

From: Patrick Loudon *Bill*  
To: Harold Chernoff *MR*  
Date: Tue, Jun 29, 2004 9:13 AM  
Subject: Fwd: Point Beach AFW Recirc Valve Pneumatic Capacity

*Bill*

*release*

*H-37*

**From:** Paul Krohn  
**To:** Burgess, Sonia; Loudon, Patrick > R111  
**Date:** Mon, Jun 28, 2004 6:55 PM  
**Subject:** Point Beach AFW Recirc Valve Pneumatic Capacity

Pat and Sonia,

The Site Director of Operations (McCarthy) brought to my attention an issue that a PB engineer had discovered during preparation of a revision to a calculation for the nitrogen backup system for the MDAFWPs. It was discovered that the AFW recirculation AOVs are not set up in conformance with the calculation of record. This issue applies to both the TDAFWP and the MDAFWP.

Both calculations require that the AOVs be set such that there is a 1/4" gap between the actuator frame and the diaphragm housing. This sets the dead volume of the actuator, a value that is an input to the calculation which determined the required capacity of the accumulators to provide 10 strokes/hour of the recirculation valves for 2 hours.

Actual walkdown of the installed configuration in the field has revealed gaps ranging between 7/8" to 1 and 7/8."

Using the worst case stroke volumes (600 cubic inches of air) the following results are obtained;

1) the TDAFWP would require a 211 gallon accumulator to provide 10 strokes/hour for 2 hours. The actual accumulator has a volume of 150 gallons.

2) the MDAFWP would require nitrogen bottles to be changed out at 1927 psig. The current log spec requires change out at 1850 psig.

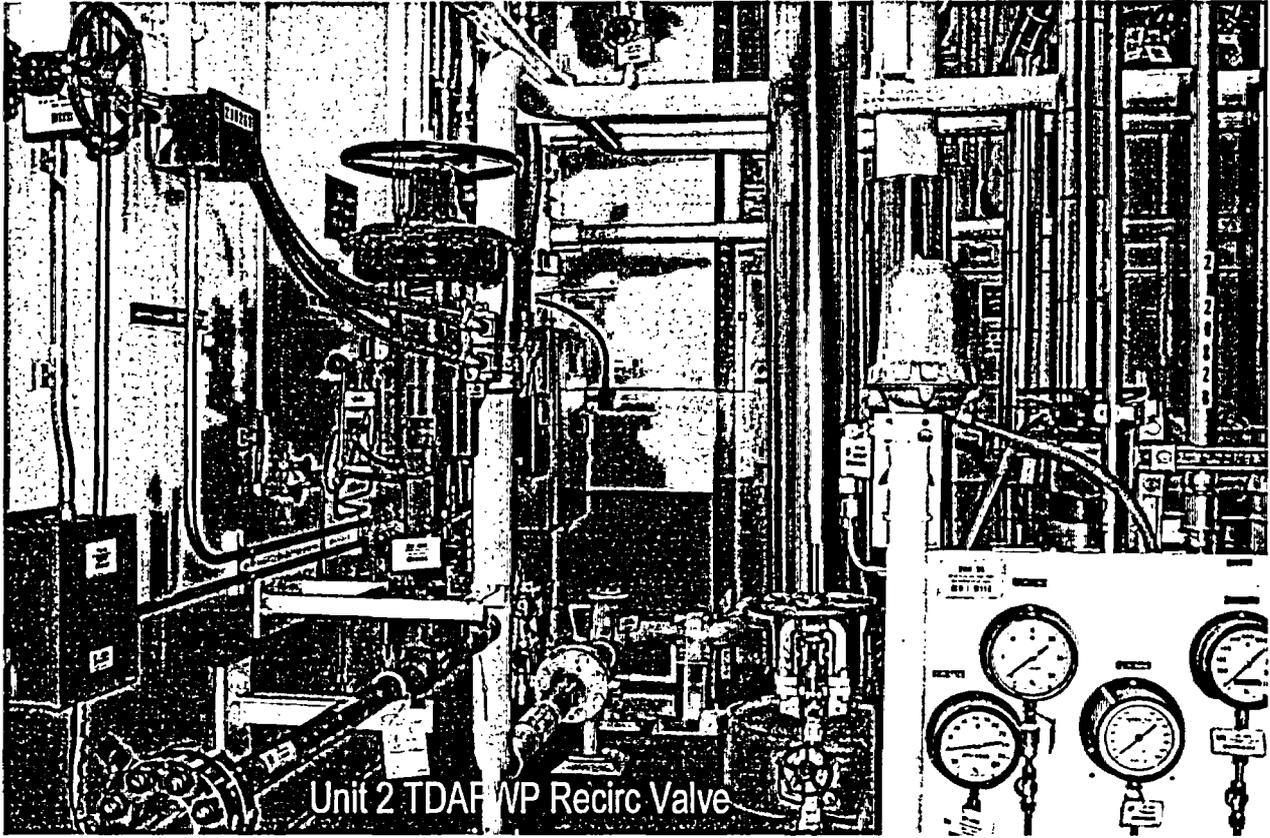
I have talked to the shift manager and the AFW system has been called operable-but-nonconforming since the pneumatic backup system can still function but not to the number of valve strokes assumed in the calculation. Operations has required engineering to perform a 24-hour operability determination. This operability determination is due tomorrow at 3:00 pm.

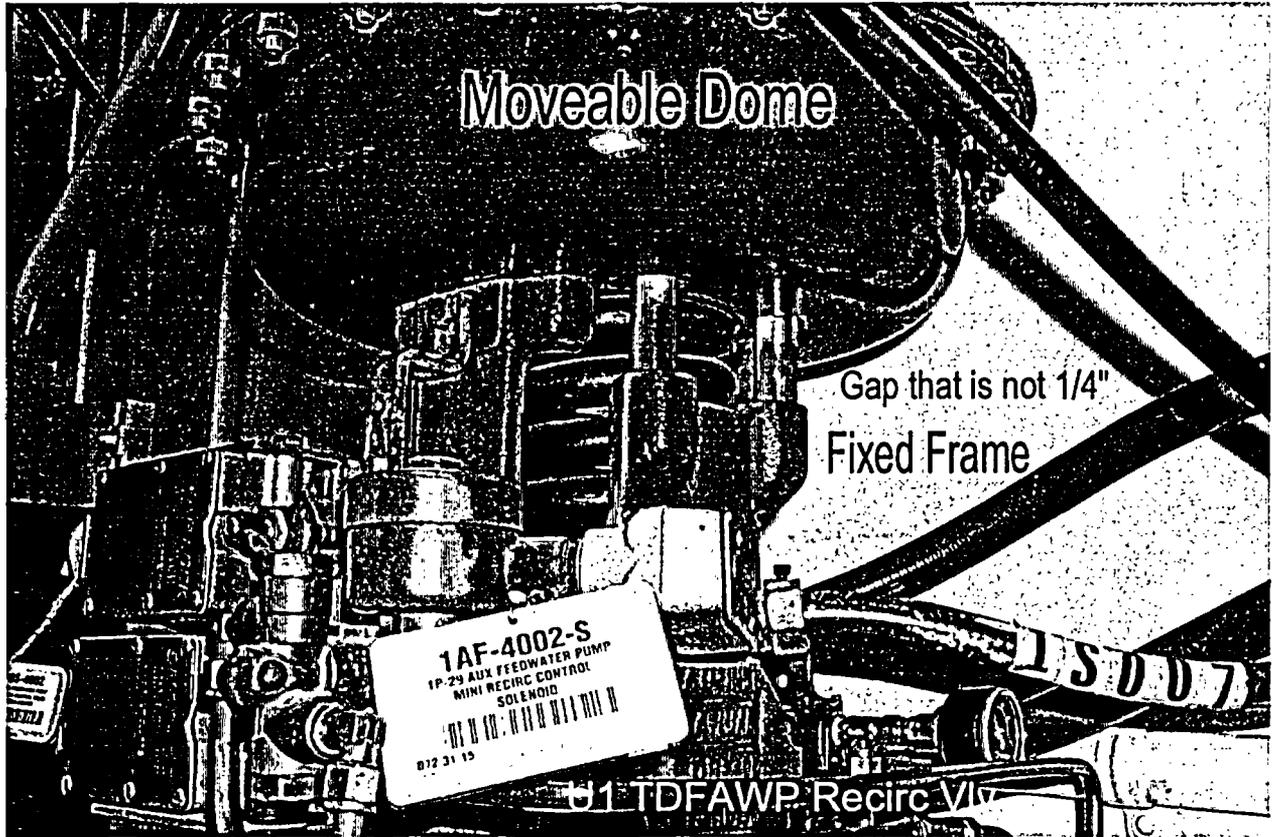
I will continue to collect information on this matter. The SSDI team Lead (Sonia Burgess) has also been made aware of this issue. For the moment, it appears that the original capacity calculation for the accumulators and backup bottles had an erroneous design input (1/4" gap) that did not match the as-built configuration in the field.

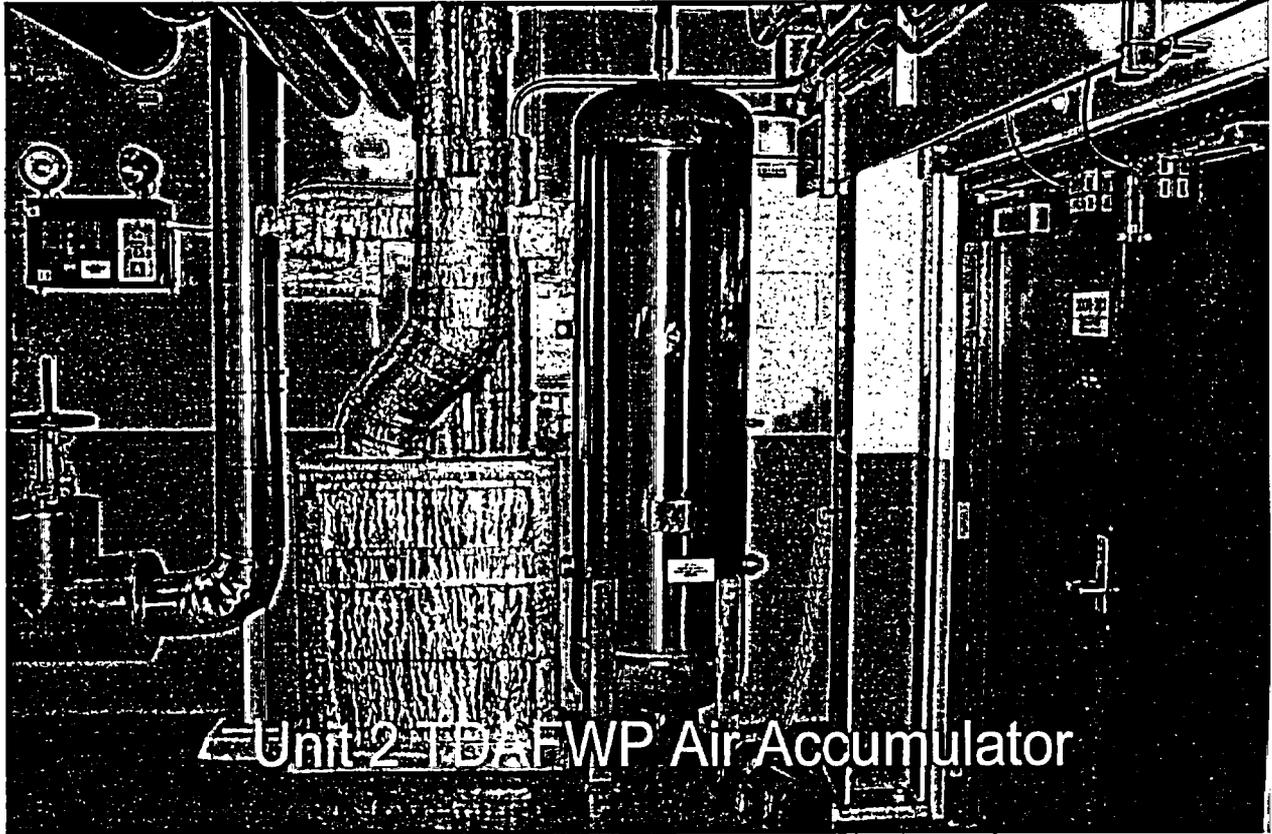
I don't believe this is an immediate operability concern but do think it reflects on the rigor of the design modification and work package that installed the backup air supply to the recirculation AOVs and past licensee AFW corrective actions. More to follow.

Paul Krohn, SRI  
Point Beach

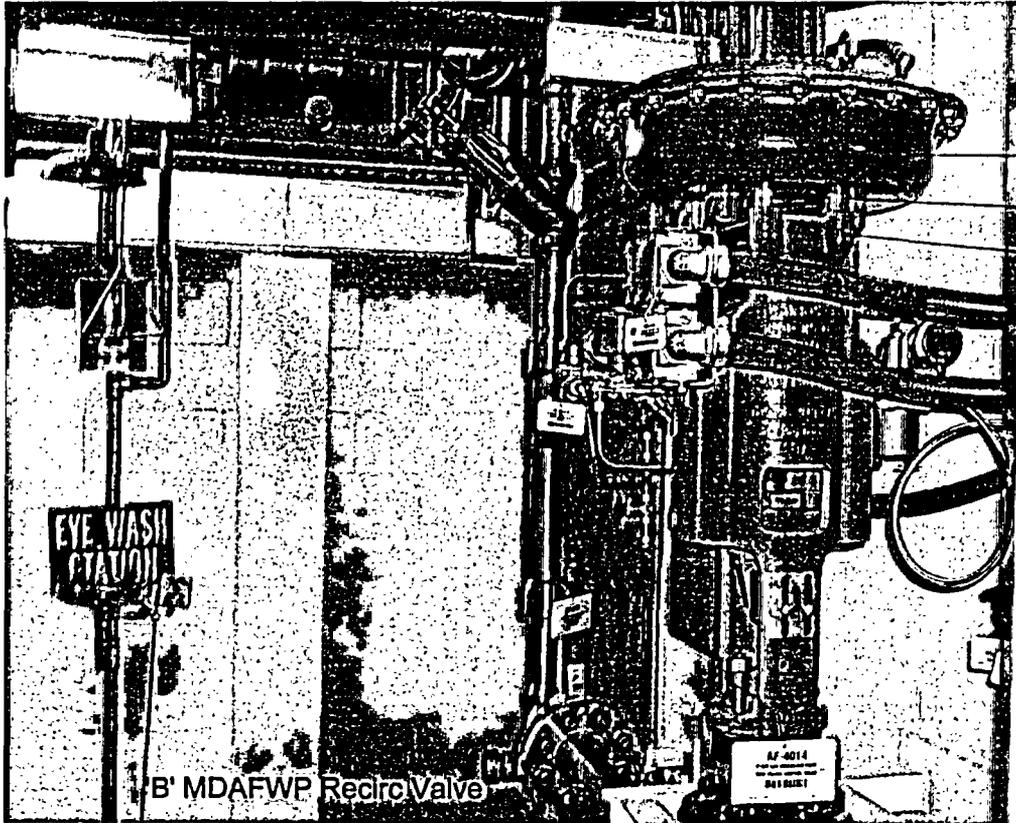
**CC:** Cameron, James; Kunowski, Michael; Morris, R. Michael; Stone, Ann Marie







Unit 2 TBAFWP Air Accumulator



Moves  
Gap  
Fixed

'B' MDAFWP Recirc Valve