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Director of Nuclear Reactor Regulation  
ATTN: Mr. J. F. Stolz, Chief  
Operating Reactors Branch #4  
Division of Licensing  
U. S. Nuclear Regulatory Commission  
Washington, D. C. 20555

Subject: Arkansas Nuclear One - Unit 1  
Docket No. 50-313  
License No. DPR-51  
Operability of Pressurizer Safety Valves

Gentlemen:

The purpose of this letter is to document AP&L's position relative to the operability of the pressurizer safety valves installed on ANO-1. This issue has recently received increased attention due to a determination by Duke Power Company on October 14, 1982, that the Dresser safety valves on Ocone 2 were inoperable. Ocone 2 was subsequently shut down to perform adjustments on these valves. This decision was based on data obtained from the EPRI Relief and Safety Valve test program. This test program was established to address NRC concerns relative to safety and relief valve performance documented in NUREG 0737.

As described via letter from Mr. J. H. Taylor of B&W to Dr. R. C. DeYoung of the NRC dated October 15, 1982, the data examined which led to this concern was for valve models 31739A and 31709NA, manufactured by Dresser Industry. A recent review indicated that for certain adjustment ring settings and back pressure conditions, full design capacity may not be achieved. In addition, at extreme ring settings, valve chatter could occur.

The final results of the EPRI test program were submitted to the NRC via letter dated April 1, 1982, from Mr. David Hoffman of Consumers Power Company. These results were later referenced on the ANO-1 docket by letter dated July 28, 1982, (1CAN078211). It should be noted that the safety valves installed on ANO-1 are Dresser model 31759A valves, which are intermediate in size compared to the model 31739A and 31709NA tested in the EPRI program. Therefore, optimum adjustment ring settings are not directly available from the EPRI test data, nor can degradation of valve capacity be quantitatively determined for given adjustment ring settings. As noted in our July 28, 1982, letter, however, AP&L has been continuing in our efforts to evaluate the effects of ring settings on valve performance. This involves a cooperative effort with other B&W owners to develop analytical

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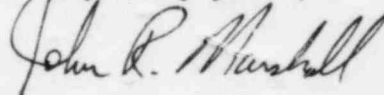
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models which could be used to extrapolate from the EPRI data to obtain plant specific valve adjustments.

In the interim AP&L has determined, by a review of AP&L and vendor documentation, the current safety valve adjustment ring settings and has compared these settings to EPRI data for similar settings on the larger and smaller valves. Based on this review, we conclude the ANO-1 pressurizer safety valves will perform satisfactorily. Specifically, the adjustment rings are not in a range where valve chatter and resultant mechanical damage would be expected. Although there may be some reduction in valve capacity, we do not feel that such reduction would prevent the valves from performing their intended function. As discussed in B&W's October 15, 1982, letter, only a small percentage of the flow from one valve is needed for moderate frequency events. Calculations also indicate that even a postulated rod withdrawal from low power would require full capacity from only one valve (or fifty percent capacity from each valve). This event is the basis for ANO-1 Technical Specification 3.1.1.3, which requires these valves to be operable. ANO-1 is currently operating with all rods out during an end of cycle coastdown. Based on our review of the EPRI data we do not feel that flow reductions below fifty percent capacity are probable with our current valve adjustments.

The information discussed above was reviewed by the ANO-1 Plant Safety Committee (PSC) on Friday, October 15, 1982. The PSC determined the safety valves to be operable as required by Technical Specification 3.1.1.3. Therefore we do not plan to take further action at this time. We are, however, continuing in our efforts to utilize the results of the EPRI test data to determine optimum, plant specific, valve adjustments. As this work continues we will make adjustments to the safety valves as needed.

Very truly yours,



John R. Marshall  
Manager, Licensing

JRM:DH:rd