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F. L. CLAYTON, JR.  
Senior Vice President



November 4, 1980

Docket No. 50-364

Director of Nuclear Reactor Regulation  
U. S. Nuclear Regulatory Commission  
Phillips Building, Room 116  
7920 Norfolk Avenue  
Washington, D. C. 20555

Attention: Mr. A. Schwencer

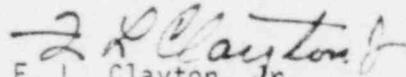
JOSEPH M. FARLEY NUCLEAR PLANT - UNIT 2  
CONTAINMENT PURGE VALVE OPERABILITY

Dear Mr. Schwencer:

As a result of discussions with your Staff concerning the operability of the 18-inch containment mini-purge valves, the NRC Staff transmitted two additional questions concerning containment purge valve operability. Enclosed are the responses to these questions.

Should you have any questions, please advise.

Yours very truly,

  
F. L. Clayton, Jr.

RWS:rt

Enclosure

cc: Mr. R. A. Thomas  
Mr. G. F. Trowbridge  
Mr. L. L. Kintner  
Mr. W. H. Bradford

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## NRC PURGE VALVE OPERABILITY QUESTIONS

### 1. QUESTION:

Have each of the valve installations, relative to the piping configuration and flow direction, been reviewed to assure that the dynamic torque coefficients ( $C_T$ ) developed by H. Pratt during model valve flow tests are applicable to the Farley 1 & 2 valves?  $C_T$  can be affected by flow direction through the valve (offset disc) shaft orientation relative to these close proximity upstream elbows.

### RESPONSE:

Henry Pratt Company has reviewed the installation of each containment mini-purge isolation valve, with respect to the piping configuration and LOCA flow direction, to verify that the installed configurations do not in any way invalidate the results of our previously submitted mini-purge valve closure analysis. Henry Pratt has also reviewed the Allis-Chalmers Valve Closure Report which was submitted as part of Docket No. 50-409 for the La Crosse Boiling Water Reactor.

Henry Pratt compared the results and methodology of the mini-purge valve closure analysis to those of the Allis-Chalmers report, to verify that our mini-purge valve closure analysis is conservative. A calculation was performed using the torque coefficient of the worst case configuration of the Allis-Chalmers Report (i.e., elbow immediately upstream of valve, valve shaft  $90^\circ$  out of plane of piping, and curved side of disc upstream). This calculation, using the disc thickness ratio for the Henry Pratt valves and the Allis-Chalmers torque calculation, resulted in a lower computed maximum torque than that previously reported for our valves. Henry Pratt's review of the installed configuration verified that all

of the Farley Plant mini-purge valves are installed in configurations which are less severe than the worst case Allis-Chalmers configuration outlined above.

It is Henry Pratt's conclusion that our actual valve installations are acceptable and that our previously submitted closure analysis presents results which are conservative with respect to the Allis-Chalmers data.

2. QUESTION:

Do the elastomeric parts in the operators have a qualified design life where periodic replacement is required?

RESPONSE:

The only elastomeric parts on the Bettis operators are the actuator seals. The actuator seals are qualified as described in our letter of September 30, 1980. Bettis recommends replacement of the actuator seal kits on a regular basis with intervals not to exceed five years. This five year replacement cycle is based on industry standards for minimizing maintenance work and associated equipment down time. This replacement interval is not required to maintain a qualified material design life. Alabama Power Company will, however, replace the actuator seals every five years as recommended by Bettis.