

NOTICE OF NONCONFORMANCE

ABB-Combustion Engineering, Inc.
Windsor, Connecticut

Docket No. 99900401

Based on the results of an inspection conducted on June 30 through July 1, 1999, it appears that certain of your activities were not conducted in accordance with NRC requirements.

- A. Criterion III, "Design Control," of 10 CFR Part 50, Appendix B, "Quality Assurance Criteria for Nuclear Power Plants and Fuel Reprocessing Plants," requires in part that "measures shall also be established for the selection and review for suitability of application of materials, parts, equipment, and processes that are essential to the safety-related functions of the structures, systems, and components," "the design control measures shall provide for verifying or checking the adequacy of design, such as by the performance of design reviews, by the use of alternate or simplified calculation methods, or by the performance of a suitable testing program," and "where a test program is used to verify the adequacy of a specific design feature in lieu of other verifying or checking processes, it shall include suitable qualifications testing of a prototype unit under the most adverse design conditions."

Section 50.49 of 10 CFR Part 50 requires environmental qualification of core exit temperature instrumentation as follows: Section 50.49 requires qualification of electrical equipment important to safety as defined in Paragraph 50.49(b). Subparagraph 50.49(b)(3) specifies certain post-accident monitoring equipment. Subparagraph (b)(3) invokes, in associated Note 4, the specific guidance of Revision 2 of Regulatory Guide 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident." Table 2, "PWR Variables" of Regulatory Guide 1.97, Under "Type C Variables" lists core exit temperature as a variable required to be monitored by Category I instrumentation.

Contrary to the above, ABB-Combustion Engineering, Inc., (CE) had not performed suitable qualification testing of a representative sample or performed an analysis to demonstrate the environmental qualification of the subject Litton-Veam electrical connectors installed in the Core Exit Thermocouple system provided to the Palo Verde Nuclear Generating Station (Palo Verde). CE had not demonstrated, with moisture present in the Litton-Veam connector during a portion of the environmental qualification test, that performing an environmental qualification test of a single connector configuration would be representative of the installed multiple connector configuration at Palo Verde or that performing the environmental qualification test with the thermocouple maintained at a single temperature, would be representative of thermocouple operation throughout the thermocouple operating range of the installed configuration at Palo Verde.

(Nonconformance 99900401/1999201-01)

Enclosure 1

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Please provide a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555, with a copy to the Chief, Quality Assurance, Vendor Inspection, Maintenance and Allegations Branch, Division of Inspection Program Management, Office of Nuclear Reactor Regulation, within 30 days of the date of the letter transmitting this Notice of Nonconformance. This reply should be clearly marked as a "Reply to a Notice of Nonconformance" and should include for each nonconformance: (1) a description of steps that have been or will be taken to correct these items; (2) a description of steps that have been or will be taken to prevent recurrence; and (3) the dates your corrective actions and preventive measures were or will be completed.

Dated at Rockville, Maryland
this 8th day of September 1999