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

November 16, 1979

IE Information Notice No. 79-29

LOSS OF NONSAFETY-RELATED REACTOR COOLANT SYSTEM INSTRUMENTATION DURING OPERATION

This notice contains information regarding a loss of reactor coolant system instrumentation as a consequence of a failure of a static transfer switch to transfer to an alternate supply.

At 3:15 p.m. on November 10 with Unit 3 of the Oconee Station at 100 percent power, the main condensate pumps tripped, apparently as a result of a technician performing maintenance on the hotwell level control system. This led to reduced feedwater flow to the steam generators, which resulted in a high reactor coolant system (RCS) pressure reactor trip and simultaneous turbine trip at 3:16:57 p.m. At 3:17:15 p.m., the inverter power supply, nonsafety-related, feeding all power to the integrated control system (ICS) tripped and failed to automatically transfer its loads from the DC power source to the regulated AC power source. The inverter had tripped due to blown fuses, resulting in loss of RCS indicators and recorders in the control room, except one wide range RCS pressure recorder.

This condition existed for approximately three minutes, until an operator could reach the equipment room and switch the inverter manually to the regulated AC source. As a result of the power failure to the ICS, all valves controlled by the system assumed their respective fail positions. This resulted in a cool down of the RCS to 1635 psi and 530 degrees F. The operator, expecting this condition, started all makeup pumps and opened the associated high pressure injection valves to the RCS which limited the rate of RCS pressure reduction and associated reduction in pressurizer level. At 3:20:42 p.m., power was restored to the ICS and RCS conditions were restored.

Although RCS cooldown limits were exceeded, the pressurizer and steam generators did not go dry, and at least 79 degrees F subcooling was maintained during this event. No engineered safety features actuation setpoints were reached, and, except for the components discussed above, no component malfunctions occurred.

The licensee has installed a redundant electromechanical transfer switch between the loads and the regulated supply. This switch will actuate and power the loads from the regulated supply should the original static switch fail to transfer.

Longer term resolution of the need or desirability to separate these instruments onto diverse electrical supplies or to provide redundant instrumentation display channels for operator use from essential power supplies are also under

consideration. It is anticipated that further NRC evaluations will result in issuance of an IE Circular, Bulletin, or NRR Generic letter in the near future which will recommend or request specific applicant or licensee actions.

This Information Notice is provided to inform licensees of a possibly significant matter. It is expected that recipients will disseminate the information to all operational personnel working at their licensed facilities. If you have questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

No written response to this Information Notice is required.

RECENTLY ISSUED  
IE INFORMATION NOTICES

Information Notice No.	Subject	Date Issued	Issued To
79-28	Overloading of Structural Elements Due to Pipe Support Loads	11/16/79	All power reactor facilities with an OL or CP
79-27	Steam Generator Tube Ruptures At Two PWR Facilities	11/16/79	All power reactor facilities holding OLs and CPs
79-12A	Attempted Damage To New Fuel Assemblies	11/9/79	All Fuel Facilities, research reactors, and power reactors with an OL or CP
79-26	Breach of Containment Integrity	11/5/79	All power reactor facilities holding OLs and CPs
79-25	Reactor Trips At Turkey Point Units 3 And 4	10/1/79	All power facilities with an OL or a CP
79-24	Overpressurization Of Containment Of A PWR Plant After A Main Steam Line Break	10/1/79	All power reactor facilities with a CP
79-23	Emergency Diesel Generator Lube Oil Coolers	9/26/79	All power reactor facilities holding OLs and CPs
79-22	Qualification of Control Systems	9/14/79	All power reactor facilities with operating licenses and construction permits.
79-21	Transportation and Commercial Burial of Radioactive Material	9/7/79	All power and research reactors with OL's
79-20 (Rev. 1)	NRC Enforcement Policy NRC Licensed Individuals	9/7/79	All Holders of Reactor OLs and CPs and Production Licensees with Licensed Operators