

March 9, 2001

MEMORANDUM TO: Donald A. Cool, Director
Division of Industrial and
Medical Nuclear Safety, NMSS

FROM: David B. Matthews, Director */RA Signed by D. Matthews/*
Division of Regulatory Improvement Programs, NRR

SUBJECT: PROPOSED RULE - MATERIAL CONTROL AND ACCOUNTING
AMENDMENTS

NRR concurs on the Commission paper transmitting a proposed rule to amend the material control and accounting regulations, which you forwarded for our review on February 9, 2001. Per the memorandum from the OEDO dated February 6, 2001, on the reorganization affecting the OCIO, the OCIO should no longer be referenced in the coordination section of the Commission paper. Other comments on the Commission paper and Federal Register notice are provided in the Attachment.

Attachment: As stated

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*See previous concurrence

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BACKGROUND:

A task force comprised of Nuclear Material Safety and Safeguards staff conducted a review of the nuclear material reporting requirements in place for licensees. The task force recommended modifying the submittal time for material status reports to coincide with the time of a facility's physical inventory.

In addition, in 1982, the staff initiated an effort to move the MC&A requirements from Part 70 to Part 74 and to make the requirements more risk-informed. The requirements for Categories I and III facilities have been moved to Part 74. The requirements for Category II facilities and the general MC&A requirements are still located in Part 70. The requirements for Category II facilities would also be converted to more risk-informed requirements.

In a Staff Requirements Memorandum dated July 19, 2000, on SECY-00-0148 (Attachment 1), the Commission approved the rulemaking plan to revise the MC&A requirements.

DISCUSSION:

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The current regulations require material balance reports (DOE/NRC-742) and inventory composition reports (DOE/NRC-742C) to be completed within 30 days of March 31 and September 30 of each year. These reports are typically based on book values as opposed to physical inventory results because the dates do not always coincide with the timeframe for a facility's physical inventory. The proposed rule would change the reporting timeframe to coincide with the requirement for a physical inventory and provide additional time to complete the report. Since most licensees are only required to conduct an annual physical inventory, this would result in a decrease in reporting frequency from twice a year to once a year. For Category I facilities, which are required to conduct physical inventories twice a year, the frequency would remain the same, but would be synchronized with the physical inventories rather than being conducted on arbitrary fixed dates. Category II facilities are currently required to conduct physical inventories every 2 to 6 months, depending on the material; the proposed rule would change the frequency to every 9 months. By revising the timeframe to complete the reports to coincide with the physical inventory and providing additional time to complete the paperwork, the licensee would be provided with more flexibility and the regulatory burden would be reduced. Both reactor licensees and material licensees would benefit from these changes. The industry has indicated support for this initiative through the Nuclear Materials Management and Safeguards System (NMMSS) users group.

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In the current regulations, ^{or} the MC&A requirements for Category II facilities and the general MC&A requirements have been interspersed among the safety and general licensing requirements of Part 70. The proposed amendments would consolidate, in Part 74, the MC&A requirements for Category II facilities with the rest of the MC&A requirements for Categories I and III facilities. The general MC&A requirements would also be moved to Part 74. Further, portions of the current rules regarding Category II material in Part 70 are not risk-informed. Some of the current requirements for Category II facilities are more restrictive than those for Category I facilities. Those requirements would be made more risk-informed, consistent with the existing MC&A requirements for Categories I and III facilities. Conforming changes would also be made to Parts 61, 73, 75, 76, and 150 to reflect the relocations. The relocation of the MC&A requirements and the modification to the Category II requirements would enhance the regulatory process by providing any future Category II licensees with a better understanding of

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the procedures and requirements for MC&A. Removal of the remaining MC&A requirements from Part 70 would also simplify locating the requirements for all licensees.

In addition, the categorical exclusion for the requirement to perform an environmental review would be broadened to include amendments of safeguards plans, as well as be made general enough to cover all safeguards plans and amendments for all licenses issued under NRC authority in Chapter 1 of Title 10, to avoid the need to amend the subsection when new licensing parts are added. The proposed rule would also correct typographical errors, remove old implementation dates, and update and add some terminology to reflect current practice.

The proposed rule would reduce the regulatory burden on both licensees and the NRC staff, while maintaining adequate safeguards. There would be no impact on safety. The MC&A requirements for Category II facilities and the general MC&A requirements for all facilities would be easier to locate, thereby improving the efficiency and effectiveness of the regulations. The operational efficiency of the NMSS contractor should be improved as it will no longer get all the material status reports simultaneously. Public confidence would not be affected by this proposed rule change.

AGREEMENT STATE ISSUES:

Changes impacting 10 CFR 70.51 (a) and (b), and conforming changes to Part 61, 10 CFR 70.19(c), and 10 CFR 150.20(b) and new 10 CFR 74.19(a) are classified as Category C compatibility items. Agreement States would be required to adopt the essential objectives; however, the manner in which these essential objectives are addressed would not need to be the same as NRC's. A conforming change to 10 CFR 70.8(b) is a Category D compatibility item. Agreement States don't need to adopt this program element for purposes of compatibility. The proposed amendment does not revise the MC&A requirements that potentially impact Agreement States--it merely relocates the requirements. The rest of the changes are Category NRC compatibility items and therefore, are areas of NRC exclusive authority.

COORDINATION:

The Office of the General Counsel has no legal objection to the proposed rulemaking. The Office of the Chief Financial Officer has reviewed this Commission Paper for resource implications and has no objections. ~~The Office of the Chief Information Officer has reviewed the proposed rule for information technology and information management implications and concurs.~~ However, the rule contains changes in information collection requirements that must be submitted to the Office of Management and Budget (OMB) no later than the date the proposed rule is forwarded to the Federal Register for publication.

RECOMMENDATIONS:

That the Commission:

1. Approve for publication, in the Federal Register, the proposed amendments to Parts 51, 61, 70, 72, 73, 74, 75, 76, and 150 on material control and accounting (Attachment 2).
2. Note:

there is only one licensed Category II facility, General Atomics, and it has a possession-only license and is undergoing decommissioning. It 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.

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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% 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% U-235 but less than 20 %.	10 kg or more.	Less than 10 kg.
	Uranium enriched above natural, but less than 10% 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 material control and accounting (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

(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 which 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 the licensees 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 will also reduce the regulatory burden by making it easier for licensees to find the MC&A requirements that apply to their facility.

Section-by-Section Discussion of Proposed Amendments

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