



# Duquesne Light

Beaver Valley No. 2 Unit Project Organization  
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Oct. 29, 1986

United States Nuclear Regulatory Commission  
Region I  
631 Park Avenue  
King of Prussia, PA 19406

ATTENTION: Dr. Thomas E. Murley  
Administrator

SUBJECT: Beaver Valley Power Station - Unit No. 2  
Docket No. 50-412  
IE Bulletin 85-01  
Steam Binding of Auxiliary Feedwater Pumps

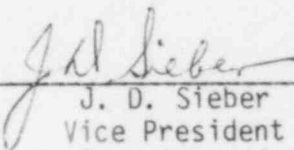
Gentlemen:

In response to the IE Bulletin 85-01, dated October 29, 1985, the attached report is submitted regarding steam binding of auxiliary feedwater pumps.

If you have any questions regarding this submittal, please contact me or members of my staff.

DUQUESNE LIGHT COMPANY

By

  
\_\_\_\_\_  
J. D. Sieber  
Vice President  
Nuclear Operations

RJW/ijr  
NR/FEEDWTR/PMP  
Attachment  
AR/NAR

cc: Mr. P. Tam, Project Manager (w/attachment)  
Mr. J. M. Taylor, Director (3) (w/attachment)  
Mr. J. Beall, Sr. Resident Inspector (w/attachment)  
Mr. L. Prividy, NRC Resident Inspector (w/attachment)  
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## ATTACHMENT

### Action Item No. 1:

The BVPS Unit 2 daily log has a space for a "hands on" check for monitoring fluid conditions of the Auxiliary Feedwater System. The daily check has been determined to be adequate since:

- (a) The system has separate trains, therefore, backleakage through one train cannot affect availability of the other train.
- (b) Each auxiliary feedwater pump is provided with an automatic recirculation control (ARC) valve which functions as a check valve (spring-loaded) when the pump is not operating. The spring-loaded check valve is designed to prevent back flow through the pump, and does not depend on high differential pressure for tight shutoff. In addition to the spring-loaded check valves, there are two swing check valves in each discharge header. Steam binding resulting from backleakage could only occur if the ARC valve and both swing check valves in series with it failed.
- (c) BVPS Unit 1, having a design similar to that of the BVPS Unit 2 Auxiliary Feedwater System, has experienced no problems with backleakage.
- (d) Each auxiliary feedwater discharge header has an average of 147 feet of uninsulated pipe to provide for heat dissipation, therefore, the effects of backleakage would be minimized.

### Action Item No. 2:

The BVPS Unit 2 Operating Manual will have a procedure to recover the Auxiliary Feedwater System to full operable status should steam binding occur. The Training Department has included the following topics in the auxiliary feedwater lesson plan: consequences of backleakage and steam binding, identification of steam binding, and correction of valve leakage problems.

### Action Item No. 3:

Present procedural controls for monitoring the fluid conditions within the BVPS Unit 2 Auxiliary Feedwater System, as described in Action No. 1, will remain in effect.

BVPS Unit 2 has performed a review of the BVPS Unit 2 Auxiliary Feedwater System in regard to steam binding, and does not recommend hardware modification changes since the present design does not appear to be susceptible to steam binding.

### Schedule

The procedures described in the action item responses above are approved or will be developed and approved prior to fuel load at BVPS-2.