

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 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:

<u>KNFC Serial No.</u>	<u>Date of Manufacture</u>
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

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updated on 4/24/97



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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 -50°F (-45°C) 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 +10°F (-12°C), 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.



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

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Attachments:

1. List of Recently Issued NMSS Information Notices
2. List of Recently Issued NRC Information Notices

Attachments filed in Jacket.

**LIST OF RECENTLY ISSUED
NMSS INFORMATION NOTICES**

Information Notice No.	Subject	Date of Issuance	Issued to
97-04	Implementation of a New Constraint on Radioactive Air Effluents	02/24/97	All materials, fuel cycle, and non-power reactor licensees
97-03	Defacing of Labels to Comply with 10 CFR 20.1904(b)	02/20/97	All material licensees involved with disposal of medical waste
96-72	Undetected Failures that May Occur During Patient Treat- ments with Teletherapy Devices	12/24/96	All teletherapy licensees
96-70	Year 2000 Effect on Computer System Software	12/24/96	All U.S. Nuclear Regulatory Commission licensees, certi- ficate holders, and regis- trants
96-66	Recent Misadministrations Caused by Incorrect Cali- brations of Strontium-90 Eye Applicators	12/13/96	All U.S. Nuclear Regulatory Commission Medical Use Licensees authorized to use strontium-90 eye applicators
96-63	Potential Safety Issue Regarding the Shipment of Fissile Material	12/05/96	All U.S. Nuclear Regulatory Commission licensees authorized to possess special nuclear material in unsealed quantities greater than a critical mass
96-57	Incident-Reporting Require- ments Involving Intakes, During a 24-Hour Period that May Cause a Total Effective Dose Equivalent in Excess of 0.05 Sv (5 rem)	10/30/96	All U.S. Nuclear Regulatory Commission licensees

LIST OF RECENTLY ISSUED
NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
97-19	Safety Injection System Weld Flaw at Sequoyah Nuclear Power Plant, Unit 2	04/18/97	All holders of OLs or CPs for nuclear power reactors
94-14, Supp. 1	Failure to Implement Requirements for Biennial Medical Examinations and Notification to the NRC of Changes in Licensed Operator Medical Conditions	04/14/97	All holders of OLs or CPs for nuclear power and non-power reactors and all licensed reactor operators and senior reactor operators
97-18	Problems Identified During Maintenance Rule Baseline Inspections	04/14/97	All holders of OLs, CPs, and decommissioning-stage licenses for nuclear power reactors
97-17	Cracking of Vertical Welds in the Core Shroud and Degraded Repair	04/04/97	All holders of OLs or CPs for boiling-water reactors
97-16	Preconditioning of Plant Structures, Systems, and Components Before ASME Code Inservice Testing or Technical Specification Surveillance Testing	04/04/97	All holders of OLs or CPs for nuclear power reactors

OL = Operating License
CP = Construction Permit

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OFC	NMSS/ TSIB	E	NMSS/ TSIB		NMSS/ TSIB		NMSS		NMSS/ TSIB	
NAM	*NLOsgood		*CRChappell		*JPJankovich		*EKraus		*SFShankman	
E										
DAT	4/14/97		4/14/97		4/14/97		4/14/97		4/14/97	
E										
OFC	OGC		NMSS/ FCSS		NMSS/ SFPO					
NAM	ENJensen		EWBrach		WFKane					
E										
DAT	4/17/97		4/16/97		4/17/97		1/197		1/197	
E										

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*See previous concurrence.

IN 97-XX

Distribution:

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OFC	NMSS/ TSIB	E	NMSS/ TSIB	NMSS/ TSIB	NMSS	NMSS/ TSIB
NAME	*NLOsgood		*CRChappell	*JPJankovich	*EKraus	*SFShankman
DATE	/ / 97		/ / 97	/ / 97	/ / 97	/ / 97

OFC	OGC	NMSS/ FCSS	NMSS/ SFPO
NAME	<i>no legal objection</i> ENJensen	<i>EWB by E-mail</i> EWBrach	<i>[Signature]</i> WFKane
DATE	4/17/97	4/16/97	4/17/97

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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. Shipments in transit at the time this notice is issued may be carried to their final destination.

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OFC	NMSS/ TSIB	E	NMSS/ TSIB	E	NMSS/ TSIB	E	NMSS	NMSS/ TSIB
	<i>NLO</i> NLOsgood		<i>CR</i> CRChappell		<i>JP</i> JPJankovich		<i>E Kraus</i> EKraus	<i>SK</i> SKHankman
DATE	4/14/97		4/14/97		4/14/97		4/14/97	4/14/97

OFC	OGC	NMSS/ IMNS	NMSS/ SFPO
	<i>N Jensen</i> CWReamer	EWBrach	WFKane
DATE	/ /97	/ /97	/ /97

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