UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS
WASHINGTON, DC 20555

April 17, 1997

NRC INFORMATION NOTICE 97-20: IDENTIFICATION OF CERTAIN URANIUM HEXAFLUORIDE HEXAFLUORIDE CYLINDERS THAT DO NOT COMPLY WITH ANSI N14.1 FABRICATION STANDARDS

Addressees

Registered users of transportation packages for uranium hexafluoride.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to notify addressees that, based on NRC inspection review of available records, certain Model 30B cylinders for uranium hexafluoride do not meet the fabrication standards in American National Standards Institute, ANSI N14.1, "Uranium Hexafluoride--Packaging for Transport." Model 30B cylinders that do not meet the ANSI N14.1 standard are not authorized for transport. It is expected that recipients will review the information for applicability to their operations. However, information contained in this notice is not an NRC requirement; therefore, no specific action nor written response is required.

Description of Circumstances

On April 9-11, 1997, NRC conducted an inspection at Amer Industrial Technologies, Inc. (AIT), in Wilmington, Delaware. The inspection involved the fabrication of cylinders for uranium hexafluoride. The fabrication records for certain Model 30B cylinders did not support a conclusion that the weld procedures had been qualified at the low temperatures specified in ANSI N14.1. The cylinders were fabricated by AIT, and were purchased by Korea Nuclear Fuel Co., Ltd (KNFC). The affected cylinders are:

KNFC Serial No.	Date of Manufacture
0244 to 0373, inclusive	June 1995 through July 1996

Discussion

The available records at AIT do not support a conclusion that Model 30B cylinders were fabricated in accordance with ANSI N14.1. U.S. Department of Transportation (DOT) regulations (49 CFR 173.420) require that packagings for uranium hexafluoride be designed, fabricated, inspected, tested, and marked in accordance with ANSI N14.1. NRC regulations require that licensees making these types of shipments comply with applicable DOT

9704170195.

regulations (10 CFR 71.5). NRC Certificates of Compliance for uranium hexafluoride packages also specify that cylinders must be fabricated, inspected, and tested in accordance with ANSI N14.1.

ANSI N14.1 specifies design and fabrication standards for uranium hexafluoride cylinders. Among other things, the standard includes provisions for ensuring impact resistance of the Model 30B cylinder shell and heads in case of a transportation accident in a cold climate. The standard specifies that the weld procedures for the Model 30B cylinders be qualified at -50øF (-45øC) for the grade of steel used for these cylinders. The weld procedures used to fabricate the cylinders identified above, according to available records, were only qualified to +10øF (-12øC), and therefore, do not conform to the ANSI N14.1 standard. Since DOT regulations and NRC Certificates of Compliance specify that cylinders used to transport uranium hexafluoride must comply with ANSI N14.1, the cylinders identified above are not authorized for transport.

This information notice requires no specific action nor written response. If you have any questions about the information in this notice, please contact one of the individuals listed below, or the appropriate regional office.

ORIGINAL SIGNED BY

William F. Kane, Director
Spent Fuel Project Office
Office of Nuclear Material Safety
and Safeguards

Technical contacts: Richard Boyle, DOT
(202) 366-4545
E-mail: rick.boyle@rspa.dot.gov

Nancy L. Osgood, NMSS
(301) 415-8513
E-mail: nlo@nrc.gov

William M. Troskoski, NMSS
(301)415-8076
E-mail: wmt@nrc.gov