



UNITED STATES  
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July 29, 2004

SECRETARY

COMMISSION VOTING RECORD

DECISION ITEM:      SECY-04-0110

TITLE:                      HIGH-RISK MATERIAL - PROPOSED RULE TO  
                                    AMEND 10 CFR PART 110, "EXPORT AND  
                                    IMPORT OF NUCLEAR EQUIPMENT AND  
                                    MATERIAL"

The Commission (with all Commissioners agreeing) approved the subject paper as recorded in the Staff Requirements Memorandum (SRM) of July 29, 2004.

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 cursive script, appearing to read "Annette Vietti-Cook".

Annette L. Vietti-Cook  
Secretary of the Commission

- Attachments:
1. Voting Summary
  2. Commissioner Vote Sheets

- cc:      Chairman Diaz  
            Commissioner McGaffigan  
            Commissioner Merrifield  
            OGC  
            EDO  
            PDR

VOTING SUMMARY - SECY-04-0110

RECORDED VOTES

	APRVD	DISAPRVD	ABSTAIN	NOT PARTICIP	COMMENTS	DATE
CHRM. DIAZ	X					7/23/04
COMR. McGAFFIGAN	X				X	7/12/04
COMR. MERRIFIELD	X				X	7/14/04

COMMENT RESOLUTION

In their vote sheets, all Commissioners approved the staff's recommendation and some provided additional comments. Subsequently, the comments of the Commission were incorporated into the guidance to staff as reflected in the SRM issued on July 29, 2004.

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: CHAIRMAN DIAZ  
SUBJECT: **SECY-04-0110 - HIGH-RISK MATERIAL - PROPOSED  
RULE TO AMEND 10 CFR PART 110 "EXPORT AND  
IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL"**

Approved  Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_  
Not Participating \_\_\_\_\_

COMMENTS:

None.

  
\_\_\_\_\_  
SIGNATURE  
7/23/2004  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

NOTATION VOTE

RESPONSE SHEET

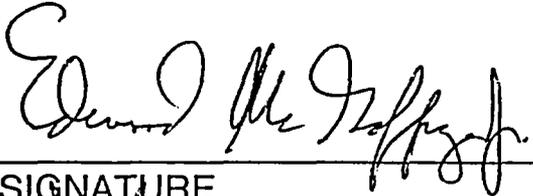
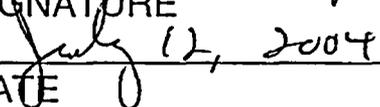
TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MCGAFFIGAN  
SUBJECT: **SECY-04-0110 - HIGH-RISK MATERIAL - PROPOSED  
RULE TO AMEND 10 CFR PART 110 "EXPORT AND  
IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL"**

Approved  Disapproved \_\_\_\_\_ Abstain \_\_\_\_\_

Not Participating \_\_\_\_\_

COMMENTS:

See attached comments.

  
\_\_\_\_\_  
SIGNATURE  
  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No \_\_\_\_\_

Commissioner McGaffigan's Comments on SECY-04-0110

I approve the staff's proposed amendments to 10 CFR Part 110, "Export and Import of Nuclear equipment and Material." I also want to congratulate the staff on completing this very important proposed rulemaking. I believe that the NRC is leading the world in amending its regulations to increase the security of exports and imports of high-risk radioactive material. The staff has taken a tremendous step toward setting up the increased system of controls for exports and imports envisioned by the "Code of Conduct," in particular through its efforts on developing the IAEA guidance document on the export and import of radioactive sources. The staff should be proud of the work they have accomplished in this area. I hope that other countries will soon follow suit and will have in place comparable regulations by the December 2005 goal set last month at the G-8 Sea Island summit.

I have several small editorial comments which are attached and I have only one larger comment related to Section 110.23 (a)(3). This section, as presented in the paper, is confusing and does not clearly explain the requirements for exporting Am-241. To address this issue, section 110.23(a)(3) should be edited to read:

"(3) For americium-241, exports to any country listed in 110.29 must not exceed one curie (308 milligrams) per shipment or 100 curies (30.8 grams) per year and must be contained in industrial process control equipment or petroleum exploration equipment. Exports to countries other than those listed in 110.28 or 110.29 must be contained in industrial process control equipment or petroleum exploration equipment and individual shipments must be less than the amounts specified in Category 2 of Appendix P to this Part."



[pdr@nrc.gov](mailto:pdr@nrc.gov).

**FOR FURTHER INFORMATION CONTACT:** Suzanne Schuyler-Hayes, Office of International Programs, U.S. Nuclear Regulatory Commission, Washington DC. 20555-0001, telephone (301) 415-2333, e-mail: [ssh@nrc.gov](mailto:ssh@nrc.gov).

**SUPPLEMENTARY INFORMATION:**

**Background**

As a result of the terrorist attacks in the United States on September 11, 2001, the Nuclear Regulatory Commission has undertaken a comprehensive review of nuclear and radioactive material security requirements, with particular focus on high-risk radioactive material. This material, including certain quantities of cobalt-60, cesium-137, iridium-192 and americium-241 isotopes, has the potential to be used in a radiological dispersion <sup>sal</sup> device (RDD) or a radiological exposure device (RED) in the absence of proper security measures. This review takes into consideration the changing domestic and international threat environments and related U.S. Government supported international initiatives in the nuclear security area, particularly activities conducted by the International Atomic Energy Agency (IAEA). X

Recently, the Commission issued a series of domestic Orders concerning security measures applicable to high-risk radioactive material. These Orders include enhanced security requirements which are also known as "Additional Security Measures," or ASMs. The ASMs have been issued to domestic licensees of the Commission and Agreement States, under the Commission's exclusive authority to provide for the common defense and security. They have not been made available to the general public because they contain sensitive security

information that is protected from public disclosure as Safeguards information in accordance with section 147 of the Atomic Energy Act. The ASMs include several provisions that pertain to export and import shipments, particularly concerning security during transportation and advance notice of proposed shipments. It is anticipated that these orders <sup>may be</sup> will be further refined based on ~~feedback from stakeholders and will eventually~~ <sup>g</sup> be reflected in the U.S. Code of Federal Regulations covering radioactive material (primarily revisions to 10 CFR Parts 30-36 and 70).

The Commission has also supported U.S. Government efforts to establish common international guidelines governing the export and import of high-risk radioactive materials. This effort has resulted in a major revision to the International Atomic Energy Agency Code of Conduct on the Safety and Security of Radioactive Sources (Code of Conduct). The revised Code of Conduct was approved by the IAEA Board of Governors in September 2003, and is available on the IAEA website at <http://www.iaea.org/Publications/Standards/index.html>. Following approval of the <sup>revised</sup> Code of Conduct, the Commission has played a key role in x multilateral meetings to develop a related document providing internationally accepted guidance for export and import activities involving high-risk radioactive material. This export/import guidance document is expected to be approved later this year, when it will be published as an IAEA Information Circular (INFCIRC).

The Code of Conduct recommends that IAEA member Countries develop specified export/import controls, discussed below, covering sources in Categories 1 and 2 in Table 1 of Annex 1 of the Code. Table 1 includes a list of high-risk radionuclides with activities corresponding to thresholds of concern that is essentially identical to the list found in the proposed Appendix P to be added to 10 CFR Part 110. While the radionuclides and threshold quantities are the same, the proposed Part 110 appendix uses the more encompassing term "radioactive material" rather than "sources." Therefore, unlike the Code of Conduct, the

NRC, an Agreement State, or the Department of Energy to possess such radioactive material. Therefore, the proposed changes to Part 110 for imports under NRC's licensing authority of high-risk radioactive material will simply require (1) confirmation by the NRC that the U.S. recipient is properly authorized to receive and possess the radioactive material and (2) prior notification to the NRC of individual shipments. The Commission will expect the applicant for the import license to provide it with pertinent documentation that each recipient of the radioactive material has the necessary authorization to receive and possess this material. For proposed imports into the U.S. of Category 1 amounts of high-risk radioactive material listed in Appendix P, the Commission will also be responsible for providing formal U.S. Government consent to the export authority of the exporting country.

Conclusion. The criteria and proposed guidelines for approving specific export and import licenses for high-risk radioactive material will provide the Commission with the necessary flexibility to process each application on a case by case basis. For example, the Commission may wish to limit exports to new recipients or to a country with limited experience with its regulatory infrastructure to single shipments of radioactive material. On the other hand, in countries with mature regulatory infrastructures with known and competent recipients, the Commission intends to use the provisions of §110.31(e) by issuing broad specific export and import licenses that allow shipments of multiple radionuclides to multiple destinations and with authorizations for up to five years or more. The duration of the import or export authorization will be consistent with the expiration date of the recipient's authorization to possess or use the radioactive material. However, each shipment under these broad export/import licenses that meet <sup>§</sup> or exceed <sup>§</sup> the Category 2 limits in Appendix P will require advance notification as discussed above<sup>1</sup>. X

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<sup>1</sup>The more restrictive requirements for the export of plutonium 238 and 239 contained in § 110.21 will continue to be the limiting controls.

In §110.32, a new paragraph <sup>g</sup>(h) is added to clarify documentation requirements accompanying an export license application for radioactive material listed in proposed new Appendix P.

Subpart D - Review of License Applications. Proposed changes would indicate licensing criteria for high-risk radioactive material exports and imports.

In §110.42 a new paragraph (e) would specify the licensing criteria for the export of high-risk radioactive material listed in a new Appendix P to this Part in amounts indicated for Categories 1 and 2.

In §110.43 a new paragraph (e) would specify the licensing criteria for the import of high-risk radioactive material listed in a new Appendix P to this Part in amounts indicated for Categories 1 and 2.

In §110.45 a new paragraph (b)(5) would describe the requirements for issuing import licenses for high-risk radioactive material listed in a new Appendix P to this Part in amounts specified in Categories 1 and 2.

Subpart E - License Terms and Related Provisions. Proposed changes would clarify that transportation issues are covered by NRC's domestic regulations.

In §110.50, a new paragraph (b)(4) would be added covering advance notification requirements. Also, the word "transport" would be added after "use" in paragraph (a)(3); and the number "71" would be added after "70" in (renumbered) paragraph (b)(5). This would clarify that "transportation" is not covered directly in Part 110 and to indicate that 10 CFR Part 71 of NRC's domestic regulations cover transportation.

A new Appendix P to Part 110 would list the high-risk radioactive material and quantities requiring specific export and import licenses.

**PART 110--EXPORT AND IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL**

1. The authority citation for part 110 continues to read as follows:

Authority: Secs. 51, 53, 54, 57, 63, 64, 65, 81, 82, 103, 104, 109, 111, 126, 127, 128, 129, 161, 181, 182, 183, 187, 189, 68 Stat. 929, 930, 931, 932, 933, 936, 937, 948, 953, 954, 955, 956, as amended (42 U.S.C. 2071, 2073, 2074, 2077, 2092-2095, 2111, 2112, 2133, 2134, 2139, 2139a, 2141, 2154-2158, 2201, 2231-2233, 2237, 2239); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841); sec. 5, Pub. L. 101-575, 104 Stat. 2835 (42 U.S.C. 2243); sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note).

Sections 110.1(b)(2) and 110.1(b)(3) also issued under Pub. L. 96-92, 93 Stat. 710 (22 U.S.C. 2403). Section 110.11 also issued under sec. 122, 68 Stat. 939 (42 U.S.C. 2152) and secs. 54c and 57d, 88 Stat. 473, 475 (42 U.S.C. 2074). Section 110.27 also issued under sec. 309(a), Pub. L. 99-440. Section 110.50(b)(3) also issued under sec. 123, 92 Stat. 142 (42 U.S.C. 2153). Section 110.51 also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 110.52 also issued under sec. 186, 68 Stat. 955 (42 U.S.C. 2236). Sections 110.80-110.113 also issued under 5 U.S.C. 552, 554. Sections 110.130-110.135 also issued under 5 U.S.C. 553. Sections 110.2 and 110.42(a)(9) also issued under sec. 903, Pub. L. 102-496 (42 U.S.C. 2151 et seq.).

2. In §110.23, paragraph (a)(3) is revised and a new paragraph (a)(7) is added to read as follows:

§110.23 General license for the export of byproduct material.

(a) \* \* \*

(3) For americium-241, exports must not exceed one curie (308 milligrams) per shipment or 100 curies (30.8 grams) per year to any country listed in §110.29, and must be

*Confusing language.* ↓

contained in industrial process control equipment or petroleum exploration equipment in individual shipments less than the amounts specified in Category 2 of Appendix P to this Part.

?

\* \* \* \* \*

(7) Individual export shipments of byproduct material must be less than the amounts specified in Category 2 of Appendix P to this Part.

\* \* \* \* \*

3. In §110.27, the introductory text of paragraph (a) is revised and paragraph (f) is added to read as follows:

§110.27 General license for import.

(a) Except as provided for in paragraphs (b), (c), and (f) of this section, a general license is issued to any person to import byproduct, source, or special nuclear material if the consignee is authorized to possess the material under:

\* \* \* \* \*

(f) Individual import shipments of radioactive material must be less than the amounts specified in Category 2 of Appendix P to this Part.

4. In §110.32, a new paragraph (g) is added to read as follows:

§110.32 Information required in an application for a specific license/NRC Form 7.

\* \* \* \* \*

(g) For proposed exports of material listed in Appendix P to this part, pertinent documentation that the recipient of the material has the necessary authorization under the laws and regulations of the importing country to import, receive, and possess the material.

5. In §110.42, <sup>a new</sup> paragraph (e) and <sup>is</sup> ~~(f)~~ are added to read as follows:

X

§110.42 Export licensing criteria.

10. A new Appendix P to part 110 is added to read as follows:

Appendix P to Part 110 – High Risk Radioactive Material

Radioactive Material	Category 1		Category 2	
	Terabequerels (TBq)	Curies (Ci)	Terabequerels (Tbq)	Curies (Ci)
Americium-241:	60	2,000	.6	20
Americium-241/Be:	60	2,000	.6	20
Californium-252:	20	500	.2	5
Curium-244:	50	1,000	.5	10
Cobalt-60:	30	800	.3	8
Cesium-137:	100	3,000	1	30
Gadolinium-153:	1,000	30,000	10.0	300
Iridium-192:	80	2,000	.8	20
Plutonium-238 <sup>1</sup>	60	2,000	.6	20
Plutonium-239/Be <sup>1</sup>	60	2,000	.6	20
Promethium-147:	40,000	1,000,000	400.0	10,000
Selenium-75:	200	5,000	2.0	50
Strontium-90:	1,000	30,000	10.0	300
Thulium-170:	20,000	500,000	200.0	5000
Ytterbium-169:	300	8,000	3.0	80

Dated at Rockville, Maryland, this --- day of ----- 2004

For the Nuclear Regulatory Commission.

Annette L. Vietti-Cook,  
Secretary of the Commission

<sup>1</sup>The limits for Pu-238 and Pu-239/Be in this table apply for imports to the U.S. The limits for exports of Pu-238 and Pu-239/Be can be found in § 110.21.

*Add Line*

NOTATION VOTE

RESPONSE SHEET

TO: Annette Vietti-Cook, Secretary  
FROM: COMMISSIONER MERRIFIELD  
SUBJECT: **SECY-04-0110 - HIGH-RISK MATERIAL - PROPOSED  
RULE TO AMEND 10 CFR PART 110 "EXPORT AND  
IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL"**

Approved  Disapproved  Abstain

Not Participating

COMMENTS:

Approve subject as the edits of Commissioner  
McGalligan as amended by one additional  
edit.

  
\_\_\_\_\_  
SIGNATURE  
7/14/01  
\_\_\_\_\_  
DATE

Entered on "STARS" Yes  No

information that is protected from public disclosure as Safeguards information in accordance with section 147 of the Atomic Energy Act. The ASMs include several provisions that pertain to export and import shipments, particularly concerning security during transportation and advance notice of proposed shipments. It is anticipated that these orders <sup>may be</sup> will be further refined based on ~~feedback from stakeholders and will eventually~~ <sup>g</sup> be reflected in the U.S. Code of Federal Regulations covering radioactive material (primarily revisions to 10 CFR Parts 30-36 and 70).

The Commission has also supported U.S. Government efforts to establish common international guidelines governing the export and import of high-risk radioactive materials. This effort has resulted in a major revision to the International Atomic Energy Agency Code of Conduct on the Safety and Security of Radioactive Sources (Code of Conduct). The revised Code of Conduct was approved by the IAEA Board of Governors in September 2003, and is available on the IAEA website at <http://www.iaea.org/Publications/Standards/index.html>.  
<sup>revised</sup> ~~the~~ <sup>current</sup> Code of Conduct, the Commission has played a key role in following approval of the <sup>revised</sup> Code of Conduct, the Commission has played a key role in multilateral meetings to develop a related document providing internationally accepted guidance for export and import activities involving high-risk radioactive material. This export/import guidance document is expected to be approved later this year, when it will be published as an IAEA Information Circular (INFCIRC).

JSM  
X

The Code of Conduct recommends that IAEA member Countries develop specified export/import controls, discussed below, covering sources in Categories 1 and 2 in Table 1 of Annex 1 of the Code. Table 1 includes a list of high-risk radionuclides with activities corresponding to thresholds of concern that is essentially identical to the list found in the proposed Appendix P to be added to 10 CFR Part 110. While the radionuclides and threshold quantities are the same, the proposed Part 110 appendix uses the more encompassing term "radioactive material" rather than "sources." Therefore, unlike the Code of Conduct, the