

HELPING BUILD ARKANSAS

ARKANSAS POWER & LIGHT COMPANY

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March 9, 1982

DONALD A RUETER DIRECTOR TECHNICAL AND ENVIRONMENTAL SERVICES

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Mr. Darrell G. Eisenhut, Director Division of Licensing Office of Nuclear Reactor Regulation U. S. Nuclear Regulatory Commission Washington, D. C. 20555

NEO

SUBJECT: Arkansas Nuclear One - Unit 1 Docket No. 50-313 License No. DPR-51 Makeup Line Component Cracking Concern (File: 1510)

Gentlemen:

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PDR

As a result of discussions with yourself and other NRC Staff members on March 8, 1982, AP&L is submitting formal documentation of our review and results on the recent Crystal River-3 and Oconee 2 and 3 makeup line cracking phenomenon. AP&L has been in close communication with B&W and other B&W owners since the initial discovery of makeup line cracks at Crystal River-3. This communication has continued throughout the discovery of a similar situation at Oconee 2 and 3, finally resulting in activation of the Regulatory Response Group which met with the NRC on March 8, 1982. AP&L firmly believes the actions that have been taken to inform our plant operators, management organization, engineering organization and licensing staff have ensured timely and appropriate decisions to be made on this matter.

Based on the information received to date. AP&L has determined that there is adequate assurance to justify interim operation of ANO-1 until the upcoming scheduled outage in late March (currently scheduled for March 26, 1982). Our determination of the above conclusion is based on four (4) specific items. The first item is that the makeup line cracks discovered so far have been on plants that had the possibility of allowing makeup flow to decreas_ below the 1.5 gpm limit assumed in the original design analysis by B&W. ANO-1 has operated the makeup system such that the lowest flow seen since commercial operation in 1974 has been approximately 22 gpm which is well above the B&W design assumptions. The normal average makeup flow rate has been about 30 gpm which would minimize the potential impact of thermal transients.

MEMBER MIDDLE SOUTH UTILITIES SYSTEM



Mr. Darrell G. Eisenhut

The second item that may have contributed to the makeup line cracks at Crystal River-3 was the location of the check valve up against the reactor coolant system nozzle safe-end weld. B&W assumed this valve to be located at least 4" away from the safe-end area in the design analysis. ANO-1 has a separation of the safe-end to valve of greater than 9 feet. Therefore, we meet the B&W design analysis assumptions for valve to safe-end separation.

The third item that has come out of the recent examinations at Crystal River-3 is that the cracks propagate at a slow rate and would be expected to leak before a break occurred. Our normal leakage detection system would detect the onset of a leak from a crack of this nature which should allow adequate time to reach a safe shutdown condition while not exceeding normal makeup capacity. With our next planned outage approximately 2½ weeks away we are assured that the phenonema, if it existed, would not degrade rapidly enough in that short time frame to cause catastropic failure. Also, our operations personnel have been informed of the situation and are well aware of what actions to take if a leak does occur. The operators would not be required to take any different actions than before they were informed, but they are aware of the potential for occurrence.

The fourth item is that ANO-1 has had Inservice Inspections performed on the makeup HPI nozzle safe-end weld area as well as the remaining three HPI nozzle safe-end weld areas. The makeup HPI safe-end weld ('D' RCP) and one of the HPI safe-end weld areas ('C' RCP) were inspected using ultrasonic (UT) and radiographic (RT) techniques in 1977. The remaining two HPI nozzle safe-ends ('A' & 'B' RCP) were inspected in 1978. One indication on the 1978 inspection of the 'B' HPI nozzle safe-end weld was found, but was determined to be acceptable at that time. Base line dye penetrant (PT) and UT examinations were performed on all four HPI nozzle safe-end weld areas.

The AP&L Plant Safety Committee and Safety Review Committee concluded in a joint meeting on March 9, 1982, that the above four items provide adequate basis for continued operation of ANO-1 at least until the planned outage currently scheduled for March 26, 1982. During this outage AP&L plans to inspect all four HPI safe-end weld areas using RT and UT techniques. Any further work will be done as deemed appropriate in light of additional findings between now and the ANO-1 planned outage. Our continued communications with B&W and other B&W owners will assure adequate transfer of information on which to base our decisions.

Very truly yours,

Donald A. Rueter

DAR: LDY: SC