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UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D. C. 20555

November 5, 1979

IE Information Notice No. 79-26

BREACH OF CONTAINMENT INTEGRITY

Description of Circumstances:

On September 14, 1979, the Consumers Power Company (CPC) notified the NRC of discovery at the Palisades Nuclear Generating Plant of a valve misalignment that had resulted in containment integrity being breached for an indeterminate length of time.

While preparing to perform a Type "C" leak test between two manual valves in a 3" bypass line around the main 48" containment purge valve, plant personnel discovered that both of these manual isolation valves were locked in the open position. These valves should have been locked closed. Investigation by the licensee indicated that the valves may have been improperly positioned since April, 1978, when an efficiency test of the bypass line filters was performed. The plant has operated at power for the major portion of that time period.

The valve misalignment had no actual impact on the public health. However, in the event of a design basis accident wherein fuel damage and release of primary coolant inside the containment are postulated, the open valves would provide a significant path for a radioactive release from the containment.

The initial design purpose for the bypass system was to provide a long term hydrogen control capability for the containment atmosphere following a design basis accident.^{1/} It was intended that after approximately 30 days following an accident, when containment pressure and activity levels dropped sufficiently to permit venting, this system would be manually valved to vent the containment atmosphere, through high efficiency and charcoal filters, to the exhaust stack. Thus the components in the bypass line beyond the two manual isolation valves were not designed for the severe service they would be exposed to with the valves open during the initial pressure surge of the design basis accident, and significant uncontrolled release would result. High radiation in the vicinity of the bypass line would also make immediate closing of the manual isolation valves, even if identified as the source of leakage, an extremely hazardous operation.

The principal cause for this event was inadequacy of the procedures addressing proper use and positioning of these valves. The master containment integrity valve line-up checklist, which is performed prior to each startup from cold

^{1/} Current NRC requirements call for the use of hydrogen recombiners to control hydrogen buildup. Palisades has recombiners installed.

shutdown, did not include these valves. The filter efficiency test for the 3" bypass line did not adequately specify the final position of these valves, and this is the probable cause for the valves being left incorrectly positioned. The valve misalignment represents a case where human factors in the form of inadequate procedures resulted in a loss of safety system function.

CPC has updated the above mentioned procedures to assure that proper positioning of these valves is addressed. Concurrently, CPC is reviewing other paths from containment to assure that procedures and checklists are complete. CPC has also hired a qualified consultant to perform an independent review for the same purpose.

This Information Notice is provided as an early notification of a significant occurrence. It is expected that recipients will review the information for possible applicability to their facilities. No written response is required. If you desire additional information regarding this matter, contact the Director of the appropriate NRC Regional Office.

LISTING OF IE INFORMATION NOTICES
ISSUED IN LAST SIX MONTHS

Information Notice No.	Subject	Date Issued	Issued To
79-14	NRC Position of Electrical Cable Support Systems	6/11/79	All Power Reactor Facilities with a CP
79-15	Deficient Procedures	6/7/79	All Holders of Reactor OLS and CPs
79-16	Nuclear Incident at Three Mile Island	6/22/79	All Research Reactors and Test Reactors with OLS
79-17	Source Holder Assembly Damage From Misfit Between Assembly and Reactor Upper Grid Plate	6/20/79	All Holders of Reactor OLS and CPs
79-18	Skylab Reentry	7/5/79	All Holders of Reactor OLS
79-19	Pipe Cracks In Stagnant Borated Water Systems At PWR Plants	7/17/79	All Holders of Reactor OLS and CPs
79-20	NRC Enforcement Policy NRC Licensed Individuals	8/10/79	All Holders of Reactor OLS and CPs and Production Licensees with Licensed Operators
79-21	Transportation and Commercial Burial of Radioactive Material	9/7/79	All power and research reactors with OL's
79-22	Qualification of Control Systems	9/14/79	All power reactor facilities with operating licenses and construction permits.
79-23	Emergency Diesel Generator Lube Oil Coolers	9/25/79	All power reactor facilities holding OLS and CPs

LISTING OF IE INFORMATION NOTICES
ISSUED IN 1979

Information Notice No.	Subject	Date Issued	Issued To
79-24	Overoressurization Of Containment Of A PWR Plant After A Main Stream Line Break	9/28/79	All power reactor facilities with a CP
79-25	Reactor Trips At Turkey Point Unit 3 And 4	10/1/79	All power facilities with an OL or a CP