

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

January 26, 1995

NRC GENERIC LETTER 95-01: NRC STAFF TECHNICAL POSITION ON FIRE PROTECTION FOR FUEL CYCLE FACILITIES

Addressees

All current licensees and applicants for uranium conversion and fuel fabrication facilities.

Purpose

The U.S. Nuclear Regulatory Commission is issuing this generic letter to notify addressees about the need to implement a Fire Hazard Analysis and a Pre-Fire Plan and require that all addressees provide the NRC a written response to this generic letter.

Background

Section 70.22, Contents of Application, and Section 70.23, Requirements for the Approval of Applications, of 10 CFR Part 70 require that equipment, facilities, and procedures that will be used by a licensee be adequate to protect health and minimize danger to life or property. Similar requirements are found in Part 40. After a January 1986 accident at Sequoyah Fuels Corporation's uranium hexafluoride conversion facility, the NRC formed a Materials Safety Regulation Review Study Group (MSRRSG), which was tasked to review the agency's licensing and regulatory program and recommend measures to strengthen areas of weakness. One such area identified by the MSRRSG was fire protection. On March 21, 1989, the NRC published in the Federal Register (54 FR 11590-98) guidance to applicants and licensees for the preparation of license applications and conduct of operations. Public comments were requested on the guidance, which was in the form of four draft Technical Positions in the areas of Management Controls/Quality Assurance, Requirements for Operation, Chemical Safety, and Fire Protection for Fuel Cycle Facilities. After consideration of the comments received and the experience gained in using these draft Technical Positions, the NRC then revised and reissued the Technical Position (TP) on Fire Protection for Fuel Cycle Facilities in the Federal Register (57 FR 35607-13) dated August 10, 1992.

Apart from providing guidance on good industry practices and standards for buildings, equipment, maintenance, and training, the TP introduced the concept of a Fire Hazard Analysis (FHA) to identify deficiencies in the fire protection program of a facility. It described FHA as a systematic study of each "fire area" of the facility, and of the facility as a whole, in order to

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identify and quantify all credible fire hazards that could affect the containment and safety of licensed radioactive materials, so that adequate controls can be provided to reduce those risks to acceptable levels. The TP also stressed the importance of the Pre-Fire Plan to the preparedness of the facility to meet all credible fire emergencies.

On May 29, 1991, a potential criticality incident that developed at the General Electric Nuclear Fuel and Component Manufacturing Facility (see NUREG-1450) once again raised generic safety concerns regarding the operation of large materials facilities. The NRC established a Materials Regulatory Review Task Force (MRRTF), which recommended a number of regulatory measures. The concept of an Integrated Safety Analysis (ISA) for the facilities, of which FHA would be an integral part, was developed from those recommendations. Pursuant to the MRRTF report (NUREG-1324), the agency started work on a revision of the 10 CFR Part 70 rule, which is ongoing. The fuel cycle industry has been consulted and informed of the agency's plan.

Discussion

While neither of the two incidents cited above involved a fire, fire was recognized as a notable hazard at the conclusion of each review. Large quantities of flammable materials needed for the processes are stored at these facilities. Some of the fuel manufacturing processes themselves involve fire risk. While such risks cannot be completely eliminated, they should be minimized. The TP on fire protection provides guidance on ways to minimize such risks from fire.

Inside facility buildings, fire hazard exists not only in the various fuel manufacturing processes, but also in construction materials, equipment, maintenance operations, and storage and transfer of combustible materials. It is important to safety to know what fire protection equipment is appropriate for a given application. The FHA is the tool that enables such important safety-related decisions. It forms the basis for effective fire protection measures that reduce accident risk and enhance safety.

The TP advises that the facilities should have Pre-Fire Plans. A Pre-Fire Plan contains information to assist a fire fighting team in an actual emergency situation. It is recommended that the plan be prepared in consultation with the local fire department, where such offsite assistance is relied upon. The importance to safety of a Pre-Fire Plan cannot be over-emphasized. The fire fighters' ability to promptly locate ordinary installed hardware, such as a compatible connection for delivery of water or a sectional valve, may be critical in an emergency situation. The purpose of a Pre-Fire Plan is to provide exactly such information. The Pre-Fire Plan should also be a training tool for both the facility's emergency response team and the offsite fire department that is expected to assist the facility in an emergency.

Requested Action

Pursuant to 10 CFR 40.31(b) or 70.22(d), as appropriate, each addressee shall prepare a statement on how it will implement the guidance of Position 9, Fire Hazard Analysis, and Position 10, Pre-Fire Plan, of the Technical Position on Fire Protection for Fuel Cycle Facilities, published in the Federal Register (57 FR 35607-13) dated August 10, 1992.

Required Response

Within 30 days from the date of this generic letter, each addressee shall submit a complete statement on how it will implement the referenced guidance.

Please address the required written statement signed by a responsible officer to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555. In addition, please submit a copy to the appropriate Regional Administrator.

Related Generic Communications

NRC Information Notice 92-14, "Uranium Oxide Fires at Fuel Cycle Facilities," issued February 21, 1992.

Paperwork Reduction Act Statement

The statement is covered by the Office of Management and Budget clearance numbers 3150-0020 (10 CFR 40.8) and 3150-0009 (10 CFR 70.8). The estimated average number of burden hours to comply with the reporting request is 40 person-hours per licensee response, including those needed to assess the new recommendations, search data sources, gather and analyze the data, and prepare the required response. This estimate of the average number of burden hours pertains only to the identified response and not to the time needed to implement any actions discussed in the responses. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch, Division of Information Support Services, Office of

Information Resources Management, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Paperwork Reduction Project (3150-0020 and 3150-0009), Office of Information and Regulatory Affairs, NEOB-3019, Office of Management and Budget, Washington, DC 20503.

If you have any questions about this matter, please contact the technical contact listed below or the appropriate regional office.



Robert F. Burnett, Director
Division of Fuel Cycle Safety
and Safeguards
Office of Nuclear Material Safety
and Safeguards

Technical contact: A. Datta, NMSS
301-415-8109

Attachment: *See Jacket* List of Recently Issued NRC Generic Letters

LIST OF RECENTLY ISSUED NRC GENERIC LETTERS

Generic Letter	Subject	Date of Issuance	Issued To
94-04	VOLUNTARY REPORTING OF ADDITIONAL OCCUPATIONAL RADIATION EXPOSURE DATA	09/02/94	ALL HOLDERS OF OLs OR CPs FOR NPRs, RADIOGRAPHY LICENSEES, FUEL PROCESSING LICENSEES, FABRICATING & REPROCESSING LICENSEES, MANUFACTURERS & DISTRIBUTORS OF BY-PRODUCT MAT'L, INDEPENDENT SPENT FUEL STORAGE INSTALLATIONS, FACILITIES FOR LAND DISPOSAL OF LOW-LEVEL WASTE, & GEOLOGIC REPOSITORIES FOR HIGH-LEVEL WASTE.
94-03	INTERGRANULAR STRESS CORROSION CRACKING OF CORE SHROUDS IN BOILING WATER	07/22/94	ALL HOLDERS OF OLs OR CPs FOR BOILING WATER REACTORS EXCEPT FOR BIG ROCK POINT, WHICH DOES NOT HAVE A CORE SHROUD.
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86-10, SUPP. 1	FIRE ENDURANCE TEST ACCEPTANCE CRITERIA FOR FIRE BARRIER SYSTEMS USED TO SEPARATE REDUNDANT SAFE SHUTDOWN TRAINS WITHIN THE SAME FIRE AREA (SUPP. 1 TO GL 86-10, "IMPLEMENTATION OF FIRE PROTECTION REQUIREMENTS")	03/25/94	ALL HOLDERS OF OLs OR CPs FOR NPRs

OL = OPERATING LICENSE
 CP = CONSTRUCTION PERMIT
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ACTION ADDRESSEES

Mr. M. D. Kosmider, Plant Manager
Allied-Signal, Inc.
P.O. Box 430
Metropolis, IL 62960

Docket 40-3392

Mr. Arne F. Olsen, Licensing Officer
Babcock & Wilcox Company
Naval Nuclear Fuel Division
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Docket 70-27

Ms. Kathryn S. Knapp
Manager, Safety and Licensing
B&W Fuel Company
Commercial Nuclear Fuel Plant
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Docket 70-1201

Mr. Robert W. Sharkey, Manager
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Combustion Engineering, Inc.
Hematite Nuclear Fuel Manufacturing
3300 State Road P
Hematite, Missouri 63047

Docket 70-36

Mr. John F. Conant, Facilities Manager
Combustion Engineering, Inc.
Windsor Nuclear Fuel Manufacturing
1000 Prospect Hill Road
Windsor, CT 06095-0500

Docket 70-1100

Mr. Keith E. Asmussen, Director
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General Atomics
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Docket 70-734

Mr. James F. Klapproth, Manager
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General Electric Company
Nuclear Energy Production
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Docket 70-1113

Mr. Andrew M. Maxin
Acting Vice President
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Nuclear Fuel Services, Inc.
P.O. Box 337, MS 123
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Docket 70-143

Mr. L. J. Maas, Manager
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Siemens Power Corporation
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Richland, WA 99352-0130

Docket 70-1257

Mr. Robert A. Williams, Project Manager
Westinghouse Electric Corporation
Drawer R
Columbia, SC 29250

Docket 70-1151

Information Resources Management, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Paperwork Reduction Project (3150-0020 and 3150-0009), Office of Information and Regulatory Affairs, NEOB-3019, Office of Management and Budget, Washington, DC 20503.

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*See previous concurrence

OFC	FCLB*	E	FCLB*	E	FCLB*	E	FCLB*	E	OGC*		WM*		IMOB*
NAME	ADatta:mh		VTharpe		MTokar		RPierson		RFonner		JSurmeier		KRamsey
DATE	11/28/94		11/28/94		11/28/94		11/29/94		12/12/94		1/17/94		1/17/94
OFC	FCSS		FCSS*										
NAME	ETenEyck		RBurnett										
DATE	1/ /95		1/17/95										

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NAME	ADatta:mh		VTharpe		MTokar		RPierson		RFonner		JSurmeier	KRamsey
DATE	11/28/94		11/28/94		11/28/94		11/29/94		12/12/94		12/17/94	10/11/94
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