IAEA Safeguards Agreement). Paragraph (a)(4) would include the requirement that is currently in paragraph (a) that a licensee must resolve any discrepancies identified during the report review and reconciliation process within 30 calendar days of being notified of a discrepancy identified by the NRC.

Paragraph (b)(1) would be revised to remove the reference to 10 CFR Part 72, and paragraph (b)(2) would also be revised to remove the reference to 10 CFR Part 72.

IV. Criminal Penalties

For the purpose of Section 223 of the Atomic Energy Act (AEA), the Commission is proposing to amend 10 CFR Parts 40, 70, 72, 74 and 150 under one or more of Sections 161b, 161i, or 161o of the AEA. Willful violations of the rule would be subject to criminal enforcement.

V. Agreement State Compatibility

Under the ‘‘Policy Statement on Adequacy and Compatibility of Agreement States Programs,’’ approved by the Commission on June 20, 1997, and published in the FR (62 FR 46517; September 3, 1997), the regulations affected by this rulemaking are classified as compatibility Category ‘‘NRC.” The NRC program elements in this category are those that relate directly to areas of regulation reserved to the NRC by the AEA, or the provisions of

10 CFR, and cannot be relinquished to the Agreement States. Thus, States should not adopt these program elements.

VI. Plain Language

The Presidential Memorandum "Plain Language in Government Writing" published June 10, 1998 (63 FR 31883), directed that the Government's documents be in clear and accessible language. The NRC requests comments on this proposed rule specifically with respect to the clarity and effectiveness of the language used. Comments should be sent to the address listed under the "ADDRESSES" heading of this document.

VII. Voluntary Consensus Standards

The National Technology Transfer and Advancement Act of 1995 (Pub. L. 104-113) requires that Federal agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless the use of such a standard is inconsistent with applicable law or otherwise impractical. In this proposed rule, the NRC would revise and consolidate requirements for MC&A in 10 CFR Part 74. The NRC is not aware of any comprehensive voluntary consensus standards that address the proposed subject matter of this proposed rule. The NRC will consider using a voluntary consensus standard if an appropriate standard is identified. If a voluntary consensus standard is identified for consideration, the submittal should explain why the standard should be used.

VIII. Environmental Assessment and Finding of No Significant Environmental Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that this rule, if adopted, would not have any significant environmental impacts, and therefore this rulemaking does not warrant the preparation of an environmental impact statement The proposed rule pertains to MC&A program requirements, which consist of administrative procedures and operations to track and control SNM and related information, in order to deter and detect any loss, theft, diversion, or unauthorized production of nuclear material. As the proposed amendments pertain to information collection and reporting requirements, adopting them would have no significant impact on the quality of the human environment. Thus the NRC finds that this proposed rulemaking will not have a significant environmental impact. Comments on the draft Environmental Assessment (EA) may be submitted to the NRC as indicated under the **ADDRESSES** heading. The draft EA may also be examined at the NRC Library, O-1F21, 11555 Rockville Pike, Rockville, MD 20852.

IX. Paperwork Reduction Act Statement

This proposed rule amends information collection requirements contained in 10 CFR Parts 72 and 74 that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq). These information collection requirements have been submitted to the Office of Management and Budget for review and approval. The proposed changes to 10 CFR Parts 40, 70, and 150 do not contain new or amended information collection requirements. Existing requirements were approved by the Office of Management and Budget, approval numbers 3150-0132 and 3150-0123.

Type of submission, new or revision: Revision.

The title of the information collection: 10 CFR Parts 40, 70, 72, 74, and 150, Amendments to Material Control and Accounting Regulations, Proposed Rule.

The form number if applicable: DOE/NRC Form 741, "Nuclear Material Transaction Report," DOE/NRC Form 742, "Material Balance Report," and DOE/NRC Form 742C, "Physical Inventory Listing."

How often the collection is required: Licensee timeframes for reporting to the NRC have not changed for NRC Forms 741, 742, and 742C. Licensees under Subparts B and C of 10 CFR Part 74 would submit reports within 60 calendar days after the start of the physical inventory covered by the reports, at intervals not to exceed 12 months. Licensees under Subpart D of 10 CFR Part 74 would submit reports within 60 calendar days after the start of the physical

inventory covered by the reports, at intervals not to exceed 9 months. Licensees under Subpart E of 10 CFR Part 74 would be required to submit reports within 30 calendar days after the start of the physical inventory covered by the reports, at intervals not to exceed 65 calendar days until performance acceptable to the NRC has been demonstrated and the Commission has issued formal approval to perform physical inventories at intervals not to exceed 6 months. Forms are also submitted when a nuclear material transaction is made.

Who will be required or asked to report: Persons licensed under 10 CFR Parts 50, 52, 70, 72, and 76 who possess and use certain forms and quantities of SNM.

An estimate of the number of annual responses: 30 responses (0 reporting responses + 30 recordkeepers)

The estimated number of annual respondents: 30

An estimate of the total number of hours needed annually to complete the requirement or request: 630 hours (0 hours reporting plus 630 hours recordkeeping).

Abstract: The NRC is proposing to amend its regulations to revise and consolidate the requirements for MC&A of SNM in 10 CFR Part 74. The proposed amendments relocate the Nuclear Materials Management and Safeguards System (NMMSS)-related reporting requirements for ISFSIs from 10 CFR Part 72 to 10 CFR Part 74; however, no changes have been made to the reporting requirements for NRC Forms 741, 742, or 742C. The proposed

rule would change recordkeeping requirements in Subparts B, C, and D. Licensees under Subpart B would be required to establish, document, implement, and maintain an item control system as defined in § 74.4. Licensees under Subparts C and D would include currently exempted items in their item controls.

The NRC is seeking public comment on the potential impact of the information collections contained in this proposed rule and on the following issues:

1. *Is the proposed information collection necessary for the proper performance of the functions of the NRC, including whether the information will have practical utility?*
2. *Is the estimate of burden accurate?*
3. *Is there a way to enhance the quality, utility, and clarity of the information to be collected?*
4. *How can the burden of the information collection be minimized, including the use of automated collection techniques?*

The public may examine and have copied for a fee publicly available documents, including the OMB supporting statement, at the NRC Public Document Room, One White Flint North, 11555 Rockville Pike, Room O-1 F21, Rockville, MD 20852. The OMB clearance package and rule are available at the NRC worldwide Web site: *http://www.nrc.gov/public-involve/doc-comment/omb/index.html* for 60 days after the signature date of this notice.

Send comments on any aspect of these proposed regulations related to information collections, including suggestions for reducing the burden and on the above issues, by (INSERT DATE 30 DAYS AFTER PUBLICATION IN THE *FEDERAL REGISTER*) to the Information

Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail to *Infocollects.Resource@NRC.gov* and to the Desk Officer, Chad Whiteman, Office of Information and Regulatory Affairs, NEOB-10202 (3150-0123 and 0132), Office of Management and Budget, Washington, DC 20503. Comments on the proposed information collections may also be submitted via the Federal eRulemaking Portal: *http://www.regulations.gov*, docket # NRC-2009-0096. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given to comments received after this date.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

X. Regulatory Analysis

The Commission has prepared a draft regulatory analysis on this proposed regulation. The analysis examines the costs and benefits of the alternatives considered by the Commission.

The Commission requests public comment on the draft regulatory analysis. Comments on the draft analysis may be submitted to the NRC as indicated under the ADDRESSES heading. The analysis is available for inspection in the NRC Public Document Room, 11555 Rockville Pike, Rockville, MD 20852.

XI. Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this rule would not, if promulgated, have a significant economic impact on a substantial number of small entities. The majority of companies that own these plants do not fall within the scope of the definition of "small entities" set forth in the Regulatory Flexibility Act or the size standards established by the NRC (10 CFR 2.810).

The NRC is seeking public comment on the potential impact of the proposed rule on small entities. The NRC particularly desires comment from licensees who qualify as small businesses, specifically as to how the proposed regulation will affect them and how the regulation may be tiered or otherwise modified to impose less stringent requirements on small entities while still adequately protecting the public health and safety and common defense and security. Comments on how the regulation could be modified to take into account the differing needs of small entities should specifically discuss–

(a) The size of the business and how the proposed regulation would result in a significant economic burden upon it as compared to a larger organization in the same business community;

(b) How the proposed regulation could be further modified to take into account the business's differing needs or capabilities;

(c) The benefits that would accrue, or the detriments that would be avoided, if the proposed regulation was modified as suggested by the commenter;

(d) How the proposed regulation, as modified, would more closely equalize the impact of NRC regulations as opposed to providing special advantages to any individuals or groups; and

(e) How the proposed regulation, as modified, would still adequately protect the public health and safety and common defense and security.

Comments should be submitted as indicated under the **ADDRESSES** heading.

XII. Backfitting and Issue Finality

The NRC has determined that the NRC's backfitting and issue finality regulations in 10 CFR 50.109, 70.76, 72.62, 76.76, and in 10 CFR Part 52, do not apply to this proposed rule because this amendment would not involve any provisions that are subject to these backfitting and issue finality provisions. The proposed rule addresses MC&A programs, which consist of administrative procedures and operations to track and control SNM and related information to deter and detect any loss, theft, diversion, or unauthorized production of nuclear material. These MC&A program requirements constitute information collection and reporting requirements. The NRC has determined that information collection and reporting requirements are not subject to the NRC's backfitting and issue finality regulations. The NRC's determination that MC&A programs are information collection and reporting requirements not subject to backfitting and issue finality regulations, is consistent with past MC&A rulemakings published in the *FR* (e.g., 56 FR 55991, October 3, 1991; 67 FR 78130, December 23, 2002; 73 FR 32453, July 9, 2008).

List of Subjects

10 CFR Part 40

Criminal penalties, Government contracts, Hazardous materials transportation, Nuclear materials, Reporting and recordkeeping requirements, Source material, Uranium.

10 CFR Part 70

Criminal penalties, Hazardous materials transportation, Material control and accounting, Nuclear materials, Packaging and containers, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Security measures, Special nuclear material.

10 CFR Part 72

Administrative practice and procedure, Criminal penalties, Manpower training programs, Nuclear materials, Occupational safety and health, Penalties, Radiation protection, Reporting and recordkeeping requirements, Security measures, Spent fuel, Whistleblowing.

10 CFR Part 74

Accounting, Criminal penalties, Hazardous materials transportation, Material control and accounting, Nuclear materials, Packaging and containers, Radiation protection, Reporting and recordkeeping requirements, Scientific equipment, Special nuclear material.

10 CFR Part 150

Criminal penalties, Hazardous materials transportation, Intergovernmental relations, Nuclear materials, Reporting and recordkeeping requirements, Security measures, Source material, SNM.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended; the Energy Reorganization Act of 1974, as amended; and 5 U.S.C. 553; the NRC is proposing to adopt the following amendments to 10 CFR Parts 40, 70, 72, 74, and 150.

1. The authority citation for Part 40 continues to read as follows:

Part 40 - Domestic Licensing of Source Material

AUTHORITY: Secs. 62, 63, 64, 65, 81, 161, 182, 183, 186, 68 Stat. 932, 933, 935, 948, 953, 954, 955, as amended, secs. 11e(2), 83, 84, Pub. L. 95-604, 92 Stat. 3033, as amended, 3039, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2014(e)(2), 2092, 2093, 2094, 2095, 2111, 2113, 2114, 2201, 2232, 2233, 2236, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688 (42 U.S.C. 2021); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 275, 92 Stat. 3021, as amended by Pub. L. 97-415, 96 Stat. 2067 (42 U.S.C. 2022); sec. 193, 104 Stat. 2835, as amended by Pub. L. 104-134, 110 Stat. 1321, 1321-349 (42 U.S.C. 2243); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109-59, 119 Stat. 594 (2005).

Section 40.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102-486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 40.31(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 40.46 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 40.71 also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

2. In § 40.64 revise paragraph (b)(1) to read as follows;

§ 40.64 Reports.

* * * * *

(b) * * *

(1) Possesses, or had possessed in the previous reporting period, at any one time and location, one kilogram or more of uranium or thorium source material with foreign obligations as defined in this part, shall document holdings as of September 30 of each year and submit to the Commission within 30 days, a statement of its source material inventory with foreign obligations as defined in this part. Alternatively, this information may be submitted with the licensee's material status reports on SNM filed under 10 CFR Part 74 of this chapter, as a statement of its source material inventory with foreign obligations as defined in this part. This statement must be submitted to the address specified in the reporting instructions in NUREG/BR–0007, and include the Reporting Identification Symbol (RIS) assigned by the Commission to the licensee.

3. The authority citation for Part 70 continues to read as follows

PART 70 - DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

AUTHORITY: Secs. 51, 53, 161, 182, 183, 68 Stat. 929, 930, 948, 953, 954, as amended, sec. 234, 83 Stat. 444, as amended, (42 U.S.C. 2071, 2073, 2201, 2232, 2233, 2282, 2297f); secs. 201, as amended, 202, 204, 206, 88 Stat. 1242, as amended, 1244, 1245, 1246 (42 U.S.C. 5841, 5842, 5845, 5846). Sec. 193, 104 Stat. 2835 as amended by Pub. L. 104-134, 110.

Stat. 1321, 1321-349 (42 U.S.C. 2243); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 194 (2005).

Sections 70.1(c) and 70.20a(b) also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

Section 70.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102-486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851). Section 70.21(g) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 70.31 also issued under sec. 57d, Pub. L. 93-377, 88 Stat. 475 (42 U.S.C. 2077). Sections 70.36 and 70.44 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 70.81 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237). Section 70.82 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

4. In § 70.32 revise paragraph (c)(1)(i), (c)(1)(ii), and (c)(1)(iii) to read as follows;

§ 70.32 Conditions of licenses.

* * * * *

(c)(1) * * *

(i) The program for control and accounting of uranium source material at an uranium enrichment facility and SNM at all applicable facilities as implemented pursuant to § 70.22(b), or §§ 74.31(b), 74.33(b), 74.41(b), or 74.51(b) of this chapter, as appropriate;

(ii) The measurement control program for uranium source material at an uranium enrichment facility and for SNM at all applicable facilities as implemented pursuant to §§ 74.31(b), 74.33(b), 74.45(c), or 74.59(e) of this chapter, as appropriate; and

(iii) Other material control procedures as the Commission determines to be essential for the safeguarding of uranium source material at an uranium enrichment facility or of SNM and providing that the licensee shall make no change that would decrease the effectiveness of the material control and accounting program implemented pursuant to § 70.22(b), or §§ 74.31(b), 74.33(b), 74.41(b), or 74.51(b) of this chapter, and the measurement control program implemented pursuant to §§74.31(b), 74.33(b), 74.41(b), or 74.59(e) of this chapter without the prior approval of the Commission. A licensee desiring to make changes that would decrease the effectiveness of its material control and accounting program or its measurement control program shall submit an application for amendment to its license pursuant to § 70.34.

* * * * *

5. The authority citation for Part 72 continues to read as follows:

PART 72 - LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL, HIGH-LEVEL RADIOACTIVE WASTE AND REACTOR-RELATED GREATER THAN CLASS C WASTE

AUTHORITY: Secs. 51, 53, 57, 62, 63, 65, 69, 81, 161, 182, 183, 184, 186, 187, 189, 68 Stat. 929, 930, 932, 933, 934, 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2071, 2073, 2077, 2092, 2093, 2095, 2099, 2111, 2201, 2232, 2233,

2234, 2236, 2237, 2238, 2282); sec. 274, Pub. L. 86-373, 73 Stat. 688, as amended (42 U.S.C. 2021); sec. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); Pub. L. 95-601, sec. 10, 92 Stat. 2951 as amended by Pub. L. 102-486, sec. 7902, 106 Stat. 3123 (42 U.S.C. 5851); sec. 102, Pub. L. 91-190, 83 Stat. 853 (42 U.S.C. 4332); secs. 131, 132, 133, 135, 137, 141, Pub. L. 97-425, 96 Stat. 2229, 2230, 2232, 2241, sec. 148, Pub. L. 100-203, 101 Stat. 1330-235 (42 U.S.C. 10151, 10152, 10153, 10155, 10157, 10161, 10168); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 549 (2005).

Section 72.44(g) also issued under secs. 142(b) and 148(c), (d), Pub. L. 100-203, 101 Stat. 1330-232, 1330-236 (42 U.S.C. 10162(b), 10168(c), (d)). Section 72.46 also issued under sec. 189, 68 Stat. 955 (42 U.S.C. 2239); sec. 134, Pub. L. 97-425, 96 Stat. 2230 (42 U.S.C. 10154). Section 72.96(d) also issued under sec. 145(g), Pub. L. 100-203, 101 Stat. 1330-235 (42 U.S.C. 10165(g)). Subpart J also issued under secs. 2(2), 2(15), 2(19), 117(a), 141(h), Pub. L. 97-425, 96 Stat. 2202, 2203, 2204, 2222, 2224 (42 U.S.C. 10101, 10137(a), 10161(h)).

Subparts K and L are also issued under sec. 133, 98 Stat. 2230 (42 U.S.C. 10153) and sec. 218(a), 96 Stat. 2252 (42 U.S.C. 10198).

6. Revise § 72.72 to read as follows:

§ 72.72 Material control and accounting requirements for source material and special nuclear material.

(a) Each licensee shall follow the requirements of § 40.61 and § 40.64 of this chapter for source material.

(b) Each licensee shall follow the requirements of 10 CFR Part 74, Subparts A and B, of this chapter for special nuclear material.

7. Revise § 72.74 to read as follows:

§ 72.74 Reports of accidental criticality.

(a) Each licensee shall notify the NRC Headquarters Operations Center within one hour of discovery of accidental criticality.

(b) Each licensee shall make the notifications required by paragraph (a) of this section to the NRC Headquarters Operations Center via any available telephone system to ensure that a report is received within one hour.

(c) Reports required under § 73.71 of this chapter need not be duplicated under the requirements of this section.

§ 72.76 [Removed and Reserved]

8. Remove and reserve §§ 72.76 and 72.78.

9. The authority citation for Part 74 continues to read as follows

PART 74 - MATERIAL CONTROL AND ACCOUNTING OF SPECIAL NUCLEAR MATERIAL

AUTHORITY: Secs. 53, 57, 161, 182, 183, 68 Stat. 930, 932, 948, 953, 954, as amended, sec. 234, 83 Stat. 444, as amended, sec.1701, 106 Stat. 2951, 2952, 2953, (42 U.S.C.2073, 2077, 2201, 2232, 2233, 2282, 2297f); secs. 201, as amended 202, 206, 88

Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note).

10. In § 74.2, revise the last sentence in paragraph (a) to read as follows:

§ 74.2 Scope.

(a) * * * The general reporting and recordkeeping requirements of Subpart B of this part also apply to licensees who possess spent nuclear fuel at independent spent fuel storage installations.

* * * * *

11. Add § 74.3 to read as follows:

§ 74.3 General performance objectives.

In addition to any other requirements in this part, each licensee who is authorized to possess or use SNM at a fixed site shall implement and maintain a material control and accounting program that enables the licensee to achieve the following general performance objectives in a timely manner:

(a) Maintain accurate, current, and reliable information on, and confirm the quantities and locations of SNM in its possession;

(b) Detect, respond to, and resolve any anomaly indicating a possible loss, theft, diversion, or misuse of SNM;

(c) Permit rapid determination of whether an actual loss, theft, diversion, or misuse of SNM has occurred;

(d) Provide information to aid in the investigation and recovery of missing SNM in the event of an actual loss, theft, diversion, or misuse; and

(e) Control access to MC&A information that might assist adversaries to carry out acts of theft, diversion, misuse, or radiological sabotage involving SNM.

12. In § 74.4:

a) Remove the definition for Effective kilograms of special nuclear material;
b) Add the definitions Accounting, Custodian, Item control, Item control area, Material balance area, material control and accounting, and two-person rule; and
c) Revise the definitions for Formula quantity, SNM of low strategic significance, and SNM of moderate strategic significance.

The additions and revisions read as follows:

§ 74.4 Definitions.

* * * * *

Accounting means a system which documents the quantities of SNM held on current inventory by the licensee, and includes tracking of receipts, shipments, and measured discards; and transfers of SNM.

* * * * *

Custodian means an individual authorized and qualified by the licensee who is responsible for controlling the movement of all SNM into, out of, and within a material balance area.

* * * * *

Formula quantity means SSNM in any combination in a quantity of 5,000 grams or more computed by the formula, grams = (grams contained U-235) + 2.5 (grams U-233 + grams plutonium). This class of material is also referred to as a Category I quantity of material as shown in Appendix A to this part.

* * * * *

Item control area (ICA) means a designated administrative area within the controlled access area, in which SNM is 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 is by the identity of an item and its assigned material quantity.

Item control system means a system tracking the creation, identity, element and isotopic content, location, and disposition of all items, which enables the licensee to maintain current knowledge of each item.

* * * * *

Material balance area (MBA) means a designated contiguous area in which the control of SNM is such that the quantity of material being moved into, out of, and within the MBA is an assigned value based on measurements of both the element content and the isotopic content.

Material control and accounting (MC&A) means a program to control and account for certain types of nuclear material used at a licensed facility, including SNM and source material, and which controls and accounts for unauthorized use of equipment capable of producing enriched uranium. The purpose of an MC&A program is to deter and detect any loss, theft, diversion, misuse, or unauthorized production of nuclear material.

* * * * *

Special nuclear material of low strategic significance means:

(1)(i) Less than an amount of SNM of moderate strategic significance, but more than 15 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope) or 15 grams of uranium-233 or 15 grams of plutonium or the combination of 15 grams when computed by the equation, grams = grams contained U-235 + grams plutonium + grams U-233; or

(ii) Less than 10,000 grams but more than 1,000 grams of uranium-235 (contained in uranium enriched to 10 percent or more, but less than 20 percent in the U-235 isotope); or

(iii) 10,000 grams or more of uranium-235 contained in uranium enriched above natural, but less than 10 percent in the U-235 isotope.

(2) This class of material is also referred to as a Category III quantity of material as shown in Appendix A to this part.

Special nuclear material of moderate strategic significance means:

(1)(i) Less than a formula quantity of SSNM but more than 1,000 grams of uranium-235 (contained in uranium enriched to 20 percent or more in the U-235 isotope) or more than 500 grams of uranium-233 or plutonium or in a combined quantity of more than 1,000 grams when computed by the equation, grams=(grams contained U-235)+2 (grams U-233+grams plutonium); or

(ii) 10,000 grams or more or uranium-235 (contained in uranium enriched to 10 percent or more but less than 20 percent in the U-235 isotope).

(2) This class of material is also referred to as a Category II quantity of material as shown in Appendix A to this part.

* * * * *

Two-person rule means a requirement that at least two authorized and qualified persons be present whenever a task covered by the rule is performed. An authorized person under this rule is one who has been given authority by the licensee to perform the task, and a qualified person is one who has sufficient knowledge to determine if the proper procedure is being followed, meets any formal qualification requirements established by the licensee for performing the task, and is capable of attesting to the accuracy of the task being performed. Such persons must be able to verify both that the task was completed in accordance with the proper procedures, and that the information recorded about the task is accurate.

* * * * *

13. In § 74.11, revise paragraph (b) to read as follows:

§ 74.11 Reports of loss or theft or attempted theft or unauthorized production of special nuclear material.

* * * * *

(b) Each licensee shall make the notifications required by paragraph (a) of this section to the NRC Headquarters Operations Center via any available telephone system to ensure that a report is received within 1 hour.

* * * * *

14. Revise § 74.13 to read as follows:

§ 74.13 Material status reports.

(a) All licensees who possess or who had possessed in the previous reporting period one gram or more of irradiated or non-irradiated SNM are required to submit both a Material Balance Report and a Physical Inventory Listing Report of these materials to the NMMSS in accordance with the instructions in paragraph (b) of this section and according to the following schedule:

(1) Commercial power reactor licensees, authorized under Part 50 or Part 52 of this chapter shall submit both reports within 60 calendar days of the beginning of the physical inventory covered by the reports;

(2) Research and test reactors, authorized under Part 50 of this chapter shall submit both reports within 60 calendar days of the beginning of the physical inventory covered by the reports;

(3) Independent spent fuel storage licensees, authorized under Part 50 or Part 72 of this chapter shall submit both reports within 60 calendar days of the beginning of the physical inventory covered by the reports.

(4) Licensees subject to § 74.31 shall submit both reports within 60 calendar days of the beginning of the physical inventory covered by the reports;

(5) Licensees operating uranium enrichment facilities shall submit both reports within 60 calendar days of the beginning of the physical inventory providing a total plant material balance as described in § 74.33(c)(4)(i).

(6) Licensees subject to Subpart D of this part shall submit both reports within 60 calendar days of the beginning of the physical inventory covered by the reports;

(7) Licensees subject to Subpart E of this part shall submit both reports within 30 calendar days of the beginning of the physical inventory covered by the reports;

(8) All other licensees who possess, or had possessed in the previous reporting period, one gram or more of irradiated or non-irradiated SNM shall submit both reports between January 1 and March 31 of each year.

(b) Each licensee shall prepare and submit the reports described in paragraph (a) of this section as follows:

(1) Reports must be submitted for each Reporting Identification Symbol (RIS) account, including all holding accounts, concerning SNM that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost.

(2) Each licensee shall prepare and submit the reports described in this section as specified in the instructions in both NUREG/BR–0007 and NMMSS Report D–24 ‘‘Personal Computer Data Input for NRC Licensees.’’

(i) This prescribed computer-readable report replaces the DOE/NRC Form 742, Material Balance Report, and DOE/NRC Form 742C, Physical Inventory Listing Report, which have been previously submitted in paper form.

(ii) Copies of these instructions may be obtained from the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001 or by e-mail to *RidsNmssFcss.Resource@nrc.gov*.

(c) The Commission may permit a licensee to submit the reports at other times for good cause. Such requests must be submitted in writing to Chief, Material Control and Accounting Branch, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. The licensee must continue to report as required until such request is granted.

(d) Any licensee who is required to submit routine Material Status Reports under § 75.35 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall

prepare and submit these reports only as provided in that section (instead of as provided in paragraphs (a) through (b) of this section).

(e) Each licensee subject to the requirements of this section shall resolve any discrepancies identified during the report review and reconciliation process within 30 calendar days of notification of a discrepancy identified by NRC.

15. In § 74.15, revise paragraph (b)(2) to read as follows:

§ 74.15 Nuclear material transaction reports.

* * * * *

(b) * * *

(2) Perform independent tests to assure the accurate identification and measurement of the material received, including its weight and enrichment; except that a licensee authorized under Parts 50 or 52 of this chapter receiving unirradiated fuel rods or unirradiated fuel assemblies or a licensee authorized under Part 70 of this chapter receiving SNM contained in a sealed source that will not be opened need not perform such tests; and

* * * * *

16. In § 74.19, revise paragraphs (b) and (c) to read as follows:

§74.19 Recordkeeping, procedures, item controls, and physical inventories.

* * * * *

(b) Each licensee authorized to possess special nuclear material, at any one time and site location, in a quantity of 350 grams or more of contained uranium-235, uranium-233, or plutonium, or any combination thereof, shall:

(1) Establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for the SNM in its possession under the license;

(2) Retain these procedures until the Commission terminates the license that authorizes possession of the special nuclear material; and

(3) Retain any superseded portion of the procedures for 3 years after the portion is superseded.

(c) Licensees subject to the requirements of §§ 74.31, 74.33, 74.41, or 74.51 are exempt from the requirements of paragraphs (c)(1) through (3) of this section. Otherwise, each licensee who is authorized to possess, at any one time and site location, any quantity of contained uranium-235, uranium-233, or plutonium, or any combination thereof, shall:

(1) Establish, document, implement, and maintain an item control system as defined in § 74.4. Exempted from this requirement are items in solution with a concentration of less than 5 grams of uranium-235 per liter and items of waste destined for burial or incineration;

(2) Conduct a physical inventory of all SNM in its possession under the license at intervals not to exceed 370 calendar days; and

(3) Retain the records associated with each physical inventory until the Commission terminates the license that authorized the possession of special nuclear material. The records of the physical inventories need not be submitted to the Commission.

* * * * *

17. In § 74.31, revise paragraphs (a), (b), and (c) to read as follows:

§ 74.31 Nuclear material control and accounting for special nuclear material of low strategic significance.

(a) *General performance objectives.* (1) Each licensee who is authorized to possess and use 350 grams or more of contained uranium-235 or SNM of low strategic significance (as defined in § 74.4 and shown in Appendix A to this part) at any site or contiguous sites subject to control by the licensee is subject to the performance objective requirements stated in § 74.3.

(2) Production or utilization facilities licensed under Part 50 or 52 of this chapter; independent spent fuel storage installations licensed under Part 72 of this chapter and operations involving waste disposal, are not subject to the requirements of subpart C of this part.

(b) *Implementation.* Each applicant for a license, and each licensee that, upon application for modification of its license, would become newly subject to paragraph (a) of this section shall submit for approval a MC&A plan describing how the performance objectives of § 74.3 and the requirements of paragraph (c) of this section will be met. The MC&A plan shall be implemented when a license is issued or modified to authorize the activities being addressed in paragraph (a) of this section, or by the date specified in a license condition.

(c) *Program capabilities.* To achieve the § 74.3 performance objectives, the MC&A plan must include the capabilities described in paragraphs (c)(1) through (11) of this section, and require the licensee to:

(1) Establish, document, and maintain a management structure which assures clear overall responsibility for material control and accounting functions, independence from

production responsibilities, separation of key responsibilities, and adequate review and use of critical material control and accounting procedures;

(2) Establish and maintain a measurement system which assures that all quantities in the material accounting records are based on measured values;

(3) Follow a measurement control program which assures that measurement bias is estimated and significant biases are eliminated from inventory difference values of record;

(4) In each inventory period, control total material control and accounting measurement uncertainty so that twice its standard error of the inventory difference (SEID) is less than the greater of 9,000 grams of U-235 or 0.25 percent of the active inventory, and assure that any measurement performed under contract is controlled so that the licensee can satisfy this requirement;

(5) Unless otherwise required to satisfy Part 75 of this chapter, perform a physical inventory at least every 12 months and, within 60 calendar days after the start of the inventory, reconcile and adjust the book inventory to the results of the physical inventory, and resolve, or report an inability to resolve, any inventory difference which is rejected by a statistical test which has a 90 percent power of detecting a discrepancy of a quantity of uranium-235 established by NRC on a site-specific basis;

(6) Establish, document, implement, and maintain an item control system as defined in § 74.4. Store and handle or subsequently measure items in a manner such that unauthorized removals of individual items or any quantity of material (as defined in § 74.4) from items will be detected. Exempted from this requirement are items in solution with a concentration of less than 5 grams of uranium-235 per liter and items of waste destined for burial or incineration;

(7) Conduct and document shipper-receiver difference comparisons for all SNM receipts on a total shipment basis, and on an individual batch basis when required by Part 75 of this

chapter, and ensure that any shipper-receiver difference that is statistically significant and exceeds twice the estimated standard deviation of the difference estimator and 500 grams of uranium-235 is investigated and resolved;

(8) Independently assess the effectiveness of the MC&A program at least every 24 months, and document management's action on prior assessment recommendations.

(9) Maintain and follow procedures for tamper-safing (as defined in § 74.4) of containers or vaults (as defined in § 74.4) containing SNM, which include control of access to, and distribution of, unused seals and records;

(10) Use the two-person rule (as defined in § 74.4) for tamper-safing, performing physical inventories, for transferring SNM, and for any handling of SNM that is not under an active control measure, monitoring, or surveillance condition; and

(11) Designate material balance areas and item control areas and assign custodial responsibility for each of these areas in a manner that ensures that such responsibility can be effectively executed for all SNM possessed under license.

* * * * *

18. In § 74.33, revise paragraphs (a), (b), (c), and (d) to read as follows:

§ 74.33 Nuclear material control and accounting for uranium enrichment facilities authorized to produce special nuclear material of low strategic significance.

(a) *General performance objectives.* Each licensee who is authorized to possess equipment capable of enriching uranium or operate an enrichment facility, and produce, possess, or use 350 grams or more of contained uranium-235 or SNM of low strategic significance (as defined in § 74.4 and shown in Appendix A to this part) at any site or contiguous

sites, subject to control by the licensee, is subject to the performance objective requirements stated in § 74.3 and to the following performance objectives:

(1) Maintain accurate, current, and reliable information on, and confirm the quantities and locations of source material (SM) in its possession;

(2) Detect, respond to, and resolve any anomaly indicating a possible loss, theft, diversion, or misuse of SM;

(3) Permit rapid determination of whether an actual loss, theft, diversion, or misuse of SM has occurred;

(4) Provide information to aid in the investigation and recovery of missing SM in the event of an actual loss, theft, diversion, or misuse; and

(5) Provide information to aid in the investigation of any unauthorized production of uranium, including unauthorized production of uranium enriched to 10 percent or more in the isotope U-235. (For centrifuge enrichment facilities this requirement does not apply to each cascade during its start-up process, not to exceed the first 24 hours.)

(b) *Implementation*. Each applicant for a license who would, upon issuance of a license under any part of this chapter, be subject to the requirements of paragraph (a) of this section shall:

(1) Submit for approval a MC&A plan describing how the performance objectives of §§ 74.3 and 74.33(a), the program capabilities of § 74.33(c), and the recordkeeping requirements of § 74.33(d) will be met; and

(2) Implement the NRC-approved MC&A plan submitted under paragraph (b)(1) of this section prior to:

(i) The cumulative receipt of 5,000 grams of U-235 contained in any combination of natural, depleted, or enriched uranium; or

(ii) The NRC's issuance of a license to test or operate the enrichment facility, whichever occurs first.

(c) *Program capabilities.* To achieve the general performance objectives stated and referenced in paragraph (a) of this section, the MC&A plan must include the capabilities described in paragraphs (c) (1) through (11) of this section. The licensee shall establish, document, implement and maintain:

(1) A management structure that ensures:

(i) Clear overall responsibility for MC&A functions;

(ii) Independence of MC&A management from production responsibilities;

(iii) Separation of key MC&A responsibilities from each other; and

(iv) Use of approved written MC&A procedures and periodic review of those procedures;

(2) A measurement program that ensures that all quantities of SM and SNM in the accounting records are based on measured values;

(3) A measurement control program that ensures that:

(i) Measurement bias is estimated and minimized through the measurement control program, and any significant biases are eliminated from inventory difference values of record;

(ii) All MC&A measurement systems are controlled so that twice the standard error of the inventory difference (SEID), based on all measurement error contributions, is less than the greater of 5,000 grams of U-235 or 0.25 percent of the U-235 of the active inventory for each total plant material balance; and

(iii) Any measurements performed under contract are controlled so that the licensee can satisfy the requirements of paragraphs (c)(3) (i) and (ii) of this section;

(4) A physical inventory program that provides for:

(i) Performing, unless otherwise required to satisfy Part 75 of this chapter, a dynamic

(nonshutdown) physical inventory of in-process (e.g., in the enrichment equipment) uranium and U-235 at least every 65 calendar days, and performing a static physical inventory of all other uranium and total U-235 contained in natural, depleted, and enriched uranium located outside of the enrichment processing equipment at least every 370 calendar days, with static physical inventories being conducted in conjunction with a dynamic physical inventory of in-process uranium and U-235 so as to provide a total plant material balance at least every 370 calendar days; and

(ii) Reconciling and adjusting the book inventory to the results of the static physical inventory and resolving, or reporting an inability to resolve, any inventory difference that is rejected by a statistical test which has a 90 percent power of detecting a discrepancy of a quantity of U-235, established by NRC on a site-specific basis, within 60 calendar days after the start of each static physical inventory;

(5) A detection program, independent of production, that provides high assurance of detecting and resolving:

(i) Production of uranium enriched to 10 percent or more in the U-235 isotope, to the extent that SNM of moderate strategic significance (as defined in § 74.4) could be produced within any 370 calendar day period;

(ii) Production of uranium enriched to 20 percent or more in the U-235 isotope; and

(iii) Unauthorized production of uranium of low strategic significance (as defined in § 74.4);

(6) An item control system (as defined in § 74.4). The system must ensure that items are stored and handled or subsequently measured in a manner such that unauthorized removal of any quantity of U-235, as individual items or as uranium contained in items, will be detected.

Exempted from this requirement are items in solution with a concentration of less than 5 grams of uranium-235 per liter and items of waste destined for burial or incineration;

(7) A system for conducting and documenting shipper-receiver difference comparisons for all source material and SNM receipts on a total shipment basis, and on an individual batch basis when required by Part 75 of this chapter, to ensure that any shipper-receiver difference that is statistically significant and exceeds twice the estimated standard deviation of the difference estimator and 500 grams of uranium-235 is investigated and resolved;

(8) An assessment program that:

(i) Independently assesses the effectiveness of the MC&A program at least every 24 months;

(ii) Documents the results of the above assessment;

(iii) Documents management's findings on whether the MC&A program is currently effective; and

(iv) Documents any actions taken on recommendations from prior assessments;

(9) Procedures for tamper-safing (as defined in § 74.4) of containers or vaults (as defined in § 74.4) containing SNM, which include control of access to, and distribution of, unused seals and records;

(10) The two-person rule (as defined in § 74.4) for tamper-safing, performing physical inventories, for transferring SNM, and for any handling of SNM that is not under an active control measure, monitoring, or surveillance condition; and

(11) Material balance areas and item control areas, and shall assign custodial responsibility for each of these areas in a manner that ensures that such responsibility can be effectively executed for all SM and SNM possessed under license.

(d) Recordkeeping.

(1) Each licensee shall establish records that will demonstrate that the performance objectives stated and referenced in paragraph (a) of this section and the program capabilities of paragraph (c) of this section have been met and maintain these records in an auditable form, available for inspection, for at least 3 years, unless a longer retention time is required by Part 75 of this chapter.

(2) Records that must be maintained pursuant to this part may be the original or a reproduced copy or a microform if such reproduced copy or microform is duly authenticated by authorized personnel and the microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations. The record may also be stored in electronic media with the capability for producing, on demand, legible, accurate, and complete records during the required retention period. Records such as letters, drawings, and specifications must include all pertinent information such as stamps, initials, and signatures.

(3) The licensee shall maintain adequate safeguards against tampering with and loss of records.

19. In § 74.41, revise paragraphs (a), (b), and (c) to read as follows:

§ 74.41 Nuclear material control and accounting for special nuclear material of moderate strategic significance.

(a) *General performance objectives.* (1) Each licensee who is authorized to possess and use SNM of moderate strategic significance (as defined in §74.4 and shown in Appendix A of this part) or 1 kilogram or more but less than 5 kilograms of SSNM (as defined in § 74.4 and shown in Appendix A to this part) in irradiated fuel reprocessing operations at any site or

contiguous sites subject to control by the licensee, is subject to the performance objective requirements stated in § 74.3.

(2) Production or utilization facilities licensed under Part 50 or 52 of this chapter; licensees using reactor irradiated fuels involved in research, development, and evaluation programs in facilities other than irradiated fuel reprocessing plants; and operations involving waste disposal, are not subject to the requirements of Subpart D of this part.

(b) *Implementation.* Each applicant for a license, and each licensee that, upon application for modification of its license, would become newly subject to paragraph (a) of this section shall submit for approval a MC&A plan describing how the performance objectives of § 74.3 and the requirements of paragraph (c) of this section will be met. The MC&A plan shall be implemented when a license is issued or modified to authorize the activities being addressed in paragraph (a) of this section, or by the date specified in a license condition.

(c) *Program capabilities.* To achieve the § 74.3 performance objectives, the MC&A plan must include the capabilities described in §§ 74.43 and 74.45, and must incorporate checks and balances that are sufficient to detect falsification of data and reports that could conceal diversion of SNM by:

(1) A single individual, including an employee in any position; or

(2) Collusion between two individuals, one or both of whom have authorized access to SNM.

20. In § 74.43 revise paragraphs (b)(3), (b)(5), (b)(6), (b)(7), and (c)(3), and add new paragraphs (c)(9) and (c)(10) to read as follows:

§ 74.43 Internal controls, inventory, and records.

* * * * *

(b) * * *

(3) The licensee shall provide for the adequate review, approval, and use of written MC&A procedures that are identified in the approved MC&A plan as being critical to the effectiveness of the described system.

* * * * *

(5) The licensee shall establish, document, implement, and maintain an item control system as defined in § 74.4. The system must ensure that items are stored and handled or subsequently measured in a manner such that unauthorized removals of individual items or any quantity of material (as defined in § 74.4) from items will be detected.

(6) Exempted from the requirements of paragraph (b)(5) of this section are 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.

(7) Conduct and document shipper-receiver difference comparisons for all SNM receipts,

* * * * *

(c) * * *

(3) Maintain and follow procedures for tamper-safing (as defined in § 74.4) of containers or vaults (as defined in § 74.4) containing SNM which include control of access to, and distribution of, unused seals and records;

* * * * *

(9) Use the two-person rule (as defined in § 74.4) for tamper-safing (as defined in § 74.4), performing physical inventories, for transfer of SNM, and for any handling of SNM that is not under an active control measure, monitoring, or surveillance condition; and

(10) Designate material balance areas and item control areas, and assign custodial responsibility for each of these areas in a manner that ensures that such responsibility can be effectively executed for all SNM possessed under license.

* * * * *

21. In § 74.45, revise paragraph (c)(4) to read as follows:

§ 74.45 Measurements and measurement control.

* * * * *

(c) * * *

(4) Establish and maintain a measurement control system so that for each inventory period the standard error of the inventory difference (SEID) is less than 0.125 percent of the active inventory, and assure that any MC&A measurements performed under contract are controlled so that the licensee can satisfy this requirement.

* * * * *

22. Revise § 74.51 to read as follows:

§ 74.51 Nuclear material control and accounting for strategic special nuclear material.

(a) *General performance objectives.* (1) Each licensee who is authorized to possess and use five or more formula kilograms of strategic special nuclear material (SSNM), as defined in § 74.4 and shown in Appendix A to this part, at any site or contiguous sites subject to control by

the licensee, is subject to the performance objective requirements stated in § 74.3, and to the following performance objectives:

(i) Ongoing confirmation of the presence of SSNM in assigned locations;

(ii) Timely detection of the possible abrupt loss of five or more formula kilograms of SSNM from an individual unit process; and

(iii) Rapid determination of whether an actual loss of five or more formula kilograms of SSNM occurred.

(2) Production or utilization facilities licensed under Part 50 or 52 of this chapter, independent spent fuel storage installations licensed under Part 72 of this chapter; and any licensee operations involving waste disposal, are not subject to the requirements of subpart E of this part.

(b) *Implementation.* Each applicant for a license, and each licensee that, upon application for modification of its license, would become newly subject to paragraph (a) of this section shall submit for approval a MC&A plan describing how the performance objectives of § 74.3 and paragraph (a) of this section will be achieved, and how the requirements of paragraph (c) of this section will be met. The MC&A plan shall be implemented when a license is issued or modified to authorize the activities being addressed in paragraph (a) of this section, or by the date specified in a license condition.

(c) *Program capabilities.* To achieve the general performance objectives specified in § 74.3 and paragraph (a) of this section, the MC&A plan must provide the capabilities described in §§ 74.53, 74.55, 74.57 and 74.59 and must incorporate checks and balances that are sufficient to detect falsification of data and reports that could conceal diversion of SNM or SSNM by:

(1) A single individual, including an employee in any position; or

(2) Collusion between two individuals, one or both of whom have authorized access to SNM or SSNM.

(d) *Inventories.* Notwithstanding § 74.59(f)(1), licensees shall perform at least 3 physical inventories at intervals not to exceed 65 calendar days after implementation of the NRC-approved MC&A plan and shall continue to perform such inventories at intervals not to exceed 65 calendar days until performance acceptable to the NRC has been demonstrated and the Commission has issued formal approval to perform physical inventories at intervals not to exceed 185 calendar days. Licensees who have prior experience with process monitoring and/or can demonstrate acceptable performance against all MC&A plan commitments may request authorization to perform inventories at intervals not to exceed 185 calendar days at an earlier date.

23. In § 74.53, revise the introductory text of paragraph (a), and paragraphs (a)(3), (a)(4), and (c)(1) to read as follows:

§ 74.53 Process monitoring.

(a) Licensees subject to § 74.51 shall monitor internal transfers, storage, and processing of SSNM. The process monitoring must achieve the detection capabilities described in paragraph (b) of this section for all SSNM except:

* * * * *

(3) SSNM with an estimated measurement standard deviation greater than 5 percent that is either input or output material associated with a unit that processes less than five formula kilograms over a period of 95 calendar days; and

(4) SSNM involved in research and development operations that process less than five formula kilograms during a period of seven calendar days.

* * * * *

(c) * * *

(1) Perform material balance tests on a lot or a batch basis, as appropriate, or at intervals not to exceed 30 calendar days, whichever is sooner, and investigate any difference greater than 200 grams of plutonium or U-233 or 300 grams of U-235 that exceeds three times the estimated standard error of the inventory difference;

* * * * *

24. In § 74.57, revise paragraph (c) to read as follows:

§ 74.57 Alarm resolution.

* * * * *

(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 MC&A 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 if:

* * * * *

25. In § 74.59, revise paragraph (e)(7), the introductory text of paragraph (f)(1), paragraphs (f)(2)(i), (h)(2)(ii), and (h)(5), and add new paragraph (h)(6) to read as follows:

§ 74.59 Quality assurance and accounting requirements.

* * * * *

(e) * * *

(7) Investigate and take corrective action, as appropriate, to identify and reduce associated measurement biases when, for like material types (i.e., measured by the same measurement system), the net cumulative shipper/receiver differences accumulated over a period not to exceed 185 calendar days results in a value greater than one formula kilogram or 0.1 percent of the total amount received.

* * * * *

(f) * * *

(1) Except as required by Part 75 of this Chapter, perform a physical inventory at least every 185 calendar days and within 45 calendar days after the start of the ending inventory:

* * * * *

(2) * * *

(i) Development of procedures for tamper-safing of containers or vaults containing SSNM not in process that include adequate controls to assure the validity of assigned SSNM values and which include control of access to, and distribution of, unused seals and records;

* * * * *

(h) * * *

(2) * * *

(ii) Any scrap measured with a standard deviation greater than 5 percent of the measured amount is recovered so that the results are segregated by inventory period and recovered within 185 calendar days of the end of the inventory period in which the scrap was

generated except where it can be demonstrated that the scrap measurement uncertainty will not cause noncompliance with § 74.59(e)(5).

* * * * *

(5) Designate material balance areas and item control areas and assign custodial responsibility for each of these areas in a manner that ensures that such responsibility can be effectively executed for all SSNM possessed under license.

(6) Use the two-person rule (as defined in § 74.4) for tamper-safing (as defined in § 74.4), performing physical inventories, for transfer of SNM, and for any handling of SNM that is not under an active control measure, monitoring, or surveillance condition.

26. Add Appendix A to Part 74 to read as follows:

Appendix A to Part 74—Categories of Special Nuclear Material.

Notes:

1. Sealed sources as defined in § 74.4 are excluded from the quantities in the table.

2. Irradiated fuel which by virtue of its original fissile material content is included as Category I or II before irradiation is reduced one category level, during the period of time that the radiation level from the fuel exceeds 1 Sv per hour (100 rads per hour) at 1 meter, unshielded.

Material	Isotopic Composition	Category I (Subpart E)	Category II (Subpart D)	Category III (Subpart C)
Plutonium	All plutonium (element)	2,000 g or more	Less than 2,000 g, but more than 500 g	500 g or less, but more than 15 g
Uranium-233	All U-233 enrichments	2,000 g or more	Less than 2,000 g, but more than 500 g	500 g or less, but more than 15 g
Uranium-235	Uranium enriched to 20% or more in isotope U-235	5,000 g or more	Less than 5,000 g, but more than 1,000 g	1,000 g or less, but more than 15 g
	Uranium enriched to 10%, but less than 20%, in isotope U-235		10,000 g or more	Less than 10,000 g, but more than 1,000 g
	Uranium enriched above 0.711%, but less than 10%, in isotope U-235			10,000 g or more

The formulae to calculate a quantity of SSNM as defined in § 74.4 are as follows:

- Category I, 5000 grams or more of SSNM
    - grams = grams contained U-235 + 2.5 (grams U-233 + grams Pu)

- Category II, less than 5000 grams but more than 1000 grams of SSNM
    - grams = grams contained U-235 + 2 (grams U-233 + grams Pu)
- Category III, 1000 grams or less but more than 15 grams of SSNM
    - grams = grams contained U-235 + grams U-233 + grams Pu

27. The authority citation for Part 150 continues to read as follows:

PART 150 - EXEMPTIONS AND CONTINUED REGULATORY AUTHORITY IN AGREEMENT STATES AND IN OFFSHORE WATERS UNDER SECTION 274

AUTHORITY: Sec. 161, 68 Stat. 948, as amended, sec. 274, 73 Stat. 688 (42 U.S.C. 2201, 2021); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (2005).

Sections 150.3, 150.15, 150.15a, 150.31, 150.32 also issued under secs. 11e(2), 81, 68 Stat. 923, 935, as amended, secs. 83, 84, 92 Stat. 3033, 3039 (42 U.S.C. 2014e(2), 2111, 2113, 2114). Section 150.14 also issued under sec. 53, 68 Stat. 930, as amended (42 U.S.C. 2073).

Section 150.15 also issued under secs. 135, 141, Pub. L. 97-425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 150.17a also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152). Section 150.30 also issued under sec. 234, 83 Stat. 444 (42 U.S.C. 2282).

28. Revise § 150.17 to read as follows:

§ 150.17 Submission to commission of nuclear material status reports.

(a) Except as specified in paragraph (d) of this section and § 150.17a, all licensees who possess or who had possessed in the previous reporting period one gram or more of irradiated

or non-irradiated special nuclear material are required to submit both a Material Balance Report and a Physical Inventory Listing Report of these materials to the NMMSS in accordance with the instructions in paragraph (a)(1) of this section. Both reports shall be submitted between January 1 and March 31 of each year.

(1) Each licensee shall prepare and submit the reports described in this section as follows:

(i) Reports must be submitted for each Reporting Identification Symbol (RIS) account, including all special nuclear material that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost.

(ii) Each licensee shall prepare and submit the reports described in this section as specified in the instructions in both NUREG/BR–0007 and NMMSS Report D–24, ‘‘Personal Computer Data Input for NRC Licensees.’’

(iii) This prescribed computer-readable report replaces the DOE/NRC Form 742, Material Balance Report, and DOE/NRC Form 742C, Physical Inventory Listing Report, which have been previously submitted in paper form.

(iv) Copies of these instructions may be obtained from the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001 or by e-mail to *RidsNmssFcss.Resource@nrc.gov*.

(2) The Commission may permit a licensee to submit the reports at other times for good cause. Such requests must be submitted in writing to Chief, Material Control and Accounting Branch, Division of Fuel Cycle Safety and Safeguards, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555. The licensee must continue to report as required until such request is granted.

(3) Any licensee who is required to submit routine Material Status Reports under § 75.35 of this chapter (pertaining to implementation of the US/IAEA Safeguards Agreement) shall prepare and submit these reports only as provided in that section (instead of as provided in paragraphs (a) through (b) of this section).

(4) Each licensee subject to the requirements of this section shall resolve any discrepancies identified during the report review and reconciliation process within 30 calendar days of notification of a discrepancy identified by NRC.

(b) Except as specified in paragraph (d) of this section and § 150.17a, each person possessing, or who had possessed in the previous reporting period, at any one time and location, under an Agreement State license:

(1) One kilogram or more of uranium or thorium source material with foreign obligations, shall document holdings as of September 30 of each year and submit to the Commission within 30 days. Alternatively, these reports may be submitted with the licensee's material status reports on special nuclear material filed under Part 74 of this chapter. This statement must be submitted to the address specified in the reporting instructions in NUREG/BR–0007, and include the Reporting Identification Symbol (RIS) assigned by the Commission.

(2) One kilogram or more of uranium or thorium source material in the operation of enrichment services, down blending uranium that has an initial enrichment of the U-235 isotope of 10 percent or more, or in the fabrication of mixed-oxide fuels shall complete and submit, in computer-readable format, Material Balance and Physical Inventory Listing Reports concerning source material that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost. Reports must be submitted for each RIS account including all holding accounts. Each licensee shall prepare and submit these reports as specified in the instructions in NUREG/BR–0007 and NMMSS Report D–24, ‘‘Personal Computer Data Input for NRC

Licensees.'' These reports must document holdings as of September 30 of each year and submitted to the Commission within 30 days. Alternatively, these reports may be submitted with the licensee's material status reports on special nuclear material filed under Part 74 of this chapter. Copies of the reporting instructions may be obtained by writing to the U.S. Nuclear Regulatory Commission, Division of Fuel Cycle Safety and Safeguards, Washington, DC 20555–0001, or by e-mail to *RidsNmssFcss@nrc.gov*. Each licensee required to report material balance, and inventory information, as described in this part, shall resolve any discrepancies identified during the report review and reconciliation process within 30 calendar days of the notification.

Dated at Rockville, Maryland, this_____day of_____, 2011.

For the Nuclear Regulatory Commission.

Annette Vietti-Cook,
Secretary of the Commission