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Norman W. Curtis
Vice President-Engineering & Construction-Nuclear
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JAN 25 1984

Dr. Thomas E. Murley
Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, PA 19406

SUSQUEHANNA STEAM ELECTRIC STATION
RHR SYSTEM THROTTLING VALVES F017A & F017B
ER 100450/100508 FILE 821-10/1029 Docket Nos. 50-387
PLA-2045 50-388

References: (1) PLA-977 dated 12/14/81
(2) PLA-1045 dated 3/26/82
(3) PLA-1583 (LER 83-034) dated 3/18/83
(4) PLA-1653 (LER 83-056) dated 5/6/83
(5) PLA-1742 (LER 83-091) dated 7/8/83
(6) PLA-1928 dated 11/17/83
(7) IE Information Notice 83-55 dated 8/22/83
(8) Inspection Report 388/83-29

Dear Dr. Murley:

This letter and its attachment provide followup information regarding a modification to the RHR F017A and F017B valves to enable operation of these valves in the shutdown cooling mode without adverse cavitation and vibration at low flow rates. This deficiency was originally reported by telephone to Mr. E. C. McCabe of NRC Region I on November 12, 1981 by Mr. A. R. Sabol of PP&L. Reports pursuant to 10CFR50.55(e) were provided in References (1) and (2).

Very truly yours,

N. W. Curtis
Vice President-Engineering & Construction-Nuclear

Attachment

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Copy to:
Mr. Richard C. DeYoung (15)
Director-Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Mr. G. McDonald, Director
Office of Management Information & Program Control
U.S. Nuclear Regulatory Commission
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Mr. Gary Rhoads
U.S. Nuclear Regulatory Commission
P.O. Box 52
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Records Center
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
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FOLLOWUP INFORMATION
ON RHR SYSTEM THROTTLING VALVES F017A & F017B

Subject

Anchor/Darling Valve Co. globe valves used in throttling service within the Residual Heat Removal (RHR) Systems on Susquehanna Units 1 & 2.

Introduction

A description of the circumstances, cause, and an analysis of the safety implications is included in Reference (6). A description of the interim corrective actions for the F017A and F017B valves was also provided in Reference (6) and was reviewed by your Mr. L. Narrow in Reference (8).

Reference (6) committed to providing the final corrective action and target dates for completion of modifications to enable operation of the F017 valves on Units 1 & 2 in the shutdown cooling mode at low flows without adverse cavitation and vibration. The remainder of this letter discusses the details of this modification.

Corrective Action

The RHR F017A and F017B valves on Units 1 & 2 will be replaced with velocity drag control valves maufactured by Control Components Inc. These valves divide the flow into many parallel streams. Each stream is a tortuous path and the resistance encountered on each path is designed to limit exit velocities while eliminating cavitation. It is expected that the present F017A and F017B valves will be replaced on Units 1 & 2 during their respective first refueling outages.

Conclusion

Interim measures discussed in Reference (6), including flowrate limits, essentially eliminate adverse valve cavitation and the resultant vibration. These interim measures are adequate for operation of the F017 valves until the present valves can be replaced.