

APPENDIX A

Babcock & Wilcox, A McDermott Company
Utility Power Generation Division
Docket No. 99900400/85-01

NOTICE OF NONCONFORMANCE

Based on the results of an NRC inspection conducted on February 4-8, 1985, it appears that certain of your activities were not conducted in accordance with NRC requirements.

- A. Criterion XVI of Appendix B to 10 CFR 50 states in part "Measures shall be established to assure that conditions adverse to quality such as failures, malfunctions, deficiencies, deviations, defective materials and equipment, and nonconformances are promptly identified and corrected."

Babcock & Wilcox (B&W) Quality Assurance Topical Report, BAW-10096A, Rev. 4, Section 16, "Corrective Action," states in part, that "Procedures are established by NPGD to ensure prompt identification and correction of conditions adverse to quality, such as failures, malfunctions, deficiencies, deviations, defective material and equipment, and nonconformances during the design, procurement, fabrication, receipt, installation, and testing of components, systems, and equipment...."

Contrary to the above, B&W QA Procedure NPG-1707-01, Rev. 16, "Processing Safety Concerns" does not explicitly require the prompt evaluation of Potential Safety Concerns (PSCs). Since the evaluation of a PSC is an important part of identifying and correcting "conditions adverse to quality," the timeliness of these evaluations should be required by the procedure. An example of a PSC that has not been evaluated in a timely manner is described below.

PSC 5-83: This PSC concerns a potential thermal shock/thermal stress problem with the high pressure injection (HPI) and makeup water system pumps when 40°F water is pumped from the borated water storage tank (BWST). The HPI pumps are a significant safety-related system required following a loss of coolant accident. The temperature transient associated with the 40°F BWST water was not included in the equipment specification for the pumps.

This PSC was identified in January 1983 and entered the PSC file in March 1983; however, the evaluation and disposition had not been completed as of February 8, 1985. PSC 5-83 is applicable to all B&W plants, operating and under construction.

- B. Criterion VII of Appendix B to 10 CFR 50 states, in part, that "Measures shall be established to assure that purchased material, equipment and services, whether purchased directly or through contractors and subcontractors, conform to the procurement documents."

Contrary to the above, B&W failed to ensure that adequate measures were in place to assure that purchased components conform to procurement documents, resulting in certain components (Lambda Power Supplies) not being of adequate configuration or quality to assure (a) the function of the sub-supplier's product or (b) the proper output voltage characteristics for a certain range of input power and environmental conditions that are important to the B&W system function.

Hardware problems were identified in October 1983 in site Problem Report SPR 13-16-337. System reliability, functional ability, and/or performance characteristics have been shown to be affected by the lack of capacitor "C26" or diode "CR6", or both. The fact that the Lambda Power Supplies components are a continuing problem is supported by Bellefonte Unit 1 Site Problems Reports SPR-13-15-0683, dated November 9, 1984, and SPR 13-15-700, dated December 20, 1984. This problem is also evident in Bellefonte Unit 2 Site Problem Report SPR 13-16-33, Revision 5, dated October 26, 1984.

- C. B&W Administrative Manual Procedure NPG-0402-01 states, in part, that "...Only certified computer programs (full, conditional, interim, not required, see NPG-0902-06 and NPG-0903-13), and computer programs specifically exempted by NPG-0902-06 shall be used for engineering calculations which are performed to provide final results for licensing or final design of hardware to be used in a licensed facility. Other programs may be used for preliminary, exploratory, or sensitivity, but any results so obtained must be independently demonstrated to be correct if the results are to be used for licensing or final design of hardware to be used in a licensed facility, or if verification is required by contract."

Contrary to the above, the calculation of reactor protection system (RPS) setpoints, as demonstrated in calculation number 32-1150653-00, Oconee 1, Cycle 9, RPS Set Point Calculations, do not contain information to demonstrate the accuracy of the noncertified setpoint calculations (personal computer computations). Thus, the calculations are found to be in nonconformance with the above requirements regarding the use and verification of safety-related, noncertified computer calculations.

- D. Paragraph VII.1 of B&W Administrative Manual Procedure NPG-0902-06, Rev. 9, states, in part, that "A certification statement [for a computer code] indicates that an orderly plan of testing has been executed...so that reasonable assurance can be given that with proper input, as defined in the User Manual, the program will execute and produce results as defined in the User Manual."

Contrary to the above, B&W did not perform sufficient testing of the T3PIPE computer code to give reasonable assurance that the stress indices used in the ASME code Section III equations, and therefore showing the results of these equations, are correct."