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ARKANSAS POWER & LIGHT COMPANY
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October 27, 1978

1-108-14

Director of Nuclear Reactor Regulation
ATTN: Mr. R. W. Reid, Chief
Operating Reactor Branch #4
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Subject: Arkansas Nuclear One - Unit 1
Docket No. 50-313
License No. DPR-51
ECCS Small Break Long-Term
Modification
(File: 1510, 0520)

Gentlemen:

Our letter of July 20, 1978, on the above subject, proposed our long-term ECCS modification and requested your approval of the modification. Although your response of September 26, 1978, did not specifically address our proposal, it provided staff positions that we could utilize in determining the acceptability of our proposal.

Following evaluation of the staff positions, we determined that, with possible small modification, our proposed modification would meet those positions. However, as we began to develop our detailed engineering design, we determined that another modification, that meets your positions, could be made at an improved cost/benefit to AP&L. The staff was informed of this decision by a telecon on October 10, 1978, in accordance with your letter of September 26, 1978. The conceptual design of the new modification is as follows.

Attached is a diagram of the ANO-1 High Pressure Injection (HPI) system with the proposed modifications shown in bubbles. The modification consists of adding a 3" cross tie between HPI lines to P32A - P32D and P32B - P32C. Downstream of each of the cross ties are flow restriction orifices. These orifices will be sized such that equal flow balance in all four HPI lines is achieved and HPI pump run out is precluded.

This proposed modification meets the staff positions of your September 16, 1978, letter as no operator action will be required and is consistent with and meets all the assumptions of our ECCS Small Breaks Analysis submitted to you by our letter of October 17, 1978.

Our intent is to implement this modification during our next refueling outage (currently scheduled for March, 1979) however, to support our implementation schedule, it is imperative that we receive staff concurrence of this proposal by December 1, 1978. Failure of the staff to approve

AP&L
10/31/78*

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Mr. R. W. Reid

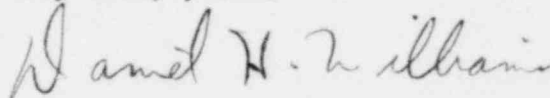
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this modification by this date will seriously impact our ability to implement this modification during the outage and could preclude it completely.

Your letter of May 10, 1978, asked us to inform you if we utilized any throttle valves to obtain required flow distribution in the HPI systems. In response, the above modification will preclude throttling the HPI flow with valves as flow distribution will be achieved by the flow restricting orifices.

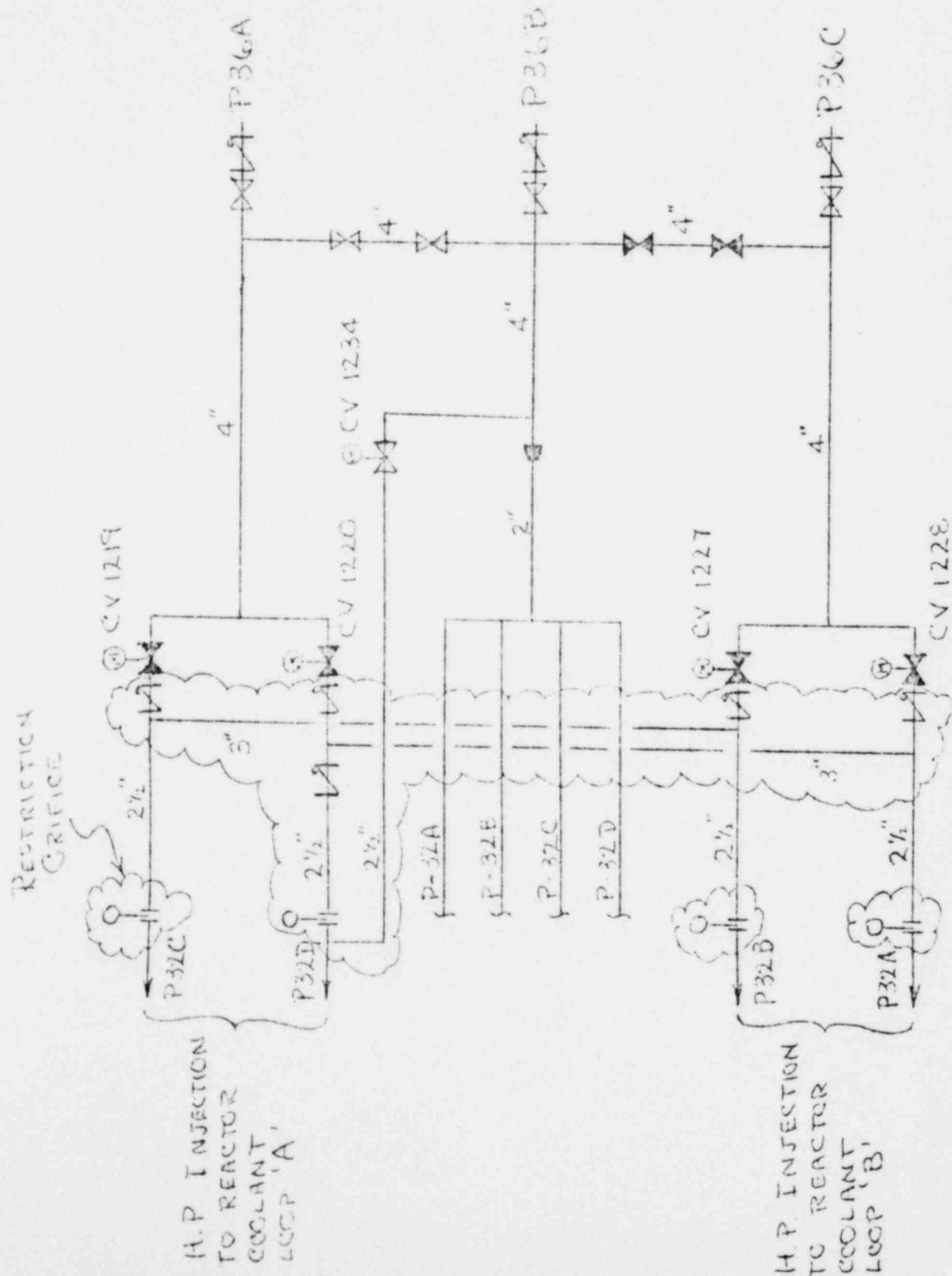
Very truly yours,

A handwritten signature in cursive script, reading "Daniel H. Williams".

Daniel H. Williams
Manager, Licensing

DHW:JTE:vb

Attachment



MECHANICAL SOLUTION TO SMALL BREAK ECCS