

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF NUCLEAR REACTOR REGULATION
WASHINGTON, D.C. 20555

November 26, 1991

NRC INFORMATION NOTICE 91-77: SHIFT STAFFING AT NUCLEAR POWER PLANTS

Addressees

All holders of operating licenses or construction permits for nuclear power reactors.

Purpose

The U.S. Nuclear Regulatory Commission (NRC) is issuing this information notice to alert addressees to problems that could result from inadequate controls to ensure that shift staffing is sufficient to accomplish all necessary functions required by an event. It is expected that recipients will review the information for applicability to their facilities and consider actions, as appropriate, to avoid similar problems. However, suggestions contained in this information notice are not NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances

On April 29, 1991, the Maine Yankee Atomic Power Plant experienced a main generator hydrogen fire. Although a senior reactor operator (SRO) and auxiliary operators from another shift were available immediately, the need to provide personnel for the fire brigade and yet perform the many actions required by the event caused a heavy workload for the control room staff. This workload contributed to the licensee's failure to notify some key emergency response personnel as specified in the licensee's procedure.

On June 15, 1991, at 11:50 p.m., lightning struck the switchyard at the Yankee-Rowe Nuclear Power Station. The lightning strike caused a fire, a loss of offsite power, a loss of normal telephone communication, and a reactor trip. The staff on duty experienced difficulty in its effort to concurrently classify the event, notify the required people, implement emergency operating procedures, and provide personnel for the fire brigade. The lack of staff contributed to the licensee's failure to make a timely Notification of Unusual Event to the State of Vermont and to the Commonwealth of Massachusetts. Two auxiliary operators, members of the five man fire brigade, did not respond to the fire because they were needed to start the steam driven emergency boiler feed pump. After the plant was initially stabilized, the shift supervisor sent the shift technical advisor to the central alarm station to report the plant's status to the plant manager via the loss-of-power telephone. This was done because their first attempts to report by the control room phones were unsuccessful.

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updated on 12/11/91

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Discussion

The safe operation of a nuclear power plant and the preservation of the health and safety of the public depend on the ability of the on duty staff to respond to an event. The number of staff on each shift is expected to be sufficient to accomplish all necessary actions to ensure a safe shutdown of the reactor following an event. Those actions include implementing emergency operating procedures, performing required notifications, establishing and maintaining communications with the NRC and plant management, and any additional duties assigned by the licensee's administrative controls. Many licensees assign control room staff to be members of the fire brigade. Also, the operations staff is frequently required to support special security responses such as plant searches in response to a bomb threat. Section 50.54(m) of Title 10 of the Code of Federal Regulations addresses only minimum staffing levels for licensed personnel and does not address personnel availability for performing all of the necessary actions specified in the licensee's administrative controls and required by an event. Licensees may wish to carefully review actual staffing needs to ensure that sufficient personnel are available to adequately respond to all events. This is especially relevant to the backshift when staffing levels are usually at a minimum.

Related Generic Communications

1. NUREG-0737, "TMI Action Plan," dated October 30, 1980.
2. NRC Generic Letter 82-16, "NUREG 0737 Technical Specifications," dated September 20, 1982.
3. NRC Generic Letter 83-02, "NUREG 0737 Technical Specifications," dated January 10, 1983.

This information notice requires no specific action or written response. If you have any questions about the information in this notice, please contact the technical contact listed below or the appropriate Office of Nuclear Reactor Regulation (NRR) project manager.


Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

Technical contact: Jesse Arildsen, NRR
(301) 492-1026

Attachment: List of Recently Issued NRC Information Notices

LIST OF RECENTLY ISSUED
 NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
91-76	10 CFR Parts 21 and 50.55(e) Final Rules	11/26/91	All holders of OLs or CPs and vendors for nuclear power reactors.
91-75	Static Head Corrections Mistakenly not Included in Pressure Transmitter Calibration Procedures	11/25/91	All holders of OLs or CPs for nuclear power reactors.
91-74	Changes in Pressurizer Safety Valve Setpoints Before Installation	11/25/91	All holders of OLs or CPs for nuclear power reactors.
91-73	Loss of Shutdown Cooling During Disassembly of High Pressure Safety Injection System Check Valve	11/21/91	All holders of OLs or CPs for nuclear power reactors.
91-72	Issuance of a Revision to the EPA Manual of Protective Action Guides and Protective Actions for Nuclear Incidents	11/19/91	All holders of OLs or CPs for nuclear power reactors.
91-71	Training and Supervision of Individuals Supervised by an Authorized User	11/12/91	All NRC medical licensees.
91-70	Improper Installation of Instrumentation Modules	11/4/91	All holders of OLs or CPs for nuclear power reactors.
91-69	Errors in Main Steam Line Break Analyses for Determining Containment Parameters	11/1/91	All holders of OLs or CPs for pressurized-water reactors.
91-68	Careful Planning Significantly Reduces the Potential Adverse Impacts of Loss of Offsite Power Events During Shutdown	10/28/91	All holders of OLs or CPs for nuclear power reactors.

OL = Operating License
 CP = Construction Permit

Discussion

The safe operation of a nuclear power plant and the preservation of the health and safety of the public depend on the ability of the on duty staff to respond to an event. The number of staff on each shift is expected to be sufficient to accomplish all necessary actions to ensure a safe shutdown of the reactor following an event. Those actions include implementing emergency operating procedures, performing required notifications, establishing and maintaining communications with the NRC and plant management, and any additional duties assigned by the licensee's administrative controls. Many licensees assign control room staff to be members of the fire brigade. Also, the operations staff is frequently required to support special security responses such as plant searches in response to a bomb threat. Section 50.54(m) of Title 10 of the Code of Federal Regulations addresses only minimum staffing levels for licensed personnel and does not address personnel availability for performing all of the necessary actions specified in the licensee's administrative controls and required by an event. Licensees may wish to carefully review actual staffing needs to ensure that sufficient personnel are available to adequately respond to all events. This is especially relevant to the backshift when staffing levels are usually at a minimum.

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Original Signed by

Charles E. Rossi

Charles E. Rossi, Director
Division of Operational Events Assessment
Office of Nuclear Reactor Regulation

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(301) 492-1026

Attachment: List of Recently Issued NRC Information Notices

*SEE PREVIOUS CONCURRENCES

*OGCB:DOEA:NRR*RPB:ADM	*LHFB:DLPQ:NRR	*LHFB:DLPQ:NRR	*C/LHFB:DLPQ:NRR
JBirmingham	JArildsen	WSwenson	JWermiel
TechEd	JArildsen	WSwenson	JWermiel
11/05/91	11/05/91	11/05/91	11/05/91
*DD/DLPQ:NRR	*D/DLPQ:NRR	*C/OGCB:DOEA:NRR	D/DOEA:NRR
CThomas	JRoe	CHBerlinger	CERoss
11/08/91	11/08/91	11/12/91	11/20/91

DOCUMENT NAME: IN 91-77

Discussion

The safe operation of a nuclear power plant and the preservation of the health and safety of the public depend on the ability of the on duty staff to respond to an event. The number of staff on each shift must be sufficient to accomplish all necessary actions to ensure a safe shutdown of the reactor following an event. Those actions include implementing emergency operating procedures, performing required notifications, establishing and maintaining communications with the NRC and plant management, and any additional duties assigned by the licensee's administrative controls. Many licensees assign control room staff to be members of the fire brigade. Also, the operations staff is frequently required to support special security responses such as plant searches in response to a bomb threat. Because of the addition of such duties, minimum staffing levels specified in section 50.54 (m) of Title 10 of the Code of Federal Regulations and in plant technical specifications may not ensure that sufficient personnel are available to perform all of the necessary actions specified in the licensee's administrative controls and required by an event. Licensees may wish to carefully review actual staffing needs to ensure that sufficient personnel are available to adequately respond to all postulated events. This is especially relevant to the backshift when staffing levels are usually at a minimum.

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Document: SHIFT STAFFING IN

OGCB:DOEA:NRR JBirmingham 11/5/91	RPB:ADM TechED 11/1/91	LHFB:DLPO:NRR JARildsen 11/5/91	LHFB:DLPO:NRR WSwenson 11/5/91	C/LHFB:DLPO:NRR JWermiel 11/5/91
DD/DLPO:NRR CThomas 11/5/91	B/DLPO:NRR JRo 11/1/91	C/OGCB:DOEA:NRR CHBerlinger 11/1/91	D/DOEA:NRR GERossi 11/ /91	

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