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

MAY 2 3 1980

MEMORANDUM FOR: Harold R. Denton, Director
Office of Nuclear Reactor Regulation

JM: Carl Michelson, Director
Office for Analysis and Evaluation of
Operational Data

SUBJECT: LESSONS LEARNED FROM THE CRYSTAL RIVER TRANSIENT OF FEBRUARY 26, 1980 - CORRECTING ATMOSPHERIC DUMP VALVE OPENING UPON LOSS OF ICS POWER

At an April 24, 1980 meeting, Florida Power Corporation presented a list of items to be completed prior to restart of Crystal River Unit No. 3. One item, number 1.35, commits to:

> "Provide override closure of atmospheric dump valves upon loss of ICS power."

Florida Power noted that the atmospheric dump valves on their plant open halfway upon ICS power failure. Such a failure, coupled with an absence of atmospheric dump valve position, can significantly aggrevate an overcooling transient which is initiated by a loss of NNI/ICS power. (It should be noted that during the meeting Florida Power stated that they are planning to install ADV position indication which is powered by the NNI power supply.)

At that meeting, my staff asked whether or not the opening of the ADV's upon loss of ICS power is a design feature common to other B&W plants. The B&W representatives (B. J. Short and E. Kane) indicated that they did not know.

My staff has reviewed Arkansas Power and Light Company's "Emergency Feedwater System Reliability Study," submitted to NRC on December 20, 1979. It states that:

> "The dump valves fail to about 50% open on loss of control signal" (page 8).

It is not clear to AEOD which other B&W plants have the same design deficiency, and whether or not they have reliable ADV position indication available to the operator.

AEOD is in agreement with Florida Power that the aforementioned ADV design deficiency should be corrected expeditiously; however, the question of reliable ADV position indication has not, as yet, been addressed. AEOD requests that NRR take action to determine if the ADV design deficiency, which is apparent at Crystal River 3 and Arkansas One, Unit 1, is present at other plants, and assure that this deficiency is corrected on a timely basis. AEOD also requests that NRR address the issue of the reliability of ADV position indication and its effect upon controlling the B&W plants during overcooling and undercooling transients.

Carl Michelson

Carl Michelson, Director
Office for Analysis and Evaluation
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