



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

DCS/DF02  
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OCT 17 1989

Mr. Fred D. Flowers  
Manager, Licensing & Traffic  
M/C 512  
General Electric Company  
175 Curtner Avenue  
San Jose, CA 95125

Dear Mr. Flowers:

By letter of September 28 you requested clarification and confirmation of the applicable NRC regulations for the export of IAEA samples to be shipped from the GE facility at Wilmington, North Carolina to the IAEA, Vienna, Austria.

The exemption from licensing requirements contained in 10 CFR 110.11 allows the export of special nuclear material for IAEA safeguards sample purposes in quantities not to exceed a combined total of 100 grams of contained U-235, plutonium and U-233 per facility per year. This exemption applies without consideration to the weight percent enrichment of the material to be exported. Thus, it would permit the export of gram quantities of plutonium, U-233 and U-235, including high-enriched uranium.

In addition to the exports permitted under the preceding part of the NRC regulations, there is a general license in 10 CFR 110.21(b)(1) which allows the export of small quantities of special nuclear materials of one (1) effective gram or less in individual shipments, not to exceed 100 effective grams per year to any one country. This provision of the regulations can be used without regard to the provisions of 10 CFR 110.11. You will note that the significant term in 10 CFR 110.21(b)(1) involves the definition of an "effective" gram which, for uranium, may be determined by multiplying the square of the percent enrichment by the total element weight. (For example, under this formulation, 1,111 total grams of uranium enriched to 3% would equal .999 effective grams of U-235.) For plutonium and U-233, one gram of either is, by definition, one effective gram. By using this formula, your proposed shipment of 279.7 grams of uranium, containing 9.32 grams of U-235 amounts to approximately .3 of an effective gram, well below the one effective gram limit for a single shipment.

If you need further explanation on this matter, please let us know.

Sincerely,

Marvin R. Peterson, Assistant Director  
for International Security, Exports and  
Materials Safety  
Office of Governmental and Public Affairs

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