

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

April 20, 1989

NRC INFORMATION NOTICE NO. 89-41: OPERATOR RESPONSE TO PRESSURIZATION
OF LOW-PRESSURE INTERFACING SYSTEMS

Addressees:

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

Purpose:

This information notice is being provided to alert addressees to potential problems that may arise from the lack of proper procedures to deal with unexpected pressurization of systems designed for low operating pressure such as the residual heat removal (RHR) system. 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 do not constitute NRC requirements; therefore, no specific action or written response is required.

Description of Circumstances:

On March 9, 1989, when Vogtle Unit 2 was in Mode 3 preparing for initial criticality, the reactor coolant system (RCS) leakage exceeded Technical Specification limits. The leakage was observed during a surveillance test on a cold-leg swing check valve that acts as the inboard pressure isolation boundary between the RCS and the low-pressure RHR system. The RHR system had been taken out of service, but the pressure in it did not reduce to the expected level. To relieve the RHR system pressure, operators opened two normally locked-closed valves that connect the RHR system to the refueling water storage tank (RWST), thereby venting RCS coolant to the tank, and from there, to the atmosphere. The action they took to depressurize the RHR system was inappropriate and taken without the benefit of proper procedures.

Subsequent investigations determined that the inboard cold-leg check valve in question had experienced abnormal wear. The operators appear to have considered possible leakage into the RHR system, such as leakage through check valves and through isolation valves from the chemical and volume control system. However, the action taken did not reflect an awareness of the potential seriousness of such leakage.

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Discussion:

During this event, public safety was not adversely affected at Vogtle Unit 2 because there was no fission product inventory in the reactor. Also, the potential for damage to the RHR system was minimal because the leakage was well within the relieving capacity of the system. However, leakage of RCS coolant into systems such as the RHR system and responses to such events by operators have been sources of longstanding concern because of the potential for the so-called "Event V" or the "interfacing system loss-of-coolant accident." It is important that licensees have proper procedures that will enable operators to take only appropriate actions to respond to unexpected or unexplained pressurization of systems such as the RHR system.

No specific action or written response is required by this information notice. If you have any questions about this matter, please contact the technical contact listed below or the Regional Administrator of the appropriate regional office.



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

Technical Contact: N. Prasad Kadambi, NRR
(301) 492-1153

Attachment: List of Recently Issued NRC Information Notices

LIST OF RECENTLY ISSUED
 NRC INFORMATION NOTICES

Information Notice No.	Subject	Date of Issuance	Issued to
88-75, Supplement 1	Disabling of Diesel Generator Output Circuit Breakers by Anti-Pump Circuitry	4/17/89	All holders of OLS or CPs for nuclear power reactors.
89-40	Unsatisfactory Operator Test Results and Their Effect on the Requalification Program	4/14/89	All holders of OLS or CPs for nuclear power reactors.
89-39	List of Parties Excluded from Federal Procurement or Non-Procurement Programs	4/5/89	All holders of OLS or CPs for nuclear power reactors.
89-38	Atmospheric Dump Valve Failures at Palo Verde Units 1, 2, and 3	4/5/89	All holders of OLS or CPs for nuclear power reactors.
89-37	Proposed Amendments to 40 CFR Part 61, Air Emission Standards for Radionuclides	4/4/89	All U.S. NRC licensees.
89-36	Excessive Temperatures in Emergency Core Cooling System Piping Located Outside Containment	4/4/89	All holders of OLS or CPs for nuclear power reactors.
88-86, Supp. 1	Operating with Multiple Grounds in Direct Current Distribution Systems	3/31/89	All holders of OLS or CPs for nuclear power reactors.
89-35	Loss and Theft of Un-secured Licensed Material	3/30/89	All U.S. NRC byproduct, source and special nuclear material licensees.
89-34	Disposal of Americium Well-Logging Sources	3/30/89	All holders of an NRC specific license authorizing well-logging activities.

OL = Operating License
 CP = Construction Permit

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*SEE PREVIOUS CONCURRENCES
*OGCB:DOEA:NRR *C/SRXB:DEST:NRR
NPKadambi MWHodges
04/04/89 04/04/89

*RPB:ARM *C/OGCB:DOEA:NRR
TechEd CHBerlinger
04/05/89 04/13/89

D/DOEA:NRR
CERossi
04/14/89

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