

NUCLEAR REGULATORY COMMISSION

10 CFR Part 110

RIN 3150-AH51

Export and Import of Nuclear Equipment and Material: Nuclear Grade Graphite

AGENCY: Nuclear Regulatory Commission.

ACTION: Final Rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) export/import regulations in 10 CFR Part 110 are being revised to remove the NRC's export licensing requirements for nuclear grade graphite for non-nuclear end use. The purpose of this change is to remove from NRC export licensing jurisdiction nuclear materials which are not of significance from a nuclear proliferation perspective. The responsibility for the licensing of exports of nuclear grade graphite for non-nuclear end use will be transferred to the Department of Commerce (DOC). The DOC is publishing elsewhere in this Federal Register a final rule that places such exports under its jurisdiction.

EFFECTIVE DATE: (INSERT DATE OF PUBLICATION IN THE FEDERAL REGISTER).

ADDRESSES: Publicly available documents related to this rulemaking may be viewed electronically on the public computers located at the NRC's Public Document Room (PDR), Room O1F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland. The PDR

reproduction contractor will copy documents for a fee. Selected documents can be viewed and downloaded electronically via the NRC's rulemaking web site at <http://ruleforum.llnl.gov>

Publicly available documents created or received at the NRC are available electronically at the NRC's Electronic Reading Room at <http://www.nrc.gov/NRC/reading-rm/adams.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. If you do not have access to ADAMS or if there are problems in accessing the documents located in ADAMS, contact the NRC Public Document Room (PDR) Reference staff at (800) 397-4209, (301) 415-4737, or by email to pdr@nrc.gov.

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SUPPLEMENTARY INFORMATION:

Background

The purpose of this rule is to update NRC's regulations in 10 CFR Part 110 governing the export of nuclear grade graphite. Neither the Atomic Energy Act (AEA) nor the Nuclear Non-proliferation Act (NNPA) explicitly requires that the export of nuclear grade graphite be controlled by the NRC. The Commission has controlled the export of nuclear grade graphite pursuant to Section 109b. of the AEA, due to its prior determination that nuclear grade graphite is an "item or substance" that is "especially relevant from the standpoint of export control because of [its] significance for nuclear explosive purposes." As a result of technological

advancements in the production of graphite, virtually all graphite produced today can be considered “nuclear grade.” The NRC’s licensing experience has been that most nuclear grade graphite is exported only for non-nuclear end use in the manufacture of commercial and industrial items.

Other supplier nations have export controls over nuclear grade graphite but have limited them to cover exports “for use in a nuclear reactor.” This limitation appears in both the Nuclear Non-Proliferation Treaty Exporters Committee (Zangger Committee) and the Nuclear Suppliers Group (NSG) definitions of controlled items. See, e.g., International Atomic Energy Agency INFCIRC/209 and 254 respectively.

The NRC has determined, after consultation with the Executive Branch, that nuclear grade graphite for non-nuclear end use is not an “item or substance” that is “especially relevant from the standpoint of export control because of [its] significance for nuclear explosive purposes.” See Section 109b. of the AEA.¹ The Executive Branch, including the Departments of State, Energy, Defense, and Commerce, concurs in the NRC’s determination. The history of the use of nuclear grade graphite exported under the Commission’s authority indicates that graphite has not been diverted for illicit purposes to produce weapons-grade material or for use in unsafeguarded nuclear activities. To the extent that any risk of diversion may exist, exports of nuclear grade graphite for non-nuclear end use will continue to be controlled by the DOC. Thus, any effort to divert exported material for illicit purposes would likely be discovered by the cognizant national authority or the international community.

Accordingly, the Commission has concluded, with the concurrence of the Executive Branch, that U.S. regulatory and commercial interests will be best served by the DOC assuming

¹The NRC has not, however, made the same finding under the Section 109b. of the AEA with respect to exports of nuclear grade graphite for nuclear end use, which the NRC will continue to regulate as a material “especially relevant for export control because of [its] significance for nuclear explosive purposes.”

export control over all nuclear grade graphite for non-nuclear end use. The DOC is publishing regulations establishing licensing controls over this class of material.

This final rule limits NRC's jurisdiction over exports of nuclear grade graphite to nuclear end use. The definition of "nuclear grade graphite" in 10 CFR 110.2 is being replaced with a definition of "nuclear grade graphite for nuclear end use." Nuclear grade graphite for nuclear end use is being defined in § 110.2 as "graphite having a purity level of better than (i.e., less than) 5 parts per million boron equivalent...and intended for use in a nuclear reactor." This definition is consistent with the definition in the Zangger Committee and NSG Part 1 Trigger Lists. The density requirement of 1.5 grams per cubic centimeter in the current definition of nuclear grade graphite is being removed. Graphite powder at any density level for nuclear end use, including the coating of fuel spheres in pebble bed reactor applications, is being captured under NRC jurisdiction. The general license for the export of nuclear grade graphite for nuclear end use in § 110.25 is being revoked. All exports of nuclear grade graphite for nuclear end use will now require a specific license from the NRC, including Commission and Executive Branch review (see §§110.40 and 41), and will be noticed in the Federal Register (see § 110.70). Finally, all NRC license provisions for non-nuclear end use exports of nuclear grade graphite are being removed. A note is being added which states that the export of nuclear grade graphite for non-nuclear end use is regulated by the DOC.

This final rule eliminates the NRC licensing burden on exporters for nuclear grade graphite exported purely for non-nuclear end use which, under current industry trends, constitutes the majority of nuclear grade graphite being exported. Removing exports of nuclear grade graphite for non-nuclear end use from 10 CFR Part 110 will also reduce the burden under the Paperwork Reduction Act for licensees exporting nuclear grade graphite for non-nuclear end use.

The NRC has determined that this rule will pose no unreasonable risk to the public health and safety or the common defense and security.

Administrative Procedure Act

The provisions of the Administrative Procedure Act under 5 U.S.C. 553 requiring notice of proposed rulemaking, the opportunity for public participation, and a 30-day delay in effective date are inapplicable because this rule involves a military and foreign affairs function of the United States (5 U.S.C. 553(a)(1)). Accordingly, this final rule is effective immediately upon publication in the Federal Register.

Voluntary Consensus Standards

The National Technology Transfer and Advancement Act of 1995, Pub. L. 104-113, requires that Federal Agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless using such a standard is inconsistent with applicable law or otherwise impractical. This final rule does not constitute the establishment of a standard for which the use of a voluntary consensus standard would be applicable.

Environmental Impact: Categorical Exclusion

The NRC has determined that this final rule is the type of action described in categorical exclusion 10 CFR 51.22(c)(1). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for the regulation.

Paperwork Reduction Act Statement

This final rule eliminates the burden on licensees for recordkeeping and reporting requirements to obtain a license for the export of nuclear grade graphite for non-nuclear end use and maintain associated records under 10 CFR Part 110. The public burden for information collection and record keeping requirements to export nuclear grade graphite for non-nuclear end use is estimated to average 3.6 hours per licensee. Because the burden for this information collection is insignificant, Office of Management and Budget (OMB) clearance is not required. Existing requirements were approved by OMB, approval numbers 3150-0027 and 3150-0036.

Public Protection Notification

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

Regulatory Analysis

The NRC has sole control of the export of nuclear grade graphite for nuclear applications. There is no other alternative to amending the regulations at 10 CFR Part 110 to reflect changing circumstances. The final rule will reduce the burden on licensees and the cost to the public without posing an unreasonable risk to the public health and safety or to the common defense and security.

Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that this final rule does not have a significant economic impact on a substantial number of small entities. This rule eliminates NRC license requirements for the export of nuclear grade graphite for non-nuclear end use. The companies which export nuclear grade graphite do not fall within the scope of the definition of “small entities” set forth in the Regulatory Flexibility Act (5 U.S.C. 601(3)), or the Size Standards established by the NRC (10 CFR 2.810).

Backfit Analysis

The NRC has determined that a backfit analysis is not required for this final rule because these amendments do not include any provisions that would impose backfits as defined in 10 CFR Chapter I.

Small Business Regulatory Enforcement Fairness Act

In accordance with the Small Business Regulatory Enforcement Fairness Act of 1996, the NRC has determined that this action is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs of OMB.

List of Subjects in 10 CFR Part 110

Administrative practice and procedure, Classified information, Criminal penalties, Export, Import, Intergovernmental relations, Nuclear materials, Nuclear power plants and reactors, Reporting and record keeping requirements, Scientific equipment.

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. 552 and 553, the NRC is adopting the following amendments to 10 CFR Part 110.

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 § 110.2, the definition of “nuclear grade graphite” is removed and the definition of “nuclear grade graphite for nuclear end use” is added to read as follows:

§ 110.2 Definitions.

* * * * *

Nuclear grade graphite for nuclear end use means graphite having a purity level better than (i.e., less than) 5 parts per million boron equivalent, as measured according to ASTM standard C1233-98 and intended for use in a nuclear reactor. (Nuclear grade graphite for non-nuclear end use is regulated by the Department of Commerce.)

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3. In § 110.9, paragraph (e) is revised to read as follows:

§ 110.9 List of Nuclear Material under NRC export licensing authority.

* * * * *

(e) Nuclear grade graphite for nuclear end use.

§ 110.25 [Removed]

4. Remove § 110.25.

5. Amend § 110.40 as follows:

- a. Revise paragraph (b)(3);
- b. Redesignate paragraphs (b)(4) through (b)(7) as paragraphs (b)(5) through (b)(8);
- c. In redesignated paragraph (b)(7), further redesignate paragraph (iv) as paragraph (b)(7)(v);
- d. Revise redesignated paragraph (b)(7)(iii);
- e. Add new paragraphs (b)(4) and (b)(7)(iv).

§ 110.40 Commission review.

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(b) * * *

(3) Nuclear grade graphite for nuclear end use.

(4) 1,000 kilograms or more of deuterium oxide (heavy water), other than exports of heavy water to Canada.

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(7) * * *

(iii) Nuclear grade graphite for nuclear end use;

(iv) 250 kilograms of source material or heavy water; or

* * * * *

6. In § 110.41, paragraph (a)(3) is revised, paragraphs (a)(4) through (a)(9) are redesignated as paragraphs (a)(5) through (a)(10), and a new paragraph (a)(4) is added to read as follows:

§ 110.41 Executive branch review.

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(a) * * *

(3) Nuclear grade graphite for nuclear end use.

(4) More than 100 curies of tritium, and deuterium oxide (heavy water), other than exports of heavy water to Canada.

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7. In § 110.42, the introductory language of paragraph (b) is revised to read as follows:

§ 110.42 Export licensing criteria

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(b) The review of license applications for the export of nuclear equipment, other than a production or utilization facility, and for deuterium and nuclear grade graphite for nuclear end use, is governed by the following criteria:

* * * * *

8. In § 110.70, paragraph (b)(3) is revised, paragraph (b)(4) is redesignated as paragraph (b)(5), and a new paragraph (b)(4) is added to read as follows:

§ 110.70 Public notice of receipt of an application

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(b) * * *

(3) 10,000 kilograms or more of heavy water.

(4) Nuclear grade graphite for nuclear end use.

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Dated at Rockville, Maryland, this 12 day of October, 2004.

For the Nuclear Regulatory Commission.

/RA/

Luis A. Reyes
Executive Director For Operations