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

March 31, 1980

IE Information Notice No.: 80-12

INSTRUMENT FAILURE CAUSES OPENING OF PORV AND BLOCK VALVE

Description of Circumstances:

On August 13, 1979, during full, steady-state power operation at the Connecticut Yankee Haddam Neck Plant, the pressurizer power operated relief valve (PORV) and its isolation (block) valve opened as a result of failure of a light source in the sigma bistable of the pressurizer pressure controller. The failure of the light source was equivalent in control system response to an overpressure condition in the pressurizer. By system design both PORV and block valves are closed during normal operation and therefore both valves are required to open in response to an overpressure condition. The opening of the PORV and block valve allowed the pressurizer pressure to drop from its normal value of 2000 psig to 1950 psig before the PORV and block valves could be closed. The operator immediately overrode the open signal to the valves and closed the valves to stop depressurization. The pressurizer pressure then immediately returned to normal.

The light source was subsequently replaced in the bistable and the pressure control system was returned to normal.

The licensee reported that failures of light sources in the bistable of this pressure controller and in other similar plant bistables had been experienced previously. Also, subsequently on February 4, 1980, a spurious signal from the pressure controller caused both PORV and block valve to open. In both events, the operator responded immediately and effectively to limit the consequences of the event to a relatively mild pressure transient on the reactor coolant system. The licensee also indicated that they had changed out the type of bistable with a solid state design which does not depend on a light source and which is expected to be more reliable.

This information is provided as notification of a possibly significant matter. It is expected that recipients will review the information for possible applicability to their facilities. No specific action or response is requested at this time. If you have questions regarding this matter, please contact the Director of the appropriate NRC Regional Office.

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Enclosure

RECENTLY ISSUED  
IE INFORMATION NOTICES

Information Notice No.	Subject	Date Issued	Issued To
80-11	General Problems with ASCO Valves in Nuclear Application Including Fire Protection Systems	3/14/80	All holders of Reactor OL, CP, fuel fabrication and processing facilities
80-10	Partial Loss of Non-Nuclear Instrument System Power Supply During Operation	3/7/80	All power reactor facilities holding OLs and CPs
80-09	Possible Occupational Health Hazard Associated with Closed Cooling Systems	3/7/80	All holders of power reactor OLs and near term CPs
80-08	The States Company Sliding Link Electrical Terminal Block	3/7/80	All power reactor facilities with an OL or a CP
80-07	Pump Shaft Fatigue Cracking	2/29/80	All Light Water Reactor Facilities holder power reactor OLs and CPs
80-06	Notification of Significant Events	2/27/80	All holders of Reactor OLs and to near term OL applicants
80-05	Chloride Contamination of Safety Related Piping	2/8/80	All licensees of nuclear power reactor facilities and applicants and holders of nuclear power reactor CPs
80-04	BWR Fuel Exposure in Excess of Limits	2/4/80	All BWR's holding a power reactor OL or CP
80-03	Main Turbine Electro-Hydraulic Control System	1/31/80	All holders of power reactor OLs and CPs
80-02	8X8R Water Rod Lower End Plug Wear	1/25/80	All BWR Facilities holder power reactor OLs or CPs
80-01	Fuel Handling Events	1/4/80	All holders of power reactor OLs and CPs
79-37	Cracking in Low Pressure Turbine Discs	12/28/79	All power reactor OLs and CPs