

POLICY ISSUE NOTATION VOTE

February 24, 2003

SECY-03-0028

FOR: The Commissioners

FROM: Janice Dunn Lee, Director
Office of International Programs

SUBJECT: PROPOSED LICENSES TO EXPORT NUCLEAR GRADE GRAPHITE TO CANADA AND OTHER COUNTRIES FOR NON-NUCLEAR END USE (XMAT0403 AND XMAT0404, RESPECTIVELY)

PURPOSE:

To request Commission review of the proposed issuance of licenses to SGL Carbon, LLC, (SGL) involving the export of nuclear grade graphite for non-nuclear end use. The applications (Attachments 1 and 2) are being referred to the Commission in accordance with 10 CFR 110.40(b).

URGENCY:

The applicant has arranged for graphite suppliers from Europe to temporarily supply Canadian end-users until SGL receives the necessary NRC export license to resume direct exports to Canada. However, shipments of graphite to Canada from Europe by ship have been interrupted by freezing conditions on the St. Lawrence Seaway, forcing SGL to resort to more expensive air shipments. Accordingly, SGL has requested expeditious review of its export request. Congressman John E. Peterson (Pennsylvania) has written to NRC on SGL's behalf, noting the urgency caused by the shipping conditions (Attachment 3).

BACKGROUND:

SGL is a member of the SGL Carbon Group, a large manufacturer of carbon graphite and composite materials for industrial and aerospace applications, headquartered in Germany. The Carbon and Graphite Business Unit in America, SGL Carbon, LLC, makes electrodes for the metallurgical industry for electric arc furnace operation to melt scrap steel. On December 16, 2002, SGL made a voluntary self-disclosure of numerous large exports of bulk nuclear grade

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graphite for non-nuclear end use that occurred during the period 1998 to October 2002. SGL exported the graphite to several countries without obtaining a specific license from the NRC as required under 10 CFR 110.25(a). The company stopped exporting in October 2002 upon understanding that it was in violation of NRC's regulations. The Office of International Programs (OIP) is working with the Office of Enforcement (OE) concerning the significance of the violations and potential enforcement actions. While the shipments made by SGL without an NRC license were both numerous and large, at this time, the staff does not believe the violations were willful. The Executive Branch agrees with this assessment, and has advised the staff that it is not aware of any information indicating that the unauthorized exports were inimical to the common defense and security of the United States. Consequently, OIP is continuing to process the license applications SGL submitted for the proposed exports of graphite for non-nuclear end use while the consideration of enforcement is ongoing.

DISCUSSION:

On November 20, 2002, SGL applied for a license requesting authority to export for non-nuclear end use, 869,000.0 kilograms of nuclear grade graphite to Canada (XMAT0403 at Attachment 1), and an additional license to export 11,617,833.0 kilograms to the countries of the European Union, Argentina, Australia, Bolivia, Brazil, Chile, China, Colombia, Czech Republic, Ecuador, French Guyana, Guyana, India, Japan, Malaysia, Mexico, New Zealand, Norway, Paraguay, Peru, Republic of Korea, Singapore, South Africa, Suriname, Taiwan, Thailand, Uruguay, and Venezuela (XMAT0404 at Attachment 2).

The graphite produced by SGL is very pure (as is much of the graphite currently produced in the U.S. and abroad) and meets the definition of nuclear-grade graphite in 10 CFR 110.2, having a boron equivalent content of less than five parts per million and density greater than 1.5 grams per cubic centimeter. Bulk shipments of such graphite are controlled by the United States and other members of the Nuclear Suppliers Group to help prevent its use as a moderator or reflector material in an un-safeguarded reactor. SGL, which produces graphite primarily for commercial non-nuclear end-uses, was unaware until recently that its graphite products were of the purity level requiring NRC export licensing controls.

In response to NRC's request for views on proposed export XMAT0403, the Executive Branch (EB), in a letter dated January 23, 2003 (Attachment 4), recommended that a license be issued to SGL to export up to 870,000 kilograms of bulk nuclear grade graphite for the production of various non-nuclear commercial articles by SGL affiliate, Spear Canada. Regarding NRC's request for views on proposed export XMAT0404, the EB recommended that a license be issued to SGL to export up to 11,617,833 kilograms of bulk nuclear grade graphite for the production of various non-nuclear industrial and commercial articles, but limited to the following destinations: member states of the European Union, Czech Republic, Japan, New Zealand, Republic of Korea, and Taiwan (Attachment 5). It would be limited to a period of five years, and exclude countries on application XMAT0404 which have not yet provided the necessary assurances to the U.S. Government on re-transfers. The applicant has been advised in this regard, and indicated interest in later amending the new XMAT0404 license to reinstate some excluded countries, if the EB approves and receives the required assurances.

The EB has concluded that the proposed exports under the new licenses are consistent with the provisions of the Atomic Energy Act, as amended, if limited to the countries/destinations and quantities as specified above. The EB letter notes that, as parties to the Non-proliferation Treaty (NPT), all of the countries/destinations to be approved under XMAT0403 and XMAT 0404 (Canada, European Union countries, Czech Republic, Japan, New Zealand, Republic of Korea, and Taiwan) have committed to maintaining IAEA safeguards on all of their peaceful nuclear activities and have pledged not to produce or otherwise acquire any nuclear explosive device, therefore, satisfying criteria (1) and (2) of Section 109b of the Atomic Energy Act, as amended, for exports of nuclear components, substances and items. The right of prior consent on the retransfer of U.S. origin nuclear grade graphite has been satisfied and confirmed by the receipt of generic assurances from all the countries/destinations to be authorized under XMAT0403 and XMAT0404. Finally, the proposed exports will not be inimical to the common defense and security of the United States.

Security Significance of the Exports

The amount of material to be exported to the authorized destinations does not raise any additional security concerns related to transportation, including the domestic shipping portion of the export, beyond those applicable to other past and current licensed exports of nuclear grade graphite from the U.S. under general or specific NRC export licenses. The licensee is prepared to comply fully with current domestic shipping requirements imposed by NRC. Accordingly, the staff does not believe that security considerations warrant denial of the SGL applications.

Review of Other Sources of Information

The Office of International Programs has reviewed recent Department of State telegrams and other sources of information and found nothing which would preclude issuing the export licenses to the destinations approved by the EB.

CONCLUSION:

The staff concurs with the EB judgment that the proposed exports, as modified, would not be inimical to the common defense and security of the United States and also meet the three specific export licensing criteria of Section 109b of the Atomic Energy Act of 1954, as amended. There are no applicable safeguards or foreign physical protection requirements for the proposed exports of nuclear grade graphite for non-nuclear end use.

RECOMMENDATIONS:

1. That the Commission should authorize the issuance of the requested export license, XMAT0403 (Canada), to SGL for a period of five years.
2. That the Commission should authorize the issuance of export license, XMAT0404 (European Union countries, Czech Republic, Japan, New Zealand, Republic of Korea, and Taiwan), to SGL for a period of five years.

3. That amendments should be issued for XMAT0404 for other requested destinations, contingent upon receipt of more specific contract information from the applicant on anticipated future exports and favorable views from the EB, including U.S. assurances from the foreign governments.

/RA/

Janice Dunn Lee, Director
Office of International Programs

Attachments:

1. 11/20/02 S.L. Carbon, LLC Graphite Export License Application
2. 11/20/02 S.L. Carbon, LLC Graphite Export License Application
3. 1/30/03 Letter from Congressman Peterson to D.K. Rathbun
4. 1/23/03 DOS Letter, R. J. Stratford to J. D. Lee, Views, XMAT0403
5. 2/12/03 DOS Letter, R. J. Stratford to J. D. Lee, Views, XMAT0404

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* See previous concurrence

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