



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

January 17, 1977

MEMORANDUM FOR: A. Schwencer, Chief, Operating Reactors Branch #1, DOR
D. Ziemann, Chief, Operating Reactors Branch #2, DOR
G. Lear, Chief, Operating Reactors Branch #3, DOR
R. Reid, Chief, Operating Reactors Branch #4, DOR

FROM: Karl R. Goller, Assistant Director for Operating Reactors,
DOR

SUBJECT: FLOODING OF TURBINE BUILDING

Recently the NRC staff reviewed the turbine building flooding incident which occurred at Oconee Nuclear Station on October 10, 1976. The attached enclosure is a draft DOR to DSS "feedback memorandum" which describes the details of this incident, including the interim corrective action which has been taken by the licensee.

The Oconee flooding incident occurred as a result of the inadvertent opening of a main condenser isolation valve in the circulating water system while the condenser was open for maintenance. The fact that flooding of the turbine building continued until the valve could be repositioned raised concerns regarding the consequences of an unisolable break in the circulating water system piping inside the turbine building. A preliminary review indicates that this potential problem may be unique to the Oconee Nuclear Station in that the elevation differential between the main condenser (775 feet MSL) and the source of circulating water (800 feet MSL) at Oconee provides a driving force for continued water flow into the turbine building should an unisolable piping break occur. It should be noted that, if a facility's main condenser is located at an elevation higher than that of the source of circulating water, the adverse consequences of an unisolable break in the circulating water piping would be minimized.

Due to the significance of this concern, it is desirable to conduct a more detailed investigation to determine if the problem is unique to Oconee or not. Therefore, ORPMs should examine any available information on this generic technical issue for their assigned facilities (many licensees responded to this concern in late 1972 or early 1973) to determine:

- a. If there has been any previous consideration of the potential consequences of a break in the circulating water system piping.
- b. Whether these considerations were limited to the failure of seals and/or expansion bellows in the circulating water system or if pipe ruptures anywhere in the system, including unisolable locations, were considered.

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Y Y
N N
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B	T
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c. If the facility's main condenser and/or any of the circulating water piping within the turbine building are located at an elevation lower than that of the source of circulating water.

ORPMs should provide a written summary of their findings to John Guibert, DOR coordinator for this effort, by January 31, 1977.

Karl R. Goller

Karl R. Goller, Assistant Director
for Operating Reactors
Division of Operating Reactors

Enclosure:
Draft Feedback Memorandum
Regarding the Turbine
Building Flooding Incident
at Oconee Nuclear Station

cc: V. Stello
D. Eisenhut
W. Butler
B. Buckley
J. Reece
ORPM's