

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

April 29, 1992

NRC INFORMATION NOTICE 92-32: PROBLEMS IDENTIFIED WITH EMERGENCY VENTILATION SYSTEMS FOR NEAR-SITE (WITHIN 10 MILES) EMERGENCY OPERATIONS FACILITIES AND TECHNICAL SUPPORT CENTERS

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 potential problems resulting from inadequate maintenance and testing of Emergency Operations Facility (EOF) and Technical Support Center (TSC) emergency ventilation systems. These problems could result in a situation after an accident in which the EOF or TSC would not provide the level of protection to emergency workers that was intended. 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

Through routine inspection activities, the NRC has identified concerns with the operational readiness of EOF and TSC emergency ventilation systems. The following are three examples of recent inspection results:

1. Brunswick, February 1991. While observing a requested startup of the emergency ventilation system for the EOF, the inspector noted that the system was in poor material condition. The inspector also noted the licensee had not implemented procedures for operating, maintaining, or functional testing of the system. (Inspection Report 50-325,327/91-03).
2. Vogtle, May 1991. During a demonstration of the EOF ventilation system, the system failed to provide a positive pressure in the EOF in the emergency mode. After initial repair efforts, the system again failed to initiate the emergency mode when required. The licensee had neither a maintenance program nor test and operating procedures for the system. (Inspection Reports 50-424,425/91-04 and 50-424,425/91-08).

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3. Crystal River, May 1991. During an annual exercise, the TSC ventilation system failed to maintain facility habitability after approximately 2 hours of operation. The facility was originally designed for 29 persons assuming a heat load of 450 btu/hr per person. A heat load assumption of 640 btu/hr per person for an approximate 70 persons occupancy level would have been more applicable. The licensee had neither operating procedures nor a maintenance and testing program for the ventilation system. (Inspection Report 50-302/91-08).

Discussion

The NRC requires licensees and applicants to provide emergency facilities and equipment in support of operating nuclear power plants in the following regulations:

1. 10 CFR 50.47, "Emergency Plans," Section (b)(8)
2. 10 CFR Part 50, Appendix E, Section IV.E, "Emergency Facilities and Equipment"

Guidance for implementing the requirements contained in the regulations is provided in NUREG-0737, Supplement 1, "Clarification of TMI Action Plan Requirements." This NUREG document was transmitted to licensees via Generic Letter 82-33, "Supplement 1 to NUREG-0737 - Requirements for Emergency Response Capability," dated December 17, 1982. It provides general design and performance criteria for EOF and TSC ventilation systems. The NRC has not specifically identified maintenance and test criteria for these ventilation systems, but instead has provided a degree of flexibility within which licensees can exercise management prerogative in their maintenance programs. Other documents that provide guidance on maintenance and test programs for ventilation systems, which many licensees have used as a basis for maintenance and test programs, are:

1. Regulatory Guide 1.52, "Design, Test, and Maintenance Criteria for Post-Accident Engineered-Safety-Feature Atmosphere Cleanup System Air Filtration and Adsorption Units of Light-Water-Cooled Nuclear Power Plants"
2. Regulatory Guide 1.140, "Design, Test, and Maintenance Criteria for Normal Ventilation Exhaust System Air Filtration and Adsorption Units of Light-Water Cooled Nuclear Power Plants"
3. American Society of Mechanical Engineers (ASME) Standard NS10, "Testing of Nuclear Air Treatment Systems"

If dose assessment, communications, or decisionmaking capability is lost or impaired because the EOF and/or TSC become uninhabitable and are evacuated, the ability of the licensee's emergency response staff could be severely impaired, thus jeopardizing protection of the health and safety of the public.

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

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

Technical contacts: Glen W. Salyers, RII
(404) 331-5604

Daniel M. Barss, NRR
(301) 504-2922

Attachment: List of Recently Issued NRC Information Notices

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LIST OF RECENTLY ISSUED
NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
92-31	Electrical Connection Problem in Johnson Tokogawa Corporation YS-80 Programmable Indicating Controllers	04/27/92	All holders of OLs or CPs for nuclear power reactors.
92-30	Falsification of Plant Records	04/23/92	All holders of OLs or CPs for nuclear power reactors and all licensed operators and senior operators.
92-21, Supp. 1	Spent Fuel Pool Reactivity Calculations	04/22/92	All holders of OLs or CPs for nuclear power reactors.
92-29	Potential Breaker Mis-coordination Caused by Instantaneous Trip Circuitry	04/17/92	All holders of OLs or CPs for nuclear power reactors.
92-28	Inadequate Fire Suppression System Testing	04/08/92	All holders of OLs or CPs for nuclear power reactors.
92-27	Thermally Induced Accelerated Aging and Failure of ITE/GOULD A.C. Relays Used in Safety-Related Applications	04/03/92	All holders of OLs or CPs for nuclear power reactors.
92-26	Pressure Locking of Motor-Operated Flexible Wedge Gate Valves	04/02/92	All holders of OLs or CPs for nuclear power reactors.
92-25	Potential Weakness in Licensee Procedures for A Loss of the Refueling Cavity Water	03/31/92	All holders of OLs or CPs for nuclear power reactors.

OL = Operating License
CP = Construction Permit