

POTENTIAL COMMON MODE FLOODING OF ECCS EQUIPMENT ROOMS AT BWR FACILITIES

Georgia Power Company (GPC), by letter dated March 22, 1978, reported that during a review of the design of the ECCS corner room equipment drain systems at the Hatch facilities, the equipment drain lines for Hatch 1 were found piped into the top of an open 6-inch pipe (standpipe) in each corner room. These corner room standpipes are interconnected by a 6-inch pipe to a common sump in one corner room. This sump has redundant pumps which are powered from different emergency buses. The equipment drain system does not have any isolation valves within any of the piping between corner rooms. Therefore, in the event of a pipe break of sufficient size to flood sump pumps, the other ECCS corner rooms would be subject to flooding via the equipment drain piping.

Since one of the reasons for installing the ECCS equipment in separate, water-tight rooms was to eliminate the potential for common flooding, GPC is "hard piping" all of the equipment drain lines into the side of the corner room standpipe and capping the standpipe. This limits the size of the potential flooding backflow to the small size (approximately 1/2") piping of the equipment leakoff drain line.

The above described design for Hatch 1 and 2 was part of the A-E balance-of-plant design provided by Bechtel.

All holders of reactor operating licenses should assure that similar pathways, which could lead to common flooding of redundant equipment, do not exist in their facilities. It is recommended that the following items be considered in your review of this matter:

1. The specific design and installation for floor and equipment drains should be reviewed to verify that a flood in any one room or location would not result in flooding redundant equipment in other ECCS equipment rooms or in areas at a lower elevation.
2. If your installation depends on isolation valves and limit switches to prevent common flooding, your surveillance program should be reviewed to verify adequate maintenance of protection. Your Technical Specifications should be reviewed to assure that necessary surveillance of isolation valves, level switches, or sump pumps are included as appropriate.

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IE Circular No. 78-06

Date: May 25, 1978

Page 2 of 2

3. Your administrative controls should also be reviewed to assure that separation criteria is maintained and water tight doors and/or hatches are closed as appropriate.

This circular is also issued to holders of construction permits for information or use as appropriate to the status of plant construction.

No written response to this circular is required. If you require additional information regarding this matter, contact the Director of the appropriate NRC Regional Office.

IE Circular No. 78-06
May 25, 1978

LISTING OF IE CIRCULARS ISSUED IN 1978

Circular No.	Subject	Date of Issue	Issued To
78-01	Loss of Well Logging Source	4/5/78	All Holders of Well Logging Source Licenses
78-02	Proper Lubricating Oil for Terry Turbines	4/20/78	All Holders of Reactor Operating Licenses (OL) or Construction Permit (CP)
78-03	Packaging Greater Than Type A Quantities of Few Specific Activity Radioactive Material for Transport	5/12/78	All Holders of Reactor Operating Licenses (OL), Construction Permits (CP), Fuel Cycle, Priority I Material and Waste Disposal Licenses
78-04	Installation Error That Could Prevent Closing of Fire Doors	5/15/78	All Holders of an NRC Operating License (OL) or Construction Permit (CP)
78-05	Inadvertent Safety Injection During Cooldown	5/23/78	All Holders of an NRC Operating License (OL) or Construction Permit (CP)