



SECRETARY

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 12, 2012

COMMISSION VOTING RECORD

DECISION ITEM: SECY-11-0175

TITLE: PROPOSED RULE: AMENDMENTS TO MATERIAL
CONTROL AND ACCOUNTING REGULATIONS
(RIN 3150-AI61)

The Commission acted on the subject paper as recorded in the Staff Requirements Memorandum (SRM) of April 12, 2012.

This Record contains a summary of voting on this matter together with the individual vote sheets, views and comments of the Commission.

A handwritten signature in black ink, appearing to read "Annette L. Vietti-Cook", written over a horizontal line.

Annette L. Vietti-Cook
Secretary of the Commission

Attachments:

1. Voting Summary
2. Commissioner Vote Sheets

cc: Chairman Jaczko
Commissioner Svinicki
Commissioner Apostolakis
Commissioner Magwood
Commissioner Ostendorff
OGC
EDO
PDR

VOTING SUMMARY - SECY-11-0175

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. JACZKO	X				X	1/24/12
COMR. SVINICKI	X	X			X	3/28/12
COMR. APOSTOLAKIS		X			X	3/12/12
COMR. MAGWOOD	X	X			X	3/8/12
COMR. OSTENDORFF	X				X	2/17/12

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Chairman Gregory B. Jaczko
SUBJECT: SECY-11-0175 – PROPOSED RULE: AMENDMENTS
TO MATERIAL CONTROL AND ACCOUNTING
REGULATIONS (RIN 3150-AI61)

Approved X Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached X None ___



SIGNATURE

1/24/12

DATE


Entered on "STARS" Yes x No ___

**Chairman Jaczko's Comments on SECY-11-0175,
"Proposed Rule: Amendments to Material Control and Accounting Regulations"**

I approve the staff's recommendation to publish this proposed rule to update, clarify, and strengthen the material control and accounting (MC&A) requirements for special nuclear material (SNM), with one exception as noted below. I appreciate the staff's work to improve the accountability and security of this material and I look forward to reviewing the public comments.

It is not clear to me why 350 grams is the appropriate threshold for these enhanced MC&A requirements. The SECY paper says that "...in terms of the amount of SNM necessary to form a critical mass, the activities of licensees who are only authorized to possess 350 grams or less of SNM carry less risk compared to the activities of licensees authorized to possess more than 350 grams of SNM." It is not, however, because of criticality concerns that these rules are being revised. As stated in the same SECY paper, part of the reason for these rule changes is "...to deter, detect, or aid in responding to any loss, theft, diversion, or misuse of SNM..."

I believe that NRC licensees and Agreement State licensees can, and should, be tracking to below 350 grams. The staff's previous Commission paper on this topic (SECY-11-0126) proposed requiring all licensees, regardless of quantity, to maintain current knowledge of each item via an item tracking system. I support this approach but staff should instead use a threshold of 1 gram rather than "any quantity." This would align with the reporting requirements that apply to more than 1 gram. As indicated by the staff in SECY-11-0126, licensees' business systems give them the ability to track SNM-containing items in near real time, and this has been demonstrated numerous times during inspections by NRC staff. Therefore, staff should revise the proposed rule language to apply to both NRC and Agreement State licensees, with a threshold of 1 gram of SNM, and highlight this area for public comment.



Gregory B. Jaczko

7/24/12

Date

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER SVINICKI

SUBJECT: SECY-11-0175 – PROPOSED RULE: AMENDMENTS
TO MATERIAL CONTROL AND ACCOUNTING
REGULATIONS (RIN 3150-AI61)

Approved XX In part Disapproved XX In part Abstain _____

Not Participating _____

COMMENTS: Below ___ Attached XX None ___



SIGNATURE

03/28/12

DATE

Entered on "STARS" Yes No ___

Commissioner Svinicki's Comments on SECY-11-0175
Proposed Rule: Amendments to Material Control and Accounting Regulations
(RIN 3150-AI61)

I approve (with exceptions) publication of the draft *Federal Register Notice* (FRN) for the proposed amendments to 10 CFR Parts 40, 70, 72, 74, and 150 (Enclosure 1 to SECY-11-0175), subject to these comments and the attached edits. In large measure, the revisions to our material control and accounting regulations contained in the proposed rule, such as the General Performance Requirements and other clarifying changes, should have the effect of strengthening NRC's articulation of performance expectations and high-level objectives. These revisions will also express more directly which requirements in Part 74 apply to various classes of licensees. This improved clarity is useful.

However, the staff has not provided an adequate basis for some of the proposed new requirements and, for this reason I cast my vote to disapprove, in part. Specifically, based on the reasoning outlined by the staff, I cannot conclude that the application of the two-person rule will result in the articulated regulatory outcomes predicted by the staff. Although the problem set is not well-articulated, it appears that staff proposes the two person rule in order to address fundamental, operational performance deficiencies by licensees. If this is the case, I do not agree that having two people present – who perhaps, in the case of performance problems, are both products of the same deficient training or qualification programs – would “better ensure that correct procedures are used, that covered actions are completed correctly by qualified and authorized personnel, and that information about the actions is accurately documented.” These results simply do not follow. Due to this apparent logic gap, I find the staff's justification for imposing the two-person rule to be fundamentally lacking, and I do not support its inclusion in the proposed rule. If, however, the Commission should approve publication of the proposed rule with the two-person rule, at a minimum, the FRN should be revised to solicit stakeholder input related to the two-person rule, and its basis.

I appreciate that the staff states in the paper that they will continue to apply a graded approach such that the new provisions would be less rigorous for facilities representing lower risk. However, the requirements for an item control system and for the two-person rule that would apply to each category of licensee are virtually identical. Although what constitutes a graded implementation based on risk for each class of licensee can be defined in revised guidance, I question whether these requirements should be applied at all to those facilities that represent the lowest risk. Therefore, I agree with Commissioners Magwood and Ostendorff that the scope of the proposed new requirements should be better risk informed. Prior to publication in the *Federal Register*, the staff should revise the draft FRN to provide a full and clear justification for the staff's proposed changes and should clearly delineate how each new requirement will be applied to each class of facility. In addition, I agree with Commissioner Ostendorff that the new requirements seem to go beyond information collection and may not be necessary to ensure adequate protection or compliance with existing regulations. Therefore, the staff should either include a more thorough discussion of how the requirements in this proposed rule satisfy one or more of the backfit exception provisions of 70.76(a)(4) or the staff should provide a backfit analysis if the proposed rule is determined not to qualify for an exception.

The staff should specifically solicit stakeholder input on the proposed new item control (and two-person rule requirements, if supported by a Commission majority). In addition to further explaining the basis for the new requirements, the Statements of Consideration should also include specific questions regarding the need for the new requirements in relation to the proportionate levels of risk represented by the processes and material quantities and forms at different types of licensee facilities. The FRN should also solicit information on alternatives that might address any purported concerns with equivalent outcomes but lesser burden.

Additionally, I find no basis in the information provided by the staff that would support applying the new requirements in the proposed rule to licensees with less than 350 grams of Special Nuclear Material (SNM). Inventory and transaction reporting for all licensees having at least 1 gram of SNM continues through the Nuclear Materials Management and Safeguards System. To my knowledge, this reporting has not provided indications of significant quantities of material being diverted from Agreement State or NRC materials licensees.

Finally, given the significant, additional revisions to the draft FRN that may arise from the final staff requirements memorandum on SECY-11-0175, the staff should provide a revised FRN to the Commission for its information, five days prior to its submittal for publication in the *Federal Register*.


Kristine L. Svinicki 03/28/12

categories (Category I, Category II, and Category III) and an effective kilogram of SNM.

Effective kilograms of special nuclear material would remain as a defined term in 10 CFR parts 40, 70, 75, 76, and 110, to ensure the continued effective implementation of the U.S./International Atomic Energy Agency (IAEA) Safeguards Agreement.

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

SECY-09-0082 ("Update on Reprocessing Regulatory Framework – Summary of Gap Analysis," ADAMS Accession No. ML091520280), dated May 28, 2009, included the NRC staff's recommendation that the existing 10 CFR 74.51(a) exemption for an irradiated fuel

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

Doing so would allow quantities of SNM specified in 10 CFR part 74 to be expressed in gram units which would simplify the accounting requirements and provide consistency with the existing definitions of *formula quantity*, *special nuclear material of low strategic significance*, and *special nuclear material of moderate strategic significance*, which specify quantities in gram units. The reference to one effective kilogram in the 10 CFR 74.19(b) written MC&A procedures provision would be replaced with a reference to a quantity of SNM greater than 350 grams. This 350-gram amount would also be referenced in proposed 10 CFR 74.19(c) regarding the item control and the physical inventory provisions stated there. References to one effective kilogram in the GPO provisions of 10 CFR 74.31, 74.33, and 74.41 would be revised to instead reference gram units of material. The new Appendix A would also use gram units. The term would remain in 10 CFR parts 40, 70, 75, 76, and 110, to ensure the continued effective implementation of the U.S./IAEA Safeguards Agreement.

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

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

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

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

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

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

(2) One kilogram or more of uranium or thorium source material in the operation of enrichment services, down blending uranium that has an initial enrichment of the U-235 isotope of 10 percent or more, or in the fabrication of mixed-oxide fuels shall complete and submit, in computer-readable format, Material Balance and Physical Inventory Listing Reports concerning source material that the licensee has received, produced, possessed, transferred, consumed, disposed, or lost. Reports must be submitted for each RIS account including all holding accounts. Each licensee shall prepare and submit these reports as specified in the instructions in NUREG/BR-0007 and NMMSS Report D-24, "Personal Computer Data Input for NRC Licensees." These reports must document holdings as of September 30 of each year and be

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: Commissioner Apostolakis
SUBJECT: SECY-11-0175 – PROPOSED RULE: AMENDMENTS TO MATERIAL CONTROL AND ACCOUNTING REGULATIONS (RIN 3150-AI61)

Approved _____ Disapproved X Abstain _____

Not Participating _____

COMMENTS: Below X Attached _____ None _____

I do not approve publication of the proposed rule at this time. I agree with the Chairman and Commissioner Magwood that the 350 gram threshold may not be appropriate for material control and accounting purposes. Rather, I propose that staff develop and include the technical basis for a threshold in a revised proposed rule.

The staff should work with the Agreement States to develop the technical basis and the revised proposed rule. Additionally, the revised proposed rule should allow the reader to clearly identify the technical basis for each subpart.

During this additional period of development, the staff should consider the cumulative effect of regulations as directed by the Commission (SRM-SECY-11-0032 – Consideration of the Effects of Regulation in the Rulemaking Process).



SIGNATURE

3/12/12

DATE

Entered on "STARS" Yes No _____

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary

FROM: COMMISSIONER MAGWOOD

SUBJECT: SECY-11-0175 – PROPOSED RULE: AMENDMENTS
TO MATERIAL CONTROL AND ACCOUNTING
REGULATIONS (RIN 3150-AI61)

Approved X Disapproved X Abstain

Not Participating

COMMENTS: Below Attached X None



SIGNATURE

8 March 2012

DATE

Entered on "STARS" Yes X No

**Commissioner Magwood's Comments on SECY-11-0175,
"Proposed Rule: Amendments to
Material Control and Accounting Regulations"**

I appreciate staff's work to revise the NRC's material control and accounting (MC&A) requirements for special nuclear material (SNM) in order to update and strengthen these rules as well as to consolidate and clarify the agency's various requirements. Staff's effort to address the various issues identified in the audit conducted by the Office of Inspector General is to be applauded as is its work to apply MC&A regulations to additional licensees and facilities. I believe the proposed changes will provide a clear direction to licensees and will result in stronger MC&A programs. I approve staff's recommended changes with the exceptions discussed below.

First, I believe this rulemaking should seize the opportunity to clarify how NRC applies risk-informed regulation to matters related to materials control and accounting. The Department of Energy, which has great experience in managing a very wide array of SNM, applies a graded approach to its MC&A programs and there is no reason to believe the NRC could not devise a path to further risk-inform our requirements.

The application of the two-person rule under the proposed revision to 10 CFR Part 74 is an excellent case-in-point. This measure might be appropriate in some instances but may be unnecessary in others; or it might, in some cases, be appropriate to rely on electronic systems to serve as the second "person." Determining when and if to do so should be determined on a risk basis.

The August 2004 assessment of NRC's MC&A regulatory program conducted by Oak Ridge National Laboratory highlighted the need for NRC to develop a clear definition of the two-person rule for safeguards and the performance criteria for acceptance. However, as currently constructed, the staff proposal is too vague in defining how the two-person rule should be applied and does not provide a clear technical basis or justification for adding this requirement to our regulations.

Until additional work is performed to clarify the risk basis for this proposed change, I cannot approve this element of staff's proposal. To advance this issue, however, I recommend that the staff indicate in the *Federal Register* notice issuing the proposed rule that the Commission is evaluating the use of the two-person rule as part of the enhancements to the current regulation and is seeking public comment. Once stakeholder interaction has been completed and additional analysis completed, staff may be in a position to provide an improved recommendation to the Commission.

For similar reasons, I also do not approve staff's recommendation to establish item control with a 350 gram threshold. The staff has not provided a clear risk basis for selecting this quantity. In fact, the 350 gram quantity appears to have been selected in order to avoid placing requirements on Agreement States. I agree in principle with Chairman Jaczko's comment that our rules should apply to both NRC licensees and Agreement State licensees.

That said, I also believe that these rules must be risk-informed and a full and clear justification provided for staff's proposed changes. In my view, SECY-11-0175 falls short of this goal. Again, to move the process forward, I suggest that staff seek input from stakeholders in the form of a question regarding the appropriate threshold for an item control system under 10 CFR Part 74. This input can then be applied to analysis that can result in a clear technical basis that staff can then provide to the Commission.

 3/8/12

William D. Magwood, IV date

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary
FROM: COMMISSIONER OSTENDORFF
SUBJECT: SECY-11-0175 – PROPOSED RULE: AMENDMENTS
TO MATERIAL CONTROL AND ACCOUNTING
REGULATIONS (RIN 3150-AI61)

Approved Disapproved _____ Abstain _____

Not Participating _____

COMMENTS: Below _____ Attached None _____



SIGNATURE

2/17/12

DATE

Entered on "STARS" Yes No _____

Commissioner Ostendorff's Comments on SECY-11-0175, "Proposed Rule: Amendments to Material Control and Accounting Regulations"

I approve publication of the proposed rule amending the 10 CFR 74 requirements to revise and consolidate requirements for the material control and accounting (MC&A) of special nuclear material (SNM). The rule will enhance regulatory clarity by consolidating and clarifying the current requirements.

I appreciate the staff's diligence in exploring whether enhancements to the current MC&A requirements are necessary following incidents in which licensees did not account for small quantities of SNM below certain regulatory thresholds. Some enhancements being considered require lower risk facilities to implement MC&A programs in a manner similar to higher risk Category I facilities. While it is important that the staff continue to apply lessons learned in the spirit of continuous improvement, the scope of any regulatory revisions should be guided by the low risk of theft and diversion at these facilities, and the findings of the staff's previous vulnerability assessments, which demonstrated that the MC&A posture of these facilities is adequate.

In finalizing the rule, the staff will need to balance the public confidence issues that may result from poor accounting of small quantities of SNM with the low security risk at the facilities subject to new requirements. The staff should solicit comments on whether revisions to the rule which go beyond consolidation and clarification are necessary, and the impacts of these revisions on existing licensees.

Further, the proposed rule indicated that a backfit analysis is not required because the MC&A programs are information collection and reporting requirements. It appears, however, that the new requirements go beyond information collection, and are not necessary either to ensure adequate protection or compliance with NRC regulations. Thus, a backfit analysis may be required. Therefore, the staff should include a more thorough discussion of how the backfit requirements of 10 CFR Part 70.76 were satisfied in the final rule.

Finally, I would note that the issue of whether to adopt new MC&A requirements given the current strong security framework is not new. When the Commission approved revisions to the MC&A regulations in 2005, it appeared to recognize the need for a strong regulatory basis for the proposed changes by directing that the rulemaking plan "clearly state . . . the scope of the problem or problems the staff is addressing." Just like in 2005, if the staff ultimately determines that the new requirements in the proposed rule are warranted, the final rule should clearly articulate their basis.