

# POLICY ISSUE NOTATION VOTE

May 8, 2001

SECY-01-0082

**FOR:** The Commissioners

**FROM:** Janice Dunn Lee, Director  
Office of International Programs

**SUBJECT:** PROPOSED LICENSE TO EXPORT LOW-ENRICHED URANIUM TO  
JAPAN FOR USE AS RELOAD FUEL IN THE FUGEN ADVANCED  
THERMAL REACTOR (APPLICATION NO. XSNM03182)

**PURPOSE:**

To request Commission approval of a license to Framatome ANP Richland, Inc. (Framatome ANP) authorizing the export to Japan of low-enriched uranium for use as reload fuel in the Fugen Advanced Thermal Reactor (ATR). This application is being referred to the Commission in accordance with 10 CFR 110.40(b)(4) because the facility is called an advanced thermal reactor.

**DISCUSSION:**

On January 31, 2001, Framatome ANP applied for a license (Attachment 1) to export to Japan 2,140 kilograms of uranium containing 42 kilograms of uranium-235, enriched to a maximum of 1.92 percent. The material, in the form of uranium dioxide powder, will be fabricated into fuel at Nuclear Fuel Industries, Ltd., Tokai Works, for eventual loading into the Fugen ATR. The Fugen ATR is a 165 Mwe heavy water moderated, light water cooled reactor, owned and operated by the Japan Nuclear Cycle Development Institute (JNC). Since commencing operation in 1979, Fugen ATR has been used to develop new fuels and improve operation and maintenance techniques. It was the first thermal reactor in the world to use mixed-oxide fuel on a full core scale, but is now nearing the end of its operational life. The U.S. supplied nuclear fuel and equipment prior to and during its first years of operation, and most recently, the NRC issued a license (XSNM03149) on September 21, 2000, authorizing Transport Logistics International to export 300 kilograms of uranium containing 57.67 kilograms of U-235 enriched to a maximum of 0.79 percent for use as reload fuel in the Fugen ATR (see SECY-00-0190).

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In response to NRC's request for views on the proposed export, the Executive Branch, in a letter dated April 9, 2001 (Attachment 2), recommends that the license be approved. The letter notes that the proposed export to Japan would take place pursuant to the 1988 U.S.-Japan Agreement for Peaceful Nuclear Cooperation as confirmed in Japan Foreign Ministry Note No. 641 dated April 2, 2001. The Note also confirms that the proposed recipients are authorized persons in Japan. A copy of the Japanese Note is also attached. The Executive Branch judges that the proposed export will not be inimical to the common defense and security of the United States, and is consistent with the provisions of the Atomic Energy Act of 1954, as amended.

### **International Safeguards**

Japan is a party to the Non-Proliferation Treaty and, as such, accepts IAEA safeguards on all source and special nuclear material in its nuclear activities. IAEA Facility Attachments are in force for the relevant Japanese facilities including Nuclear Fuel Industries and Fugen ATR.

### **Physical Protection**

With regard to physical protection, NRC staff visited Japan in May 1997. The conclusion of this review was that Japan's physical protection program was consistent with the then-current version of INFCIRC/225 (i.e., Rev.3). Staff has reviewed subsequent information received to date, and has determined that there is no indication that the physical protection program has degraded in this country. In addition, staff has determined, on the basis of currently available information, that physical protection measures to protect against proliferation of nuclear weapons are in conformance with the current version of INFCIRC/225 (i.e., Rev.4).

### **Staff Review and Analysis of Other Information**

The NRC staff has determined that the NRC licensing criteria contained in 10 CFR Part 110.42 are fully satisfied.

The staff closely and routinely monitors, through cable traffic and other means, nuclear non-proliferation-related activities and issues in and involving Japan. The staff is not aware of any concerns about Japan's commitment to full-scope international safeguards or its fulfillment of obligations to the U.S. under the U.S.-Japan Agreement for Peaceful Nuclear Cooperation.

### **CONCLUSION:**

The staff concurs with the Executive Branch judgment that the proposed export would not be inimical to the common defense and security of the United States and is consistent with the provisions of the Atomic Energy Act of 1954, as amended by the Nuclear Non-Proliferation Act of 1978. The Office of the Executive Director for Operations concurs. The Office of General Counsel has no legal objection.

The staff also concludes that given the age, characteristics of and testing functions performed by the Fugen ATR, it no longer constitutes the type of "advanced" reactor envisioned in 10 CFR 110.40(b)(4), exports for which require Commissioner review. As such, if and when similar authorizations are requested in the future to export LEU for use as reload fuel in Fugen ATR, the staff concludes they should be processed in the same manner as other requests for

authorizations to export routine LEU reload fuel for Japanese power reactors.

**RECOMMENDATION:**

That the Commission authorize the issuance of the requested license to Framatome ANP for the export of LEU for use in the ATR Fugen in Japan. It is also recommended that if similar applications for the export of LEU reload fuel for the ATR Fugen are received in the future, the Commission authorize the NRC staff to issue licenses if after consulting with the Executive Branch and receiving the relevant assurances from the Government of Japan, it is determined that the provisions of the Atomic Energy Act, as amended, are met and the export will not be inimical to the common defense and security of the United States or unduly jeopardize public health and safety.

***/RA by Ronald D. Hauber Acting For/***

Janice Dunn Lee, Director  
Office of International Programs

- Attachments:           1. 01/31/01 Framatome ANP Export License Application  
                              2. 04/09/01 DOS Letter R.J.K. Stratford to J.D. Lee

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**\*Previously concurred**

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