[7590-01-P]

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 51, 61, 70, 72, 73, 74, 75, 76, and 150

RIN AG69

Material Control and Accounting Amendments

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its material control and accounting (MC&A) regulations. The reporting requirements for submitting Material Balance Reports and Inventory Composition Reports are being revised to change both the frequency and timing of the reports. The categorical exclusion for approving safeguards plans is being revised to specifically include approval of amendments to safeguards plans. The MC&A requirements for Category II facilities are being revised to be more risk-informed. The proposed amendments are intended to reduce unnecessary burden on licensees and the NRC without adversely affecting public health and safety.

DATES: The comment period expires (**insert 75 days from date of publication**). Comments received after this date will be considered if it is practical to do so, but the NRC is able to assure consideration only for comments received on or before this date.

ADDRESSES: Submit comments to: Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, Attn: Rulemakings and Adjudications Staff.

Deliver comments to 11555 Rockville Pike, Rockville, MD, between 7:30 a.m. and 4:15 p.m. on Federal workdays.

You may also provide comments via the NRC's interactive rulemaking website (http://ruleforum.llnl.gov). This site provides the capability to upload comments as files (any format) if your web browser supports that function. For information about the interactive rulemaking website, contact Ms. Carol Gallagher (301) 415-5905; e-mail CAG@nrc.gov.

Certain documents related to this rulemaking, including comments received, may be examined at the NRC's Public Document Room (PDR), 11555 Rockville Pike, Room O-1F21, Rockville, MD. These same documents may also be viewed and downloaded electronically via the rulemaking website.

Documents created or received at the NRC are also available electronically at the NRC's Public Electronic Reading Room on the Internet at http://www.nrc.gov/NRC/ADAMS/index.html. From this site, the public can gain entry into the NRC's Agencywide Document Access and Management System (ADAMS), which provides text and image files of NRC's public documents. For more information, contact the NRC's PDR Reference staff at 1-800-397-4209, 301-415-4737 or by email to pdr@nrc.gov.

FOR FURTHER INFORMATION CONTACT: Merri Horn, telephone (301) 415-8126, e-mail mlh1@nrc.gov, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

SUPPLEMENTARY INFORMATION:

Background

The Commission has identified an aspect of the MC&A requirements where it could reduce unnecessary regulatory burden and provide additional flexibility to a licensee required to submit Material Balance Reports and Inventory Composition Reports (also called Physical Inventory Listing report). The current regulations require these reports to be compiled as of March 31 and September 30 of each year and submitted within 30 days after the end of the period covered by the report. These twice yearly reports are typically based on book values as opposed to physical inventory results because the dates do not always coincide with the time frame for a facility's physical inventory. Physical inventories for Category III facilities are conducted on an annual basis, semi-annually for Category I facilities, and every two to six months for Category II facilities. The term Material Status Reports refers to both the Material Balance Reports and the Inventory Composition Reports and is used in Part 75.

A Category I licensee is one that is licensed to possess and use formula quantities of strategic special nuclear material (SSNM) (e.g., 5 kilograms of uranium enriched to 20 percent or more in the uranium-235 isotope.) SSNM means uranium-235 (contained in uranium enriched to 20 percent or more in the uranium-235 isotope), uranium-233, or plutonium. There are currently two licensed Category I facilities. A Category II licensee is one that is licensed to possess and use greater than one effective kilogram of special nuclear material (SNM) of moderate strategic significance (e.g., uranium enriched to more than 10 percent but less than 20 percent in the uranium-235 isotope, with limited quantities at higher enrichments.) Currently, there is only one licensed Category II facility, General Atomics, and it has a possession-only

license and is undergoing decommissioning. General Atomics would not be required to make changes to meet the new requirements. There are no operating Category II licensed facilities. A Category III licensee is one that is licensed to possess and use quantities of SNM of low strategic significance (e.g., uranium enriched to less than 10 percent in the uranium-235 isotope, with limited quantities at higher enrichments.) See Table 1 for more specific information on possession limits for Category I, II, and III licensees.

Table 1 Categorization of Material

Material	Form	Category I	Category II	Category III
Plutonium	Unirradiated	2 kg or more	Less than 2 kg but more than 500 g	500 g or less
Uranium-235	Unirradiated: Uranium enriched to 20 percent U-235 or more.	5 kg or more	Less than 5 kg but more than 1 kg	1 kg or less
	Uranium enriched to 10 percent U-235 but less than 20 percent.	.....	10 kg or more	Less than 10 kg
	Uranium enriched above natural, but less than 10percent U-235	.....	.....	10 kg or more
Uranium-233	Unirradiated	2 kg or more	Less than 2 kg but more than 500 g	500 g or less

In 1982, the NRC initiated an effort to move the MC&A requirements from 10 CFR Part 70, “Domestic Licensing of Special Nuclear Material,” to 10 CFR Part 74, “Material Control and Accounting of Special Nuclear Material.” The initiative also included efforts to make the requirements more performance oriented. In 1985, the MC&A requirements for Category III

facilities were made more performance oriented and moved to Part 74 (50 FR 7575; February 25, 1985). The requirements for Category I facilities were similarly moved in 1987 (52 FR 10033; March 30, 1987). The MC&A requirements for Category II facilities and the general MC&A requirements are still interspersed among the safety and general licensing requirements of Part 70. The requirements regarding Category II material are also overly prescriptive.

In addition, Part 74 includes several typographical errors, old implementation dates, and some terminology that should be updated to reflect current practice and to be consistent with the regulatory guides.

Finally, the currently effective categorical exclusion for approval of safeguards plans does not clearly include the approval of an amendment to a safeguards plan.

Discussion

Material Status Reports.

A licensee authorized to possess SNM at any one time or location in a quantity totaling more than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof, must complete and submit in a computer-readable format a Material Balance Report concerning SNM received, produced, possessed, transferred, consumed, disposed of, or lost. A Material Balance Report is a summary of nuclear material changes from one inventory period to the next. This report must be compiled as of March 31 and September 30 of each year and filed within 30 days after the end of the period. Under §§ 76.113, 76.115, and 76.117, the gaseous diffusion plants (certificate holders) are also required to submit the report twice yearly on the same schedule. Note that the term “licensee” includes the gaseous diffusion plants as it is used within the statements of consideration, unless otherwise stated. Each licensee is also required to file a statement of the composition of the ending inventory with

the Material Balance Report. An Inventory Composition Report is a report of the actual inventory listed by specified forms of material (e.g., irradiated versus unirradiated fuel at power reactors.) However, a licensee required to submit a Material Status Report under § 75.35 is directed to submit this report only in accordance with the provisions of that section (i.e., at the time of a physical inventory). Section 75.35 applies only to those facilities that have been selected to report under the Agreement Between the United States and the International Atomic Energy Agency (IAEA) for the Application of Safeguards in the United States. For those facilities reporting under Part 75, the frequency of reporting is dependent on the frequency of the physical inventory, which is dependent on the Category of facility (i.e., Category I, II or III). The report would be required either once (Category III) or twice (Category I and II) per year.

The principal purpose of the Material Status Report is the periodic reconciliation of licensee records with the records in the Nuclear Materials Management and Safeguards System (NMMSS). The NMMSS is the national database for tracking source and SNM. The data from the NMMSS is then used to satisfy the requirement of the US/IAEA Safeguards Agreement to provide the annual Material Balance Report for facilities selected under the Agreement or associated Protocol.

The proposed rule would modify the regulations to require the Material Balance Report and the Physical Inventory Listing Report at the time of a physical inventory as is currently stated in § 75.35. The proposed rule would require the reports to be completed within 60 days of the beginning of the physical inventory for independent spent fuel storage installations, reactors, and Category II and III facilities, and within 45 days of the beginning of the physical inventory for Category I facilities. This modification would not affect licensees reporting under Part 75. Because most facilities are only required to conduct a physical inventory once a year, the reporting frequency would be reduced from twice a year to once a year. For most licensees, reconciliation once a year instead of twice a year would not appear to be a problem

because the number of transactions is such that reconciliation would be manageable. For the gaseous diffusion plants that have a significantly larger number of transactions, reconciliation could be more difficult if performed once a year. However, the gaseous diffusion plants, by practice, currently reconcile their records with the NMMSS on a bimonthly basis and could continue this practice.

As indicated, a licensee is required to submit the semiannual Material Balance Report and Inventory Composition Report within 30 days of March 31 and September 30 of each year. The pre-established timing of the submittal has two drawbacks. Specifically, the reports rarely coincide with a physical inventory and all of the reports for a given period are provided to the NMMSS at the same time. The data from a physical inventory is significantly more meaningful than the book values reported during the interim periods. Staggering the submittals would benefit the NMMSS contractor because not all licensees conduct inventories at the same time. Requirements for the NMMSS contractor would likely be spread more evenly throughout the year. Modifying the requirement to stipulate that the Material Balance Report and the Inventory Composition Report shall be submitted at the time of the physical inventory could alleviate these problems and provide more meaningful data.

Another consideration is whether there would be an adverse impact on meeting IAEA safeguards requirements. Only one Material Status Report is required per year, pursuant to the terms of the US/IAEA Safeguards Agreement and § 75.35. Consequently, there would be no adverse impact on meeting IAEA safeguards requirements.

The proposed rule would revise the timing to complete the Material Balance Report and Physical Inventory Listing Report to coincide with a facility's physical inventory. The proposed rule would also provide additional time to complete the paperwork, except for those licensees reporting under Part 75. These changes would provide most licensees with additional flexibility and reduce the regulatory burden. The proposed rule would use Physical Inventory Listing

Report instead of Inventory Composition Reports to be consistent with the name of the actual form (DOE/NRC Form 742C).

Categorical Exclusion.

The categorical exclusion (§ 51.22(c)(12)) covers the issuance of an amendment to a license pursuant to 10 CFR Parts 50, 60, 61, 70, 72, or 75, relating to safeguards matters or approval of a safeguards plan. It does not address amendments to those plans. As written, the categorical exclusion could be used for approval of a safeguards plan. However, an EA would be necessary for approval of an amendment to the safeguards plan. Initial approval is covered by the categorical exclusion, but amendments do not appear to be covered. This inconsistency appears to be inadvertent. Adding language covering revisions to safeguards plans would rectify this omission. In addition, the categorical exclusion currently lists several parts. Providing a generic reference to any part of 10 CFR Chapter I would correct the current listing and avoid the need for changes due to new parts being added.

General and Category II MC&A Requirements.

In 1982, the NRC began an effort to move the MC&A requirements from Part 70 to Part 74 and make the requirements more performance-oriented. Subsequent rulemakings in February 25, 1985 (50 FR 7575) and March 30, 1987 (52 FR 10033), moved the requirements for Category I and III facilities. The MC&A requirements for Category II facilities and the general MC&A requirements are currently interspersed among the safety and general licensing requirements of Part 70. The requirements regarding Category II material are also overly prescriptive as they contain some requirements that are more stringent than the requirements

for Category I facilities. The proposed rule represents the final stage and would result in the movement of the remaining general MC&A requirements and the requirements for Category II facilities from Part 70 to Part 74. The proposed rule would also make the MC&A requirements for the Category II facilities more risk-informed. The proposed risk-informed approach for the Category II facilities is consistent with the current MC&A regulations that apply to Category I and III facilities. In addition, the proposed rule would make needed modifications that were missed in earlier updates of the MC&A regulations, correct typographical errors, delete old implementation dates, clarify some definitions, and include several new definitions.

Specifically, the proposed rule would clarify the definitions for "Category IA material" and "inventory differences" and make them consistent with the current regulatory guides. The terms "beginning inventory," "plant," "removals from inventory," and "removals from process," would be newly defined. The definition for "removals" would be deleted. There has been some confusion by licensees over the term "removals." The term "removals" would be replaced by the terms "removals from process" and "removals from inventory." The definitions being proposed are consistent with the current regulatory guides. In addition, both the terms "beginning inventory" and "plant" are used in the current rule language, but were never defined in the rule. The definitions being proposed are consistent with the definitions contained in the current regulatory guides. The changes to the Category II requirements are discussed below.

General Requirements.

The current general MC&A requirements in Part 70 require a licensee to keep records showing the receipt, inventory, disposal, and transfer of all SNM and specifies the retention period for those records. These recordkeeping requirements are not being changed. The general requirements currently in §§ 70.51(b)(1) through (b)(5) would be captured in new §§ 74.19 (a)(1) through (a)(4). The reporting requirements currently in § 70.52 requiring a licensee to report loss or theft of SNM remain unchanged and would be covered by § 74.11. The requirements for a Nuclear Material Transfer Report in § 70.54 would remain unchanged and be captured by § 74.15. The existing requirement in § 70.51(d) for all licensees authorized to possess more than 350 grams of contained SNM to conduct an annual physical inventory of all SNM would be retained and be moved to new § 74.19(c). The requirement currently in § 70.51(c) for all licensees authorized to possess SNM in a quantity exceeding one effective kilogram of SNM to establish, maintain, and follow written MC&A procedures that are sufficient to enable the licensee to account for the SNM, wouldl be located in new § 74.19(b). The requirements in § 70.53 would be located in §§ 74.13 and 74.17.

Category II Requirements.

Current domestic MC&A regulations in Part 70 for licensees who possess greater than one effective kilogram of strategic special nuclear material in irradiated fuel reprocessing operations or moderate strategic special nuclear material have been interspersed among the safety and general licensing requirements in Part 70. These MC&A requirements are being moved to Part 74 to avoid confusion with the safety requirements in Part 70, to allow the requirements to be presented in a more orderly manner, and to make them more risk informed.

Emphasis has been given to performance requirements rather than prescriptive requirements to allow licensees to select the most cost-effective way to satisfy NRC requirements.

The basic MC&A requirements for Category II facilities are being retained in Part 74 but are presented in a more organized manner. The performance objectives being proposed for Category II facilities are: (1) confirmation of the presence and location of SNM; (2) prompt investigation and resolution of any anomalies indicating a possible loss of SNM; (3) rapid determination of whether an actual loss of a significant quantity of SNM has occurred; and (4) timely generation of information to aid in the investigation and recovery of missing SNM in the event of an actual loss. Implementation of these objectives is commensurate with the amount and type of material. The principal differences between the MC&A requirements in this proposed rule and those in the current regulations are:

(1) The proposed rule would reduce the required frequencies of Category II physical inventories from the current frequency of two months for SSNM and six months for everything else to nine months. This would be consistent with the annual frequency for Category III facilities and semiannual frequency for Category I facilities;

(2) The concept of Inventory Difference (ID) and Standard Error of the Inventory Difference (SEID) would be used to replace the Material Unaccounted For (MUF) concept in the statistical program. This would be consistent with the statistical terms and methods used in Part 74 for Category I and III facilities and with NRC guidance and reference documents;

(3) The proposed significance testing of ID with a three SEID limit would be less restrictive than the current test level of two SEID specified in §70.51(e)(5). This would be consistent with Category I facilities that use a three SEID limit with a constraint on SEID of 0.10 percent of active inventory. The measurement quality constraint for Category II would remain at 0.125 percent of active inventory for SEID. This change would result in a reduction of unwarranted, disruptive, and costly investigations, reports or responses to ID threshold actions;

(4) An item control program for Category II facilities that is consistent with Category III facilities is proposed. Category II item control requirements would be less costly than the more stringent Category I item monitoring. The item control requirements mainly consist of providing current knowledge of location, identity, and quantity of plant-wide items existing for at least 14 days. The performance-based program allows a licensee to propose its item control method and frequency;

(5) The combined standard error concept and a de minimus quantity for plutonium and uranium in the evaluation of shipper-receiver differences would be used. This is consistent with the requirements for Category I and III facilities in Part 74; and

(6) The required frequency for the independent review and assessment of the facility's MC&A program would be changed from annual to a minimum of 18 months. This compares to the annual requirement for Category I and the every two year requirement for Category III.

The consolidation of regulations would complete NRC's regulatory reform goal of providing a graded approach to MC&A regulation. It would also reduce the regulatory burden by making it easier for a licensee to find the MC&A requirements that apply to its facility.

Section-by Section Discussion of Proposed Amendments

This proposed rule would make several changes to Parts 51, 61, 70, 72, 73, 74, 75, 76, and 150, which are characterized as follows. The timing and frequency for submitting Material Balance Reports and Inventory Composition Reports in Parts 72 and 74 would be amended. The remaining MC&A requirements in Part 70 would be moved to Part 74. The MC&A requirements for Category II facilities would be made more risk informed. Part 51 would be amended to clarify that the categorical exclusion for safeguards plans would also apply to amendments to the safeguards plan. Conforming changes would be made to Parts 61, 70, 73,

75, 76, and 150 to reflect the relocation of the MC&A requirements.

Section 51.22 Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review.

This section would be revised to clarify that the categorical exclusion used for issuance of an approval of a safeguards plan can also be used for issuance of an approval for an amendment to the safeguards plan. Additionally, the listing of Parts 50, 60, 61, 70, 72, or 75 would be changed to a more generic reference to 10 CFR Chapter I. This change would avoid an incomplete listing (e.g., Part 76 was inadvertently left out).

Section 61.80 Maintenance of records, reports, and transfers.

This section would be revised to delete the reference to §§ 70.53 and 70.54, and add the new references to §§ 74.13 and 74.15.

Section 70.8 Information collection requirements: OMB approval.

This section would be revised to change the OMB information collection requirements to reflect the sections being deleted from Part 70.

Section 70.19 General license for calibration or reference sources.

This section would be revised to delete the reference to §§ 70.51 and 70.52, and add the new references to §§ 74.11 and 74.19.

Section 70.20a General license to possess special nuclear material for transport.

This section would be revised to include a reference to § 74.11.

Section 70.22 Contents of applications.

This section would be revised to delete the reference to § 70.58 and add the new reference to § 74.41.

Section 70.23 Requirements for the approval of applications.

This section would be revised to correct a reference from a nonexistent section to the correct section.

Section 70.32 Conditions of licenses.

This section would be revised to reflect the transfer of the MC&A requirements from Part 70 to Part 74, to correct an error in wording, and to clarify that changes to a licensee's MC&A program that represent a decrease in effectiveness must be made via an amendment application pursuant to § 70.34, consistent with current licensing policy.

Section 70.51 Material balance, inventory, and records requirements.

This section would be revised to rename the section and delete the MC&A requirements because they would be replaced by the requirements in Part 74. Paragraphs (b)(6), (b)(7), i(1), and i(2) would be redesignated as paragraphs (a) , (b), c(1), and c(2) respectively.

Section 70.52 Reports of accidental criticality or loss or theft or attempted theft of special nuclear material.

This section would be renamed to reflect the relocation of the reporting of theft or loss of SNM. The section would be revised to delete paragraphs (b) and (d) because they would be covered by the requirements found in § 74.11. The remaining paragraphs would be redesignated. Paragraph (a) and new paragraph (b) would be revised to remove the loss of

SNM.

Section 70.53 Material status reports.

This section would be deleted in its entirety, the requirements in this section would be covered by the requirements found in §§ 74.13 and 74.17.

Section 70.54 Nuclear material transfer reports.

This section would be deleted in its entirety. The requirements in this section would be covered by the requirements found in § 74.15.

Section 70.57 Measurement control program for special nuclear materials control and accounting.

This section would be deleted in its entirety. The requirements in this section would be replaced by the requirements found in Part 74, Subpart D.

Section 70.58 Fundamental nuclear material controls.

This section would be deleted in its entirety. The requirements in this section would be replaced by the requirements found in Part 74, Subpart D.

Section 72.76 Material status reports.

This section would be revised to change the timing of the submittal of the Material Status Reports from every March 30 and September 30 to within 60 calender days of the beginning of the physical inventory. The language would be revised to reflect the wording in § 74.13 to avoid any confusion over the term “Material Status Reports”. The language would clearly state that both the Material Balance Report and the Physical Inventory Listing Report are to be submitted.

Section 73.67 Licensee fixed site and in-transit requirements for the physical protection of special nuclear material of moderate and low strategic significance.

This section would be revised to delete the reference to § 70.54 and add a new reference to § 74.15.

Section 74.1 Purpose.

This section would be revised to reflect the addition to Part 74 of the general MC&A requirements and the requirements for SNM of moderate strategic significance. The reference to §§ 70.51, 70.57, and 70.58 would be deleted.

Section 74.2 Scope.

This section would be revised to reflect the relocation of the general reporting and recordkeeping requirements, and exempt Part 72 licensees from the general reporting and recordkeeping requirements, as they are currently covered under the Part 72 requirements.

Section 74.4 Definitions.

This section would be revised to clarify the definitions for “Category IA material” and “inventory differences”. The terms “beginning inventory,” “plant,” “removals from inventory,” and “removals from process” would be newly defined. The definition for “removals” would be deleted. There has been some confusion by licensees over the term removals. The term “removals” would be replaced by the terms “removals from process” and “removals from inventory." The definitions being proposed are consistent with the current regulatory guides. In addition, both the terms “beginning inventory” and “plant” are used in the current rule language, but were never defined in the regulations. The definitions being proposed are consistent with the definitions contained in the current regulatory guides.

Section 74.8 Information collection requirements: OMB approvals.

This section would be revised to change the OMB collection requirements to reflect the relocation of provisions from Part 70.

Section 74.13 Material status reports.

This section would be revised to delete paragraph (b), and redesignate paragraphs (a)(1) and (a)(2) as (a) and (b) respectively. The new paragraph (a) would be revised to require a Material Balance Report and Physical Inventory Listing Report to be submitted: (1) within 60 calendar days of the beginning of physical inventory as required in §§ 74.19(c), 74.31(c)(5), 74.33(c)(4), or 74.43(c)(6) or; (2) within 45 calendar days of the beginning of the physical inventories as required in § 74.59(f)(1). The original paragraph (b) would be deleted because the requirements would be replaced by the new Subpart D.

Section 74.17 Special nuclear material physical inventory summary report.

This section would be revised to reflect the relocation of the MC&A requirements and to change the address for reporting physical inventory results in paragraph (c). The reports would be submitted to the Director, Office of Nuclear Material Safety and Safeguards, instead of the regions to be consistent with paragraphs (a) and (b).

Section 74.19 Recordkeeping.

A new section would be added to address the general recordkeeping requirements for MC&A that were previously included in § 70.51. These requirements originate from §§ 70.51 (b)(1) through (b)(5), 70.51(c), and 70.51(d).

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

This section would be revised to delete implementation dates that are no longer applicable. This section would also be revised to change 9 kilograms to 9000 grams because the use of 9 kg implied that the NRC will accept a rounding to the nearest kg, when in fact the NRC requires rounding to the nearest gram.

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

A new section would be added to provide the general performance objectives, implementation schedule and system capabilities and requirements for special nuclear material of moderate strategic significance.

Section 74.43 Internal controls, inventory, and records.

A new section would be added to provide the requirements for internal controls,

inventory, and recordkeeping for special nuclear material of moderate strategic significance.

Section 74.45 Measurements and measurement control.

A new section would be added to provide the requirements for measurements and measurement control for special nuclear material of moderate strategic significance.

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

This section would be revised to delete paragraphs (c)(1) and (c)(2) to eliminate implementation dates that are no longer relevant. Paragraph (c) would be revised to reflect that new Fundamental Nuclear Material Control plans would be implemented upon issuance of a license or amendment, or by the date specified in a license condition. Paragraph (d)(1) would be deleted because it is no longer necessary to provide an 18 month exemption for implementation. Paragraph (d)(2) would be redesignated as paragraph (d).

Section 74.57 Alarm resolution.

This section would be revised to reflect an NRC organizational change, the "Domestic Safeguards and Regional Oversight Branch" and the "Division of Safeguards and Transportation" are no longer used as names of organizational units. Also, the stated phone number is no longer applicable. Notifications would be made to the NRC Operations Center.

Section 74.59 Quality assurance and accounting requirements.

This section would be revised to provide proper identification of acronyms, correct the accidental omission of the phrase "contained in high enriched uranium," provide improved punctuation, correct typographical errors, and require that reports be submitted to the Director, Office of Nuclear Material and Safeguards.

Section 75.21 General requirements.

This section would be revised to delete the reference to § 70.51 and add the new reference to § 74.15.

Section 76.113 Formula quantities of strategic special nuclear material - Category I.

This section would be revised to delete the reference to § 70.51 and replace it with the new reference to § 74.19.

Section 76.115 Special nuclear material of moderate strategic significance - Category II.

This section would be revised to delete the references to §§ 70.51, 70.52, 70.53, 70.54, 70.57, and 70.58 and add the new references to §§ 74.19, 74.41, 74.43, and 74.45.

Section 76.117 Special nuclear material of low strategic significance - Category III.

This section would be revised to delete the references to § 70.51 and add the new reference to § 74.19.

Section 150.20 Recognition of Agreement State licenses.

This section would be revised to delete the reference to §§ 70.51, 70.53, and 70.54 and add the new reference to Part 74.

Criminal Penalties

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

Agreement State Compatibility

Under the "Policy Statement on Adequacy and Compatibility of Agreement State Programs" approved by the Commission on June 30, 1997, and published in the Federal Register on September 3, 1997 (62 FR 46517), most of this proposed rule is classified as compatibility Category "NRC." However, certain parts of the proposed rule would be a matter of consistency among States and Federal safety requirements. The revisions to Part 61 and §§ 70.51(a), 70.51(b), 70.19(c), 150.20(b), and new § 74.19(a) would be classified as Category C. A conforming change to § 70.8(b) would be classified as Category D. Although these sections are subject to various degrees of compatibility regarding the Agreement States, the proposed amendments are not expected to impact existing Agreement States regulations. The actual requirements are not changing, they are only being moved to a new location. Therefore, it is not expected that Agreement States will need to make conforming changes to their regulations.

Category C means the provisions affect a program element, the essential objectives of

which should be adopted by the State to avoid conflicts, duplications, or gaps in the national program. The manner in which the essential objectives are addressed need not be the same as NRC, provided the essential objectives are met. Category D means the program element does not need to be adopted by the States for purposes of compatibility. Compatibility is not required for Category "NRC" regulations. The NRC program elements in this category are those that relate directly to areas of regulation reserved to the NRC by the Atomic Energy Act of 1954, as amended (AEA), or the provisions of 10 CFR Chapter I. Although an Agreement State may not adopt program elements reserved to NRC, it may wish to inform its licensees of certain requirements via a mechanism that is consistent with the particular State's administrative procedure laws, but does not confer regulatory authority on the State.

Plain Language

The Presidential Memorandum dated June 1, 1998, entitled, "Plain Language in Government Writing" directed that the Government's writing be in plain 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 heading "ADDRESSES" above.

Voluntary Consensus Standards

The National Technology Transfer 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 the MC&A regulations. This

action does not constitute the establishment of a standard that establishes generally applicable requirements.

Environmental Impact: Categorical Exclusion

The NRC has determined that the changes to Part 51, the changes to the reporting requirements, and the movement of the MC&A requirements now found in Part 70 to Part 74 are of the type of action described in categorical exclusion 10 CFR 51.22(c)(2) and (3). Therefore neither an environmental impact statement nor an environmental assessment has been prepared for these portions of the proposed regulation. An environmental assessment has been prepared for the remainder of the proposed rule.

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, not to prepare an environmental impact statement for this proposed rule because the Commission has concluded based on an environmental assessment (EA) that this proposed rule, if adopted, would not be a major Federal action significantly affecting the quality of the human environment. The EA prepared to support this rulemaking covers the changes to the Category II requirements.

The determination of this EA is that there will be no significant impact to the public from this action. However, the general public should note that the NRC welcomes public participation. The NRC has also committed to complying with Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, dated February 11, 1994, in all its actions. Therefore, the NRC has also determined that there are no disproportionate, high, and adverse impacts on minority and low-income populations. In the letter and spirit of E.O. 12898, the NRC is requesting public comment on any environmental justice considerations or questions that the public believes may be related to this proposed rule but were not addressed. The NRC uses the following working definition of "environmental justice": The fair treatment and meaningful involvement of all people, regardless of race, ethnicity, culture, income, or educational level with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Comments on any aspect of the EA, including environmental justice, may be submitted to the NRC as indicated under the ADDRESSES heading.

The NRC has sent a copy of the EA and this proposed rule to every State Liaison Officer and requested their comments on the EA. The EA may be examined at the NRC Public Document Room, 11555 Rockville Pike, Room O-1F21, Rockville, MD. Single copies of the EA are available from Merri Horn, telephone (301) 415-8126, e-mail, mlh1@nrc.gov, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

Paperwork Reduction Act Statement

This proposed rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). This rule has been submitted to the Office of Management and Budget for review and approval of the information collection requirements.

Because the rule will reduce existing information collection requirements, the public burden for this information collection is expected to be decreased by approximately 7 hours per licensee for licensees reporting annually, instead of semi-annually, on NRC Forms 742 and 742C. This reduction includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. There is essentially no change in overall burden for the requirements in 10 CFR Part 70 that are being moved to 10 CFR Part 74. The U.S. Nuclear Regulatory Commission is seeking public comment on the potential impact of the information collection in the 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?

Send comments on any aspect of this proposed information collection, including suggestions for reducing this burden, to the Records Management Branch (T-6 E6), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet electronic mail at BJS1@NRC.GOV; and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0004, -0009, -0058, -0123, and -0132), Office of Management and Budget, Washington, DC 20503.

Comments to OMB on the information collections or on the above issues should be submitted by (**insert 30 days after publication in the Federal Register**). 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

If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

Regulatory Analysis

Statement of the Problem and Objective:

The Commission has identified an aspect of the MC&A requirements where it would be desirable to reduce the regulatory burden and provide additional flexibility to licensees required to submit Material Balance Reports and Inventory Composition Reports. The current regulations require a licensee authorized to possess at any one time or location SNM in a

quantity totaling more than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof, to complete and submit in a computer-readable format Material Balance Reports concerning SNM received, produced, possessed, transferred, consumed, disposed of, or lost. These reports are to be compiled as of March 31 and September 30 of each year and filed within 30 days after the end of the period. Each licensee is also required to file a statement of the composition of the ending inventory (also called the Physical Inventory Listing Report) along with the Material Balance Report. These twice yearly reports are typically based on book values as opposed to physical inventory results because the dates do not always coincide with the time frame for a facility's physical inventory. Physical inventories for Category III facilities are conducted on an annual basis, semi-annually for Category I facilities, and every two to six months for Category II facilities. By revising the time frame to complete their Material Balance Reports and physical inventory listing reports to coincide with the physical inventory and providing additional time to complete the paperwork, the regulatory burden on most licensees would be reduced.

Second, the categorical exclusion (§ 51.22(c)(12)) covers the issuance of an amendment to a license pursuant to 10 CFR Parts 50, 60, 61, 70, 72, or 75, relating to safeguards matters or approval of a safeguards plan. It does not address amendments to those plans. As written, the categorical exclusion could be used for approval of a safeguards plan. However, an EA would be necessary for approval of an amendment to the safeguards plan. Initial approval is covered by the categorical exclusion, but amendments were inadvertently omitted. This inadvertent omission would be rectified by adding language covering revisions to safeguards plans. In addition, the categorical exclusion currently lists several parts. Providing a generic reference to any part of 10 CFR Chapter I would correct the current listing and avoid the need for changes due to new parts being added. These changes would enhance the NRC's efficiency and reduce potential burden on the staff.

Third, in 1982, the NRC initiated an effort to move the MC&A requirements from 10 CFR Part 70, “Domestic Licensing of Special Nuclear Material,” to 10 CFR Part 74, “Material Control and Accounting of Special Nuclear Material.” The initiative also included efforts to make the requirements more performance oriented. In 1985, the MC&A requirements for Category III facilities were made more performance oriented and moved to Part 74 (50 FR 7575; February 25, 1985). The requirements for Category I facilities were similarly moved in 1987 (52 FR 10033; March 30, 1987). The MC&A requirements for Category II facilities and some of the general MC&A requirements are still interspersed among the safety and general licensing requirements of Part 70. The requirements regarding Category II material are also overly prescriptive, in some cases having more stringent requirements than those for a Category I facility. Although there are no current operating Category II licensed facilities (the only Category II facility has a possession only license and is undergoing decommissioning), it is still beneficial to move the requirements and make them less prescriptive. These modifications would enhance the regulatory process by providing any future Category II licensee with a better understanding of the procedures and requirements for MC&A, and would consolidate the MC&A requirements in Part 74. Conforming changes would also be made to Parts 61, 73, 75, 76, and 150 to reflect the relocations.

In addition, the proposed rule would correct several typos, old implementation dates, and some terminology that should be updated to reflect current practice and to be consistent with the regulatory guides.

Identification and Analysis of Alternative Approaches to the Problem:.

Option 1 - Conduct a rulemaking that would address the regulatory problems described above.

The proposed rule would revise the timing to complete the Material Balance Reports and Physical Inventory Listing Reports to coincide with a facility’s physical inventory. The proposed

rule would also provide additional time to complete the paperwork, except for a licensee who is reporting under Part 75. These changes would provide most licensees with additional flexibility and reduce the regulatory burden. The proposed rule would require that the Material Balance Reports and Physical Inventory Listing Report be filed within 60 days (45 days for Category I facilities) of the beginning of the physical inventory. Because the majority of licensees are only required to conduct an annual physical inventory (the exceptions being Category I and II facilities), the reports would only need to be filed once a year instead of twice a year. This would reduce the burden on industry in preparing the reports by about half.

This proposed rule would also revise the categorical exclusion covering approval of safeguards plans, move the MC&A requirements to Part 74, and make the Category II requirements more performance based. The proposed rule represents the final stage of an effort that started in 1982, and would result in the movement of the remaining general MC&A requirements and the requirements for Category II facilities. The proposed risk-informed approach is consistent with the existing MC&A regulations that apply to Category I and III facilities. In addition, the proposed rule would make needed modifications that were missed in earlier updates of the MC&A regulations, correct typographical errors, delete outdated implementation dates, clarify some definitions, and include several new definitions.

Option 2 - No Action.

One alternative to amending the regulations is to maintain the current regulations without change. The advantages of the no action alternative is that the resources expended on the rulemaking would be conserved. Further, there is no urgency to make the changes to the Category II requirements because there are currently no active Category II licensees. The current system has worked reasonably well, and the proposed changes to consolidate the MC&A requirements in Part 74 may be desirable, but not necessary. The disadvantages of the

no action alternative is that the regulatory problems described above would not be addressed. The regulatory burden reductions to be gained for most licensees by changing the timing and frequency for submittal of the Material Balance Reports and the Physical Inventory Listing Reports would not be achieved. In addition, the location of the MC&A requirements in both Part 70 and Part 74 can cause confusion, particularly for a licensee who refers to the general requirements in Part 70. Consolidation of domestic MC&A requirements would not occur. The requirements for Category II facilities would remain more stringent than the requirements for Category I facilities.

Estimation and Evaluation of Values and Impacts:.

The principle purpose of the Material Balance Report and the Physical Inventory Listing Report is the periodic reconciliation of licensee records with the records in the NMMSS. A secondary purpose is the use of these records to satisfy the requirement of the US/IAEA Safeguards Agreement to provide an annual Material Balance Report for facilities selected under the Agreement or associated Protocol.

The proposed rule would modify the regulations to require the Material Balance Report and the Physical Inventory Listing Report at the time of a physical inventory. The proposed rule would require the reports to be completed within 60 days of the beginning of the physical inventory for independent spent fuel storage installations, reactors, and Category II and III facilities, and within 45 days of the beginning of the physical inventory for Category I facilities. This modification would not effect licensees reporting under Part 75. Because most licensees conduct annual inventories, the reporting burden would be reduced. Reconciliation once a year instead of twice a year would not appear to be a problem for most licensees because the number of transactions is such that reconciliation of records would be manageable. In the case of the gaseous diffusion plants (GDPs) and their large number of transactions, reconciliation

could be more difficult. This change would not preclude the GDPs from continuing to request monthly summaries from the NMMSS and reconciling its records with the NMMSS on a bimonthly basis, which is the current practice. One Material Balance Report and Physical Inventory Listing Report per year at the time of the physical inventory would still provide for adequate safeguards for Category III facilities. In addition to reducing the regulatory burden on a licensee, the change would enhance the efficiency of the NMMSS.

Licensees are required to submit the semiannual Material Balance Reports and Physical Inventory Listing Reports within 30 days of March 31 and September 30 of each year. The pre-established timing of the submittals has two drawbacks. Specifically, the reports rarely coincide with a physical inventory, and the NMMSS contractor receives all of the reports for a given period simultaneously. The data from a physical inventory is significantly more meaningful than the book values reported during the interim periods. Staggering the submittals should benefit the NMMSS contractor, as not all licensees conduct inventories at the same time. Requirements for the NMMSS contractor would likely be spread more evenly throughout the year. By modifying the requirement to stipulate that the Material Balance Report and Physical Inventory Listing Report shall be submitted at the time of the physical inventory, these problems could be alleviated and the data from the reports would be more meaningful.

Another consideration is whether there would be an adverse impact on meeting IAEA safeguards requirements. Pursuant to the terms of the US/IAEA Safeguards Agreement and

§ 75.35, only one Material Balance Report and Physical Inventory Listing Report is required per year. Consequently there would be no adverse impact.

As the proposed rule would tie submittal of the reports to the physical inventory, the majority of licensees would only need to submit the reports once a year instead of twice a year. This would result in reducing the industry burden for preparing and filing the Material Balance Report and the Physical Inventory Listing Reports by half. The Material Balance Reports are filed using DOE/NRC Form 742. The burden for preparation and submission of each DOE/NRC Form 742 is estimated to be 45 minutes. There are currently about 200 licensees who submit two forms per year. With the submittal of only one report per year for 198 licensees, the burden is reduced by about 149 hours. The Physical Inventory Listing Reports are filed on DOE/NRC Form 742C. The burden for preparing this form is six hours. With about 178 licensees submitting the form annually, the total burden reduction is 1068 hours per year. Because some licensees are also required to submit DOE/NRC Form 742 to cover foreign origin source material, the number of licensees required to submit NRC Form 742 is higher than the number submitting DOE/NRC Form 742C.

The burden on the NRC staff would also be reduced because there would be fewer reports to review. NRC review time is approximately 5 minutes per report. With a reduction of 376 reports per year, NRC staff would save about 31 hours per year. In addition, the NRC staff receives five to eight requests per year from licensees who are asking for more time to file the reports. With the additional time being provided for filing the reports, the NRC staff does not expect to receive any requests in the future. The applicant would save the effort necessary in preparing the request and the staff would save time in reviewing and approving the request.

This alternative would also result in the consolidation of the MC&A requirements in Part 74 and adoption of more risk-informed regulations for Category II facilities. These modifications would enhance the regulatory process by providing any future Category II

licensees a better understanding of the procedures and requirements for MC&A. The principal cost for this action would be the modest expenditure of NRC staff resources to issue this rulemaking. However, there are no currently active Category II licensees that would benefit from the revised regulations for Category II facilities. Another advantage is that domestic MC&A requirements would be consolidated and would provide a graded, risk-informed approach to MC&A regulation. In addition, the existing typographical errors, outdated terminology, and old implementation dates would be corrected.

Presentation of Results:.

The recommended action is to adopt the first option because it would reduce the burden on licensees in preparing and filing their Material Balance Reports and Physical Inventory Listing Reports. The process would become more efficient, and the burden of producing the reports would be reduced by a total of approximately 1,217 staff-hours. In addition to reducing unnecessary regulatory burden on licensees, the changes would enhance the operational efficiency of the NMMSS contractor by spreading the report submittals more evenly throughout the year. This change would not preclude the gaseous diffusion plants with their large number of transactions from continuing to request monthly summaries from the NMMSS to reconcile its records. The proposed rule would also consolidate the MC&A requirements in Part 74 and adopt more risk-informed regulations for Category II facilities. These modifications should enhance the regulatory process by providing any future Category II licensee a better understanding of the procedures and requirements for MC&A. The principal cost for this action would be the modest expenditure of NRC staff resources to issue this rulemaking. The total cost of this rulemaking to the NRC is estimated at 1.2 FTE. The total savings to the industry is about 1217 hours per year. The action is considered to be cost beneficial to licensees and would improve the operational efficiency of the NMMSS contractor. Adequate safeguards

would be maintained. Consequently, the Commission believes public confidence would not be adversely affected by this rulemaking.

Decision Rationale:.

Based on the discussion of the benefits and impacts of the alternatives, the NRC concludes that the requirements of the proposed rule are commensurate with the NRC's responsibilities for public health and safety and the common defense and security. This rulemaking would save both NRC staff and licensee resources. No other available alternative is believed to be as satisfactory. Thus, this action is recommended.

The Commission requests public comment on the draft analysis. Comments on the draft analysis may be submitted to the NRC as indicated under the ADDRESSES heading.

Regulatory Flexibility Certification

In accordance with the Regulatory Flexibility Act of 1980, (5 U.S.C. 605(b)), the Commission certifies that this rule, if adopted, will not 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 adopted by the NRC (10 CFR 2.810).

Backfit Analysis

The NRC has determined that the backfit rule (§§ 50.109, 72.62, or 76.76) does not apply to this proposed rule because these amendments do not involve any provisions that would impose backfits as defined in the backfit rule. Therefore, a backfit analysis is not required.

List of Subjects

10 CFR Part 51 - Administrative practice and procedure, Environmental impact statement, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements.

10 CFR Part 61 - Criminal penalties, Low-level waste, Nuclear materials, Reporting and recordkeeping requirements, Waste treatment and disposal.

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 - Criminal penalties, Manpower training programs, Nuclear materials, Occupational safety and health, Reporting and recordkeeping requirements, Security measures, Spent fuel.

10 CFR Part 73 - Criminal penalties, Hazardous materials transportation, Export, Import, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements, Security measures.

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 75 - Criminal penalties, Intergovernmental relations, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements, Security measures.

10 CFR Part 76 - Certification, Criminal penalties, Radiation protection, Reporting and recordkeeping requirements, Security measures, Special nuclear material, Uranium enrichment by gaseous diffusion.

10 CFR Part 150 - Criminal penalties, Hazardous materials transportation, Intergovernmental relations, Nuclear materials, Reporting and recordkeeping requirements, Security measures, Source material, Special nuclear material.

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 51, 61, 70, 72, 73, 74, 75, 76, and 150.

PART 51 - ENVIRONMENTAL PROTECTION REGULATIONS FOR DOMESTIC LICENSING AND RELATED REGULATORY FUNCTIONS

1. The authority citation for Part 51 continues to read as follows:

AUTHORITY: Sec. 161, 68 Stat. 948, as amended, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 2201, 2297f); secs. 201, as amended, 202, 88 Stat. 1242, as amended, 1244 (42 U.S.C. 5841, 5842). Subpart A also issued under National Environmental Policy Act of 1969, secs. 102, 104, 105, 83 Stat. 853 - 854, as amended (42 U.S.C. 4332, 4334, 4335); and Pub. L. 95 - 604, Title II, 92 Stat. 3033 - 3041; and sec. 193, Pub. L. 101 - 575, 104 Stat. 2835, (42 U.S.C. 2243). Sections 51.20, 51.30, 51.60, 51.80, and 51.97 also issued under secs. 135, 141, Pub. L. 97 - 425, 96 Stat. 2232, 2241, and sec. 148, Pub. L. 100 - 203, 101 Stat. 1330 - 223 (42 U.S.C. 10155, 10161, 10168). Section 51.22 also issued under sec. 274, 73 Stat. 688, as amended by 92 Stat. 3036 - 3038 (42 U.S.C. 2021) and under Nuclear Waste Policy Act of 1982, sec. 121, 96 Stat. 2228 (42 U.S.C. 10141). Sections 51.43, 51.67, and 51.109 also under Nuclear Waste Policy Act of 1982, sec. 114(f), 96 Stat. 2216, as amended (42 U.S.C. 10134(f)).

2. In § 51.22, paragraph (c)(12) is revised to read as follows:

<u>§51.22 Criterion for categorical exclusion; identification of licensing and regulatory actions eligible for categorical exclusion or otherwise not requiring environmental review</u>.

* * * * *

(c) * * *

(12) Issuance of an amendment to a license implementing any requirement of this

chapter relating solely to safeguards matters (i.e., protection against sabotage or loss or diversion of special nuclear material), or issuance of an approval of a safeguards plan (or revision thereto) submitted pursuant to a requirement of any part of this chapter, provided that the amendment or approval does not involve any significant construction impacts. These amendments and approvals are confined to:

(i) organizational and procedural matters;

(ii) modifications to systems used for security and/or materials accountability;

(iii) administrative changes; and

(iv) review and approval of transportation routes pursuant to 10 CFR 73.37.

* * * * *

PART 61 - LICENSING REQUIREMENTS FOR LAND DISPOSAL OF RADIOACTIVE WASTE

3. The authority citation for Part 61 continues to read as follows:

AUTHORITY: Secs. 53, 57, 62, 63, 65, 81, 161, 182, 183, 68 Stat. 930, 932, 933, 935, 948, 953, 954, as amended (42 U.S.C. 2073, 2077, 2092, 2093, 2095, 2111, 2201, 2232, 2233); secs. 202, 206, 88 Stat. 1244, 1246 (42 U.S.C. 5842, 5846); secs. 10 and 14, Pub. L. 95 - 601, 92 Stat. 2951 (42 U.S.C. 2021a and 5851) and Pub. L. 102 - 486, sec. 2902, 106 Stat. 3123 (42 U.S.C. 5851).

4. In § 61.80, paragraph (g) is revised to read as follows:

§61.80 Maintenance of records, reports, and transfers.

* * * * *

(g) Each licensee shall comply with the safeguards reporting requirements of §§ 30.55, 40.64, 74.13, and 74.15 of this chapter if the quantities or activities of materials received or transferred exceed the limits of these sections. Inventory reports required by these sections are not required for materials after disposal.

* * * * *

PART 70 - DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

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

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. 104134, 110 Stat. 1321, 1321349 (42 U.S.C. 2243).

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 (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 70.61 also issued under secs. 186, 187, 68 Stat. 955 (42 U.S.C. 2236, 2237). Section 70.62 also issued under sec. 108, 68 Stat. 939, as amended (42 U.S.C. 2138).

6. In § 70.8, paragraphs (b) and (c) are revised to read as follows:

§70.8 Information collection requirements: OMB approval.

* * * * *

(b) The approved information collection requirements contained in this part appear in §§ 70.9, 70.17, 70.19, 70.20a, 70.20b, 70.21, 70.22, 70.24, 70.25, 70.32, 70.33, 70.34, 70.38, 70.39, 70.42, 70.50, 70.51, 70.52, 70.59, 70.61, 70.62, 70.64, 70.65, 70.72, 70.73, 70.74, and Appendix A.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 70.21, Form N-71 is approved under control number 3150-0056.

(2) In § 70.38, NRC Form 314 is approved under control number 3150-0028.

7. In § 70.19, the introductory text of paragraph (c) is revised to read as follows:

§ 70.19 General license for calibration or reference sources.

* * * * *

(c) The general license in paragraph (a) of this section is subject to the provisions of §§ 70.32, 70.50, 70.55, 70.56, 70.61, 70.62, 70.71, 74.11, and 74.19, and to the provisions of parts 19, 20 and 21 of this chapter. In addition, persons who receive title to, own, acquire, deliver, receive, possess, use or transfer one or more calibration or reference sources pursuant to this general license:

* * * * *

8. In § 70.20a, paragraph (a) is revised to read as follows:

§ 70.20a General license to possess special nuclear material for transport.

(a) A general license is hereby issued to any person to possess formula quantities of strategic special nuclear material of the types and quantities subject to the requirements of §§ 73.20, 73.25, 73.26, and 73.27 of this chapter, and irradiated reactor fuel containing material of the types and quantities subject to the requirements of § 73.37 of this chapter, in the regular course of carriage for another or storage incident thereto. Carriers generally licensed under § 70.20b are exempt from the requirements of this section. Carriers of irradiated reactor fuel for the United States Department of Energy are also exempt from the requirements of this section. The general license is subject to the applicable provisions of §§ 70.7 (a) through (e), 70.32 (a) and (b), and §§ 70.42, 70.52, 70.55, 70.61, 70.62, 70.71, and 74.11.

* * * * *

9. In § 70.22, paragraph (b) is revised to read as follows:

§ 70.22 Contents of applications.

* * * * *

(b) Each application for a license to possess special nuclear material, to possess equipment capable of enriching uranium, to operate an uranium enrichment facility, to possess and use at any one time and location special nuclear material in a quantity exceeding one effective kilogram, except for applications for use as sealed sources and for those uses involved in the operation of a nuclear reactor licensed pursuant to part 50 of this chapter and those involved in a waste disposal operation, must contain a full description of the applicant's program for control and accounting of such special nuclear material or enrichment equipment

that will be in the applicant's possession under license to show how compliance with the requirements of §§ 74.31, 74.33, 74.41, or 74.51 of this chapter, as applicable, will be accomplished.

* * * * *

10. In § 70.23, paragraph (a)(6) is revised to read as follows:

§ 70.23 Requirements for the approval of applications.

(a) ***

(6) Where the applicant is required to submit a summary description of the fundamental material controls provided in his procedures for the control of and accounting for special nuclear material pursuant to § 70.22 (b), the applicant's proposed controls are adequate;

* * * * *

11. In § 70.32, paragraphs (c)(1)(i), (ii), and (iii) are revised 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 special nuclear material at all applicable facilities as implemented pursuant to §§ 70.22(b), 74.31(b), 74.33(b), 74.41(b), or 74.51(c) of this chapter, as appropriate;

(ii) The measurement control program for uranium source material at an uranium enrichment facility and for special nuclear material 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 special nuclear material 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), 74.31(b), 74.33(b), 74.41(b), or 74.51(c) 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.

* * * * *

12. In § 70.51, the section heading is revised; paragraphs (a), (b), (b)(1) through (b)(5), (c), (d), (e), (f), (g), and (h) are removed; and paragraphs (b)(6), (b)(7), i(1), and i(2) are redesignated as paragraphs (a), (b), c(1), and c(2) respectively, and revised to read as follows:

<u>§ 70.51 Records requirements</u>.

(a) Before to license termination, licensees shall forward the following records to the appropriate NRC Regional Office:

(1) Records of disposal of licensed material made under §§ 20.2002 (including burials authorized before January 28, 1981[1]), 20.2003, 20.2004, 20.2005;

[1]A previous § 20.304 permitted burial of small quantities of licensed materials in soil before January 28, 1981, without specific Commission authorization. See § 20.304 contained in the 10 CFR, parts 0 to 199, edition revised as of January 1, 1981.

(2) Records required by § 20.2103(b)(4); and

(3) Records required by § 70.25(g).

(b) If licensed activities are transferred or assigned in accordance with § 70.32(a)(3), the licensee shall transfer the following records to the new licensee and the new licensee will be responsible for maintaining these records until the license is terminated:

(1) Records of disposal of licensed material made under §§ 20.2002 (including burials authorized before January 28, 1981[1]), 20.2003, 20.2004, 20.2005;

(2) Records required by § 20.2103(b)(4); and

(3) Records required by § 70.25(g).

(c)(1) Records which must be maintained pursuant to this part may be the original or a reproduced copy or 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 legible, accurate, and complete records during the required retention period. Records such as letters, drawings, specifications, must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

(2) If there is a conflict between the Commission's regulations in this part, license condition, or other written Commission approval or authorization pertaining to the retention period for the same type of record, the retention period specified in the regulations in this part for such records shall apply unless the Commission, pursuant to §70.14, has granted a specific exemption from the record retention requirements specified in the regulations in this part.

13. In § 70.52, the section heading is revised, paragraphs (b) and (d) are removed, paragraph (c) is redesignated as paragraph (b), and paragraphs (a) and (b) are revised to read as follows:

§ 70.52 Reports of accidental criticality.

(a) Each licensee shall notify the NRC Operations Center[1] within one hour after discovery of any case of accidental criticality.

(b) This notification must be made to the NRC Operations Center via the Emergency Notification System if the licensee is party to that system. If the Emergency Notification System is inoperative or unavailable, the licensee shall make the required notification via commercial telephonic service or other dedicated telephonic system or any other method that will ensure that a report is received by the NRC Operations Center within one hour.

14. Section 70.53 is removed.

§70.53 [Removed]

15. Section 70.54 is removed.

§70.54 [Removed]

16. Section 70.57 is removed.

[1]Commercial telephone number of the NRC Operations Center is (301) 816-5100.

§70.57 [Removed]

17. Section 70.58 is removed.

§70.58 [Removed]

PART 72 - LICENSING REQUIREMENTS FOR THE INDEPENDENT STORAGE OF SPENT NUCLEAR FUEL AND HIGH-LEVEL RADIOACTIVE WASTE

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

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).

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, 2244, (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).

19. In § 72.76, paragraph (a) is revised to read as follows:

§72.76 Material status reports.

(a) Except as provided in paragraph (b) of this section, each licensee shall complete in computer-readable format and submit to the Commission a Material Balance Report and a Physical Inventory Listing Report in accordance with instructions (NUREG/BR - 0007 and NMMSS Report D - 24 "Personal Computer Data Input for NRC Licensees"). 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. These reports provide information concerning the special nuclear material possessed, received, transferred, disposed of, or lost by the licensee. Each report must be submitted within 60 days of the beginning of the physical inventory required by § 72.72(b). The Commission may, when good cause is shown, permit a licensee to submit Material Balance Reports and Physical Inventory Listing Reports at other times. The Commission's copy of this report must be submitted to the address specified in the instructions. These prescribed computer-readable forms replace the DOE/NRC Forms 742 and 742C which has been previously submitted in paper form.

* * * * *

PART 73 - PHYSICAL PROTECTION OF PLANTS AND MATERIALS

20.

21. The authority citation for Part 73 continues to read as follows:

AUTHORITY: Secs. 53, 161, 68 Stat. 930, 948, as amended, sec. 147, 94 Stat. 780 (42 U.S.C. 2073, 2167, 2201); sec. 201, as amended, 204, 88 Stat. 1242, as amended, 1245, sec. 1701, 106 Stat. 2951, 2952, 2953 (42 U.S.C. 5841, 5844, 2297f).

Section 73.1 also issued under secs. 135, 141, Pub. L. 97 - 425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161). Section 73.37(f) also issued under sec. 301, Pub. L. 96 - 295, 94 Stat. 789 (42 U.S.C. 5841 note). Section 73.57 is issued under sec. 606, Pub. L. 99 - 399, 100 Stat. 876 (42 U.S.C. 2169).

22. In § 73.67, paragraph (e)(2)(ii) is revised to read as follows:

<u>§73.67 Licensee fixed site and in-transit requirements for the physical protection of special nuclear material of moderate and low strategic significance</u>.

* * * * *

(e)***

(2)***

(ii) Notify the shipper of receipt of the material as required in § 74.15 of this chapter, and

* * * * *

PART 74 - MATERIAL CONTROL AND ACCOUNTING OF SPECIAL NUCLEAR MATERIAL

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

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).

24. In § 74.1, paragraph (a) is revised to read as follows:

§ 74.1 Purpose.

(a) This part has been established to contain the requirements for the control and accounting of special nuclear material at fixed sites and for documenting the transfer of special nuclear materials. General reporting requirements as well as specific requirements for certain licensees possessing special nuclear material of low strategic significance, special nuclear material of moderate strategic significance, and formula quantities of strategic special nuclear material are included. Requirements for the control and accounting of source material at enrichment facilities are also included.

* * * * *

25. Section 74.2 is revised to read:

§ 74.2 Scope.

(a) The general reporting and recordkeeping requirements of subpart B of this part apply to each person licensed pursuant to this chapter, except licensees whose MC&A reporting and recordkeeping requirements are covered by §§ 72.72, 72.76, and 72.78, who possess special nuclear material in a quantity greater than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof; or who transfers or receives a quantity of special nuclear material of 1 gram or more of contained uranium-235, uranium-233, or plutonium.

(b) In addition, specific control and accounting requirements are included in subparts C, D and E for certain licensees who:

(1) posses and use formula quantities of strategic special nuclear material;

(2) possess and use special nuclear material of moderate strategic significance;

(3) possess and use special nuclear material of low strategic significance; or

(4) possess uranium source material and equipment capable of producing enriched uranium.

(c) As provided in part 76 of this chapter, the regulations of this part establish procedures and criteria for material control and accounting for the issuance of a certificate of compliance or the approval of a compliance plan.

26. In § 74.4, definition for “removals” is removed; the definitions of “Category IA material” and “inventory difference (ID)”are revised; and the definitions for “Beginning inventory (BI)”, “Plant”, “Removal from inventory”, and “Removals of material from process” are added in alphabetical order to read as follows:

§ 74.4 Definitions.

* * * * *

Beginning inventory (BI) means the book inventory quantity at the beginning of an inventory period, and is the reconciled physical inventory entered into the books as an adjusted inventory at the completion of the prior inventory period.

* * * * *

Category IA material means SSNM directly useable in the manufacture of a nuclear explosive device, except if:

(1) The dimensions are large enough (at least two meters in one dimension, greater than one meter in each of two dimensions, or greater than 25cm in each of three dimensions) to preclude hiding the item on an individual;

(2) The total weight of an encapsulated item of SSNM is such that it cannot be carried inconspicuously by one person (i.e., at least 50 kilograms gross weight); or

(3) The quantity of SSNM (less than 0.05 formula kilograms) in each container requires protracted diversions to accumulate five formula kilograms.

* * * * *

Inventory difference (ID) means the arithmetic difference obtained by subtracting the quantity of SNM tabulated from a physical inventory from the book inventory quantity. Book inventory quantity is equivalent to the beginning inventory (BI) plus additions to inventory (A) minus removals from inventory (R), while the physical inventory quantity is the ending inventory (EI) for the material balance period in question (as physically determined). Thus mathematically,

$$ID = (BI + A - R) - EI \quad \text{or} \quad ID = BI + A - R - EI$$

* * * * *

Plant means a set of processes or operations (on the same site, but not necessarily all in the same building) coordinated into a single manufacturing, R&D, or testing effort. A scrap recovery operation, or an analytical laboratory, serving both on-site and off-site customers (or more than one on-site manufacturing effort) must be treated as a separate plant. Physical inventories are to be conducted for each plant as well as for a total site.

* * * * *

Removals from inventory means measured quantities of special nuclear material contained in:

(1) Shipments;

(2) Waste materials transferred to an on-site holding account via a DOE/NRC Form 741 transaction;

(3) Measured discards transported offsite; and

(4) Effluents released to the environment.

Removals of material from process (or removals from process) means measured quantities of special nuclear material contained in:

(1) effluents released to the environment;

(2) Previously unencapsulated materials that have been encapsulated as sealed sources;

(3) Waste materials that will not be subject to further on-site processing and which are under tamper-safing;

(4) Ultimate product placed under tamper-safing; and

(5) Any materials (not previously designated as *removals from process*) shipped offsite.

* * * * *

27. In § 74.8, paragraph (b) is revised to read as follows:

<u>§ 74.8 Information collection requirements: OMB approval</u>.

* * * * *

(b) The approved information collection requirements contained in this part appear in

§§74.11, 74.13, 74.15, 74.17, 74.19, 74.31, 74.33, 74.41, 74.43, 74.45, 74.51, 74.57, and 74.59.

* * * * *

28. The heading of Subpart B is revised to read as follows:

Subpart B---General Reporting and Recordkeeping Requirements

29. Section 74.13 is revised to read as follows:

§ 74.13 Material Status Reports.

(a) Each licensee, including nuclear reactor licensees as defined in §§ 50.21 and 50.22 of this chapter, authorized to possess at any one time and location special nuclear material in a quantity totaling more than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof, shall complete and submit in computer-readable format Material Balance Reports concerning special nuclear material received, produced, possessed, transferred, consumed, disposed of, or lost by it. This prescribed computer-readable report replaces the DOE/NRC Form 742 which has been previously submitted in paper form. The Physical Inventory Listing Report must be submitted with each Material Balance Report. This prescribed computer-readable report replaces the DOE/NRC Form 742C which has been previously submitted in paper form. Each licensee shall prepare and submit the reports described in this paragraph in accordance with instructions (NUREG/BR - 0007 and NMMSS Report D - 24 "Personal Computer Data Input for NRC Licensees"). 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. Each licensee shall submit a report within 60 calendar days of the beginning of the physical inventory required by §§ 74.19(c), 74.31(c)(5), 74.33(c)(4), or 74.43(c)(6) or 45 calendar days of the beginning of the physical inventory required by § 74.59(f)(1). The Commission may permit a licensee to submit the reports at other times for good cause.

(b) Any licensee who is required to submit routine Material Status Reports pursuant to § 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 paragraph (a)(1) of this section).

30. Section 74.17 is revised to read as follows:

§ 74.17 Special nuclear material physical inventory summary report.

(a) Each licensee subject to the requirements of §§ 74.31 or 74.33 of this part shall submit a completed Special Nuclear Material Physical Inventory Summary Report on NRC Form 327 not later than 60 calendar days from the start of each physical inventory required by §§ 74.31(c)(5) or 74.33(c)(4) of this part. The licensee shall report the physical inventory results by plant and total facility to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(b) Each licensee subject to the requirements of § 74.41(a) of this part shall submit a completed Special Nuclear Material Physical Inventory Summary Report on NRC Form 327 not later than 60 calendar days from the start of each physical inventory required by § 74.43(c)(7) of this part. The licensee shall report the physical inventory results by plant and total facility to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

(c) Each licensee subject to the requirements of § 74.51 of this part shall submit a completed Special Nuclear Material Physical Inventory Summary Report on NRC Form 327 not later than 45 calendar days from the start of each physical inventory required by § 74.59(f). The licensee shall report the physical inventory results by plants and total facility to the Director, Office of Nuclear Material Safety and Safeguards, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001.

31. Section 74.19 is added to read as follows:

§ 74.19 Recordkeeping.

(a) Licensees subject to the recordkeeping requirements of §§ 74.31, 74.33, 74.43, or 74.59 of this part are exempt from the requirements of paragraphs (a)(1) through (4) of this section. Otherwise:

(1) Each licensee shall keep records showing the receipt, inventory (including location and unique identity), acquisition, transfer, and disposal of all special nuclear material in its possession regardless of its origin or method of acquisition.

(2) Each record relating to material control or material accounting that is required by the regulations in this chapter or by license condition must be maintained and retained for the period specified by the appropriate regulation or license condition. If a retention period is not otherwise specified by regulation or license condition, the licensee shall retain the record until the Commission terminates the license that authorizes the activity that is subject to the recordkeeping requirement.

(3) Each record of receipt, acquisition, or physical inventory of special nuclear material that must be maintained pursuant to paragraph (a)(1) of this section must be retained as long

as the licensee retains possession of the material and for 3 years following transfer or disposal of such material.

(4) Each record of transfer of special nuclear material to other persons must be retained by the licensee who transferred the material until the Commission terminates the license authorizing the licensee's possession of the material.

(b) Each licensee that is authorized to possess at any one time special nuclear material in a quantity exceeding one effective kilogram shall establish, maintain, and follow written material control and accounting procedures that are sufficient to enable the licensee to account for the special nuclear material in its possession under license. The licensee shall retain these procedures until the Commission terminates the license that authorizes possession of the material and retain any superseded portion of the procedures for 3 years after the portion is superseded.

(c) Other than licensees subject to §§ 74.31, 74.33, 74.41, or 74.51 of this part, each licensee who is authorized to possess special nuclear material, at any one time and site location, in a quantity greater than 350 grams of contained uranium-235, uranium-233, or plutonium, or any combination thereof, shall conduct a physical inventory of all special nuclear material in its possession under license at intervals not to exceed 12 months. The results of these physical inventories need not be reported to the Commission, but the licensee shall retain the records associated with each physical inventory until the Commission terminates the license that authorized the possession of special nuclear material.

(d) Records that must be maintained pursuant to this part may be the original or a reproduced copy or a microform if the 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 legible, accurate, and complete records during

the required retention period. Records such as letters, drawings, or specifications must include all pertinent information such as stamps, initials, and signatures. The licensee shall maintain adequate safeguards against tampering with and loss of records.

32. In § 74.31, paragraphs (b) and (c)(4) are revised as follows:

<u>§ 74.31 Nuclear material control and accounting for special nuclear material of low strategic significance</u>.

* * * * *

(b) *Implementation*: Each applicant for a license, and each licensee that, upon application for modification of its license, would become newly subject to the performance objectives of paragraph (a) of this section shall submit a fundamental nuclear material control (FNMC) plan describing how the requirements of paragraph (c) of this section will be met. The FNMC plan shall be implemented upon issuance of a license or modification of an existing license to authorize the activities being addressed in paragraph (a) of this section, or by the date specified in a license condition.

(c) ***

(4) In each inventory period, control total material control and accounting measurement uncertainty so that twice its standard error 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;

* * * * *

32. The heading of Subpart D is revised to read as follows:

Subpart D---Special Nuclear Material of Moderate Strategic Significance

33. Sections §§ 74.41, 74.43, and 74.45 are added under Subpart D to read as follows:

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

(a) *General performance objectives.* Each licensee who is authorized to possess special nuclear material (SNM) of moderate strategic significance other than as sealed sources and to use this material at any site other than a nuclear reactor licensed pursuant to part 50 of this chapter, an irradiated fuel reprocessing plant, or an operation involved with waste disposal, shall establish, implement, and maintain a Commission-approved material control and accounting (MC&A) system that will achieve the following objectives:

(1) Maintain accurate, current, and reliable information on, and confirm, the quantities and locations of SNM in the licensee's possession;

(2) Conduct investigations and resolve any anomalies indicating a possible loss of special nuclear material;

(3) Permit rapid determination of whether an actual loss of a significant quantity of SNM has occurred, with significant quantity being either:

(i) More than one formula kilogram of strategic SNM; or

(ii) 10,000 grams or more of U^{235} contained in uranium enriched up to 20.00 percent.

(4) Generate information to aid in the investigation and recovery of missing SNM in the event of an actual loss.

(b) *Implementation schedule.* Each applicant for a license who would, upon issuance of

a license pursuant to any part of this chapter, be subject to the requirements of paragraph (a) of this section shall:

(1) Submit a fundamental nuclear material control (FNMC) plan describing how the performance objectives of § 74.41(a) will be achieved, and how the system capabilities required by § 74.41(c) will be met; and

(2) Implement the NRC approved plan submitted pursuant to paragraph (b)(1) of this section upon the Commission's issuance of a license or by the date specified in a license condition.

(c) *System capabilities.* To achieve the general performance objectives specified in § 74.41(a), the MC&A system 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 which have authorized access to SNM.

<u>§ 74.43 Internal controls, inventory, and records</u>.

(a) Licensees subject to § 74.41 shall maintain the internal control, inventory, and recordkeeping capabilities required in paragraphs (b), (c) and (d) of this section.

(b) *Internal controls.*

(1) A management structure shall be established, documented, and maintained that assures:

(i) Clear overall responsibility for material control and accounting (MC&A) functions;

(ii) Independence from production and manufacturing responsibilities; and

(iii) Separation of key responsibilities.

(2) The overall planning, coordination, and administration of the MC&A functions for special nuclear material (SNM) shall be vested in a single individual at an organizational level sufficient to assure independence of action and objectiveness of decisions.

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

(4) The licensee shall assure that personnel who work in key positions where mistakes could degrade the effectiveness of the MC&A system are trained to maintain a high level of safeguards awareness and are qualified to perform their duties and/or responsibilities.

(5) The licensee shall establish, document, and maintain an item control program that:

(i) Provides current knowledge of SNM items with respect to identity, element and isotope content, and stored location; and

(ii) Assures that SNM items are stored and handled, or subsequently measured, in a manner such that unauthorized removal of 200 grams or more of plutonium or U^{233} or 300 grams or more of U^{235}, as one or more whole items and/or as SNM removed from containers, will be detected.

(6) Exempted from the requirements of paragraph (b)(5) of this section are items that exist for less than 14 calendar days and licensee-identified items each containing less than 200 grams of plutonium or U^{233} or 300 grams or more of U^{235} up to a cumulative total of one formula strategic SNM or 17 kilograms of U^{235} contained in uranium enriched to 10.00 percent or more but less than 20.00 percent in the U^{235} isotope.

(7) Conduct and document shipper-receiver comparisons for all SNM receipts, both on an individual batch basis and a total shipment basis, and ensure that any shipper-receiver difference that is statistically significant and exceeds twice the estimated standard deviation of

the difference estimator and 200 grams of plutonium of U^{233} or 300 grams of U^{235} is investigated and resolved; and

(8) Perform independent assessments of the total MC&A system, at intervals not to exceed 18 months, that assess the performance of the system, review its effectiveness, and document management's action on prior assessment recommendations and identified deficiencies. These assessments must include a review and evaluation of any contractor who performs SNM accountability measurements for the licensee.

(c) *Inventory control and physical inventories.* The licensee shall:

(1) Provide unique identification for each item on inventory and maintain inventory records showing the identity, location, and quantity of SNM for these items;

(2) Document all transfers of SNM between designated internal control areas within the licensee's site;

(3) Maintain and follow procedures for tamper-safing of containers or vaults containing SNM, if tamper-safe seals are to be used for assuring the validity of prior measurements, which include control of access to, and distribution of, unused seals and to records showing the date and time of seal application;

(4) Maintain and follow procedures for confirming the validity of prior measurements associated with unencapsulated and unsealed items on ending inventory;

(5) Maintain and follow physical inventory procedures to assure that:

(i) The quantity of SNM associated with each item on ending inventory is a measured value;

(ii) Each item on ending inventory is listed and identified to assure that all items are listed and no item listed more than once;

(iii) Cutoff procedures for transfers and processing are established so that all quantities are inventoried and none are inventoried more than once;

(iv) Cutoff procedures for records and reports are established so that all transfers for the inventory and material balance interval and no others are included in the records for the material balance period in question;

(v) Upon completion of the physical inventory, all book and inventory records, for total plant and individual internal control areas, are reconciled with and adjusted to the results of the physical inventory; and

(vi) Measurements will be performed for element and isotope content on all quantities of SNM not previously measured.

(6) Conduct physical inventories according to written instructions for each physical inventory which:

(i) Assign inventory duties and responsibilities;

(ii) Specify the extent to which each internal control area and process is to be shut down, cleaned out, and/or remain static;

(iii) Identify the basis for accepting previously made measurements and their limits of error; and

(iv) Designate measurements to be made for physical inventory purposes and the procedures for making these measurements.

(7) For each plant, conduct physical inventories of all possessed SNM at intervals not to exceed 9 calendar months; and

(8) Within 60 calendar days after the start of each physical inventory required by paragraph (c)(7) of this section:

(i) Calculate, for the material balance period terminated by the physical inventory, the inventory difference (ID) and its associated standard error of inventory difference (SEID) for both element and isotope;

(ii) Reconcile and adjust the book record of quantity of element and isotope content, as appropriate, to the results of the physical inventory; and

(iii) Investigate and report to the Director, Office of Nuclear Material Safety and Safeguards, any occurrence of SEID exceeding 0.125 percent of active inventory, and any occurrence of ID exceeding both three times SEID and 200 grams of plutonium or U^{233} or 300 grams of U^{235} contained in high enriched uranium, or 9000 grams of uranium U^{235} contained in low enriched uranium. The report will include a statement of the probable reasons for the excessive inventory difference and the corrective actions taken or planned.

(d) *Recordkeeping.* The licensee shall:

(1) Maintain records of the receipt, shipment, disposal, and current inventory associated with all possessed SNM;

(2) Maintain records of the quantities of SNM added to and removed from process;

(3) Maintain records of all shipper-receiver evaluations associated with SNM receipts;

(4) Retain each record pertaining to receipt and disposal of SNM until the Commission terminates the license; and

(5) Establish records that will demonstrate that the performance objectives of § 74.41(a)(1) through (4), the system capabilities of paragraphs (b) and (c) of this section and § 74.45(b) and (c) 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 specified by § 74.19(b) of this part, part 75 of this chapter, or by a specific license condition.

<u>§ 74.45 Measurements and measurement control</u>.

(a) Licensees subject to § 74.41 of this part shall establish and maintain the measurement and measurement control capabilities required by paragraphs (b) and (c) of this section.

(b) *Measurements.* The licensee shall:

(1) Establish, maintain, and use a program for the measurement of all SNM received, produced, transferred between internal control areas, on inventory, or shipped, discarded, or otherwise removed from inventory, except for:

(i) Sealed sources that have been determined by other means to contain less than 10 grams of U^{235}, U^{233}, or plutonium each;

(ii) Samples received, transferred between internal control areas, or on inventory that have been determined by other means to contain less than 10 grams of U^{235}, U^{233}, or plutonium each;

(iii) Receipt of sealed sources, of any quantity, previously manufactured and shipped by the licensee and which are returned to the licensee, provided the unique identity and encapsulation integrity have not been compromised, and the booked receipt quantity equals the previously shipped quantity for the involved sealed sources; and

(iv) Heterogeneous scrap that cannot be accurately measured in its as received form, provided this scrap is measured after dissolution within 18 months of receipt. The after dissolution measurement must include measurement of both the resulting solution and any undissolved residues, before any co-mingling with other scrap solutions or residues.

(2) Maintain and follow a program for the development and use of written procedures that includes documented review and approval of these procedures, and any revisions thereof, before use, for:

(i) Preparing or acquiring, maintaining, storing, and using reference standards;

(ii) Calibrating measurement systems, performing bulk mass and volume measurements, conducting nondestructive assay measurements, obtaining samples, and performing laboratory analyses for element concentration and isotope abundance; and

(iii) Recording, reviewing, and reporting measurements.

(c) *Measurement control.* To maintain measurement quality and to estimate measurement uncertainty values, the licensee shall:

(1) Assign responsibility for planning, developing, coordinating, and administering a measurement control program to an individual who has no direct responsibility for performing measurements or for SNM processing or handling, and who holds a position at an organizational level which permits independence of action and has adequate authority to obtain all the information required to monitor and evaluate measurement quality as required by this section.

(2) Ensure that any contractor who performs MC&A measurements services conforms with applicable requirements in paragraphs (c)(5), (6), (7), (10) and (11) of this section. Conformance must include reporting by the contractor of sufficient measurement control data to allow the licensee to calculate bias corrections and measurement limits of error.

(3) Ensure that potential sources of sampling error are identified and that samples are representative by performing process sampling tests using well characterized materials to establish or verify the applicability of utilized procedures for sampling SNM and for maintaining sample integrity during transport and storage. These sampling tests or sample integrity tests, as appropriate, shall be conducted whenever:

(i) A new sampling procedure or technique is used, or new sampling equipment is installed;

(ii) A sampling procedure, technique, or sampling equipment is modified to the extent that a systematic sampling error could be introduced; and

(iii) Sample containers, sample transport methods, or sample storage conditions are changed or modified to the extent that a systematic sampling error could be introduced.

(4) Establish and maintain a measurement control program so that for each inventory period the 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.

(5) Generate current data on the performance of each measurement system used during each material balance period for the establishment of measured values and estimated measurement uncertainties, including estimates of bias, variance components for calibration, sampling, and repeat measurements. The program data must reflect the current process and measurement conditions existing at the time the control measurements are made.

(6) Use standards on an ongoing basis for the calibration and control of all measurement systems used for SNM accountability. Calibrations shall be repeated whenever any significant change occurs in a measurement system or when program data indicate a need for recalibration. Calibrations and control standard measurements shall be based on standards whose assigned values are traceable to certified reference standards or certified standard reference materials. Additionally, control standards shall be representative of the process material or items being measured by the measurement system in question.

(7) Conduct control measurements to provide current data for the determination of random error behavior. On a predetermined schedule, the program shall include, as appropriate:

(i) Replicate analyses of individual samples;

(ii) Analysis of replicate process samples;

(iii) Replicate volume measurements of bulk process batches;

(iv) Replicate weight measurements of process items and bulk batches, or alternatively, the use of data generated from the replicate weighings of control standard weights as derived from the control standard program; and

(v) Replicate NDA measurements of individual process containers (items), or alternatively, the use of data generated from the replicate measurements of NDA control

standards as derived from the control standard program.

(8) Use all measurements and measurement controls generated during the current material balance period for the estimation of the SEID.

(9) Evaluate with appropriate statistical methods all measurement system data generated in paragraph (c)(5) of this section to determine significant contributors to the measurement uncertainties associated with inventory differences and shipper-receiver differences, so that if SEID exceeds the limits established in paragraph (c)(4) of this section, the cause of the excessive SEID can be identified for corrective action with respect to controlling the standard error within applicable limits.

(10) Establish and maintain a statistical control system, including control charts and formal statistical procedures, designed to monitor the quality of each measurement device or system. Control chart limits must be established to be equivalent to levels of significance of 0.05 and 0.001.

(11) Promptly investigate and take any appropriate corrective action whenever a control datum exceeds an 0.05 control limit, and whenever a control datum exceeds an 0.001 control limit, the measurement system that generated the datum shall immediately be placed out-of-service with respect to MC&A measurements until the deficiency has been corrected and the system brought into control within the 0.05 control limits.

34. In § 74.51, paragraphs (c) and (d) are revised to read as follows:

<u>§ 74.51 Nuclear material control and accounting for strategic special nuclear material</u>.

* * * * *

(c) Implementation dates. Each applicant for a license, and each licensee that, upon application for modification of a license, would become newly subject to paragraph (a) of this

section, shall submit a fundamental nuclear material control (FNMC) plan describing how the MC&A system shall satisfy the requirement of paragraph (b) of this section. The FNMC plan shall be implemented upon issuance of a license (or modification of existing license) to authorize the activities being addressed in paragraph (a) of this section, or by the date specified in a license condition.

(d) Notwithstanding §74.59(f)(1), licensees shall perform at least three bimonthly physical inventories after implementation of the NRC approved FNMC Plan and shall continue to perform bimonthly inventories until performance acceptable to the NRC has been demonstrated and the Commission has issued formal approval to perform semiannual inventories. Licensees who have prior experience with process monitoring and/or can demonstrate acceptable performance against all Plan commitments may request authorization to perform semiannual inventories at an earlier date.

35. In § 74.57, the introductory text of paragraph (c) and paragraph (f)(2) are revised to read as follows:

<u>§74.57 Alarm resolution</u>.

* * * * *

(c) Each licensee shall notify the NRC Operations Center by telephone of any MC&A alarm that remains unresolved beyond the time period specified for its resolution in the licensee's fundamental nuclear material control plan. Notification must occur within 24 hours . The licensee may consider an alarm to be resolved if:

* * * * *

(f) ***

(2) Within 24 hours, the licensee shall notify the NRC Operations Center by telephone that an MC&A alarm resolution procedure has been initiated.

36. In § 74.59, paragraphs (d)(1),(f)(1)(i) and (iii), and (h)(2)(ii) are revised to read as follows:

§74.59 Quality assurance and accounting requirements.

* * * * *

(d) ***

(1) Substantiate the plutonium element and uranium element and isotope content of all SSNM received, produced, transferred between areas of custodial responsibility, on inventory, or shipped, discarded, or otherwise removed from inventory;

* * * * *

(f) ***

(1) ***

(i) Calculate the inventory difference (ID); estimate the standard error of the inventory difference (SEID); and investigate and report any SEID estimate of 0.1 percent or more of active inventory, and any ID that exceeds both three times SEID and 200 grams of plutonium or uranium-233, or 300 grams of uranium-235 contained in high enriched uranium.

* * * * *

(iii) Investigate and report to the Director, Office of Nuclear Material Safety and Safeguards, any difference that exceeds three times the standard deviation determined from the sequential analysis;

* * * * *

(h) ***

(2) ***

(ii) Any scrap measured with a standard deviation greater than five percent of the measured amount is recovered so that the results are segregated by inventory period and recovered within six months 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).

* * * * *

PART 75 - SAFEGUARDS ON NUCLEAR MATERIAL - IMPLEMENTATION OF US/IAEA AGREEMENT

37. The authority citation for Part 75 continues to read as follows:

AUTHORITY: Secs. 53, 63, 103, 104, 122, 161, 68 Stat. 930, 932, 936, 937, 939, 948, as amended (42 U.S.C. 2073, 2093, 2133, 2134, 2152, 2201); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841).

Section 75.4 also issued under secs. 135, 141, Pub. L. 97 - 425, 96 Stat. 2232, 2241 (42 U.S.C. 10155, 10161).

38. In §75.21, paragraph (c)(2) is revised to read as follows:

<u>§75.21 General requirements</u>.

* * * * *

(c) ***

(2) Until installation information has been submitted by the licensee, the procedures shall be sufficient to document changes in the quantity of nuclear material in or at its installation. Observance of the procedures described in §§ 40.61 or 74.15 of this chapter (or the corresponding provisions of the regulations of an Agreement State) by any licensee subject thereto shall constitute compliance with this paragraph.

* * * * *

PART 76 - CERTIFICATION OF GASEOUS DIFFUSION PLANTS

39. The authority citation for Part 76 continues to read as follows:

AUTHORITY: Secs. 161, 68 Stat. 948, as amended, secs. 1312, 1701, as amended, 106 Stat. 2932, 2951, 2952, 2953, 110 Stat. 1321-349 (42 U.S.C. 2201, 2297b-11, 2297f); secs. 201, as amended, 204, 206, 88 Stat. 1244, 1245, 1246 (42 U.S.C. 5841, 5842, 5845, 5846). Sec. 234(a), 83 Stat. 444, as amended by Pub. L. 104-134, 110 Stat. 1321, 1321-349 (42 U.S.C. 2243(a)).

Sec. 76.7 also issued under Pub. L. 95-601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Sec. 76.22 is also issued under sec. 193(f), as amended, 104 Stat. 2835, as amended by Pub. L. 104-134, 110 Stat. 1321, 1321-349 (42 U.S.C. 2243(f)). Sec. 76.35(j) also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152).

40. In § 76.113, paragraph (a) is revised to read as follows:

§ 76.113 Formula quantities of strategic special nuclear material - Category I.

(a) The requirements for material control and accounting for formula quantities of strategic special nuclear material (Category I) are contained in §§ 74.11, 74.13, 74.15, 74.17, 74.19, 74.51, 74.53, 74.55, 74.57, 74.59, 74.81, and 74.82 of this chapter.

* * * * *

41. In § 76.115, paragraph (a) is revised to read as follows:

§ 76.115 Special nuclear material of moderate strategic significance - Category II.

(a) The requirements for material control and accounting for special nuclear material of moderate strategic significance (Category II) are contained in §§ 74.11. 74.13, 74.15, 74.17, 74.19, 74.41, 74.43, 74.45, 74.81, and 74.82 of this chapter.

* * * * *

42. In § 76.117, paragraph (a) is revised to read as follows:

§ 76.117 Special nuclear material of low strategic significance - Category III.

(a) The requirements for material control and accounting for special nuclear material of low strategic significance (Category III) are contained in §§ 74.11, 74.13, 74.15, 74.17, 74.19, 74.33, 74.81, and 74.82 of this chapter. However, inventories of uranium outside of the enrichment processing equipment conducted at least every 370 days are deemed to satisfy the requirements of § 74.19(c).

* * * * *

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

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

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).

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).

44. In §150.20, the introductory text of paragraph (b) is revised to read as follows:

§ 150.20 Recognition of Agreement State licenses.

* * * * *

(b) Notwithstanding any provision to the contrary in any specific license issued by an Agreement State to a person engaging in activities in a non-Agreement State, in an area of exclusive Federal jurisdiction within an Agreement State, or in offshore waters under the general licenses provided in this section, the general licenses provided in this section are subject to all the provisions of the Act, now or hereafter in effect, and to all applicable rules, regulations, and orders of the Commission including the provisions of §§ 30.7 (a) through (f), 30.9, 30.10, 30.14(d), 30.34, 30.41, and 30.51 to 30.63, inclusive, of part 30 of this chapter; §§ 40.7 (a) through (f), 40.9, 40.10, 40.41, 40.51, 40.61, 40.63 inclusive, 40.71 and 40.81 of part 40 of this chapter; §§ 70.7 (a) through (f), 70.9, 70.10, 70.32, 70.42, 70.52, 70.55, 70.56, 70.60 to 70.62; §§ 74.11, 74.15, and 74.19; and to the provisions of 10 CFR parts 19, 20 and 71 and subparts

C through H of part 34, §§ 39.15 and 39.31 through 39.77, inclusive, of part 39 of this chapter. In addition, any person engaging in activities in non-Agreement States, in areas of exclusive Federal jurisdiction within Agreement States, or in offshore waters under the general licenses provided in this section:

* * * * *

Dated at Rockville, Maryland, this ____ day of _____, 2001.

For the Nuclear Regulatory Commission.

_____
Annette Vietti-Cook,
Secretary of the Commission.