BALTIMORE GAS AND ELECTRIC COMPANY

P. O. BOX 1475

BALTIMORE, MARYLAND 21203

March 5, 1981

ARTHUR E. LUNDVALL, JR.
VICE PRESIDENT
SUPPLY

Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Attn: Mr. Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing

Subject: Calvert Cliffs Nuclear Power Plant
Units Nos. 1 & 2, Dockets Nos. 50-317 & 50-318
NRC Requirements for Auxiliary Feedwater System

References: (a) Ltr. from Eisenhut to Lundvall dated 11/7/79, same subject.
(b) Ltr from Lundvall to Clark dated 11/18/80, same subject.
(c) Ltr from Ash to Conner dated 2/2/81, AFT System Modifications

Gentlemen:

Recommendation GL-2 of reference (a) required that licensees with plants in which the primary AFW system water supply passes through valves in a single flow path, but the alternate AFW system water supplies connect to the AFW system pump suction piping downstream of the above valve(s) should install redundant valves parallel to the above valve(s) or provide automatic opening of the valve(s) from the alternate water supply upon low pump suction pressure. Reference (c) informed the NRC as to how we were going to modify the AFW suction piping to comply with this recommendation.

With the entire plant undergoing an analysis by the Interim Reliability Evaluation Program task force, we decided to determine the impact on system unavailability of various proposed modifications to the suction piping line up of the AFW system. The analysis resulted in the following:

	T1	T2
Present System	5.9×10^{-3}	1.2×10^{-2}
Modification A	7.4×10^{-5}	7.7×10^{-5}
Modification B	6.7×10^{-5}	7.1×10^{-5}

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The above numbers represent the unavailability of the AFW system during two different transients. T1 involves a demand for the AFW system in which there are no special circumstances. T2 transients are demands for AFW system when there has been a steam generator (S/G) rupture, i.e. loss of one S/G. Modification A includes those design changes discussed in references (b) and (c) with the excention of installing the bypasses around 1-AFW-161 and 2-AFW-161 (see attached drawing for valve location). Modification B presents the decrease in unavailability obtained by installing the bypasses around the above mentioned valves.

As can be seen from the above numbers, installing the bypasses around 1-AFW-161 and 2-AFW-161 does not significantly improve the availability of the system. It will not even improve reliability by a factor of two.

We estimate the cost of installing these two valves to be $40,000. This does not include replacement power costs due to the outage being longer because men are diverted to perform this task. In addition to this, it may be necessary, because of tech spec requirements, to shut down both units at the same time for this work. To avoid shutting down the unaffected unit we would have to maintain 150,000 gallons in the alternate condensate storage tank (CST). The alternate CST (No. 11 or No. 21) is the normal source of makeup water for the unit's condensate system and depending on makeup requirements we may not be able to maintain the required 150,000 gallon capacity. Without demonstrating the operability of the alternate CST we would have to shutdown the unit within 16 hours per tech spec 3.7.1.3. It currently costs $760,000/day/unit for replacement power.

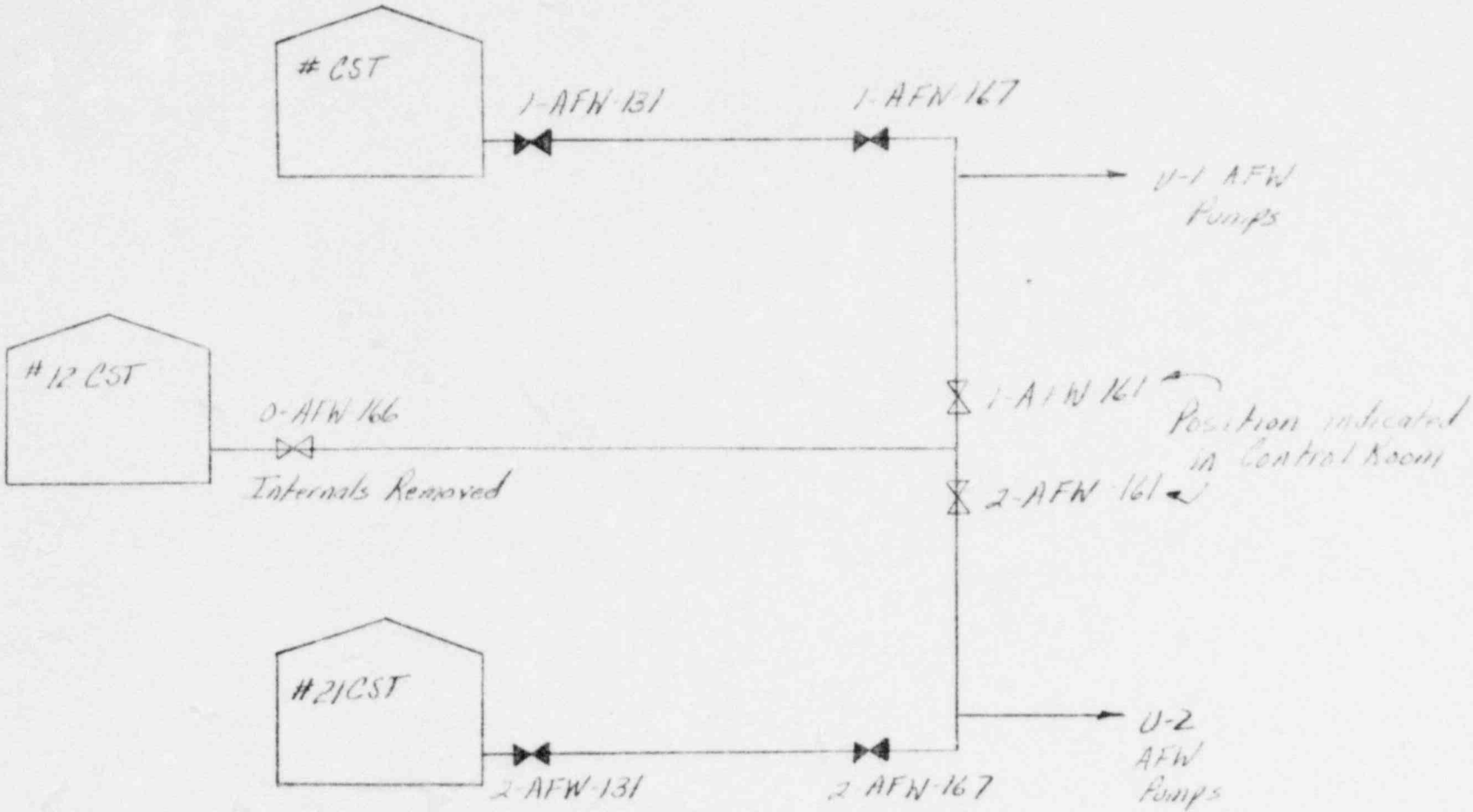
Even based solely on the $4 ,000 expenditure to install these valves, we feel that the small increase in availability does not warrant the cost. We propose to modify the suction piping lineup as discussed in reference (c) to that shown on the attached drawing.

We request the NRC review this proposed modification in light of the information provided on costs and reliability. Due to the long lead time associated with ordering equipment we desire a response as soon as possible. Should you have any questions, feel free to contact us.

Very truly yours,

cc: J. A. Biddison, Esquire
G. F. Trowbridge, Esquire
Messrs. E. L. Conner, Jr. - NRC
J. C. Ventura - Bechtel
P. W. Kruse - CE

Proposed Modification To CCNPP AFW Suction Piping



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