TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

85 SEP 25 A11:30

September 19, 1985

BLRD-50-438/85-26
BLRD-50-439/85-23

U.S. Nuclear Regulatory Commission
Region II
Attn: Dr. J. Nelson Grace, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30323

Dear Dr. Grace:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - INTAKE PUMPING STATION ELECTRICAL EQUIPMENT ROOM EXHAUST FANS AND DAMPERS DO NOT MEET IEEE REQUIREMENTS - BLRD-50-438/85-26, BLRD-50-439/85-23 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Al Ignatonis on August 23, 1985 in accordance with 10 CFR 50.55(e) as Significant Condition Report (SCR) BLN EEB 8511. Enclosed is our first interim report. We expect to submit our next report on or about January 31, 1988.

If you have any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

J. A. Domer

for G. W. Hufham, Manager
Licensing and Risk Protection

Enclosure
cc: Mr. James Taylor, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Records Center (Enclosure)
Institute of Nuclear Power Operations
1100 Circle 75 Parkway, Suite 1500
Atlanta, Georgia 30339

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
INTAKE PUMPING STATION ELECTRICAL EQUIPMENT ROOM
EXHAUST FANS AND DAMPERS DO NOT MEET IEEE REQUIREMENTS
BLRD-50-438/85-26, BLRD-50-439/85-23
SCR BLN EEB 8511
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

During the development of corrective action for nonconformance report (NCR) BLN NEB 8405 (BLRD-50-438/83-31; BLRD-50-439/83-27) to configure the intake pumping station electrical equipment rooms ventilation system for a tornado, it was discovered that the heating, ventilating, and air-conditioning (HVAC) exhaust fans and dampers for the intake pumping station were being fed from and controlled by trained class 1E power, but the components were not IEEE class 1E qualified. The design does not provide IEEE 394-1977-approved electrical isolation as is required when non-1E loads are powered from 1E power supplies.

The early design of this system was based upon a misinterpretation of Bellefonte Nuclear Plant (BLN) Design Criteria N4-VP-D740. This criteria excludes the exhaust components from the safety-related portions of the system. However, design drawings show this equipment as being trained (safety related). The original issue of the design criteria could have been interpreted as assigning the ventilation system as a whole to a safety function. A later revision of the design criteria more clearly differentiated the safety and nonsafety portions of this system.

Interim Progress

Corrective action is being taken to replace the presently installed circuit breakers feeding the exhaust fans and dampers with circuit breakers having a shunt trip mechanism which will actuate upon an engineered safety feature actuation (ESFAS) signal. This will open the circuit downstream of the breaker during an accident and eliminate any potential interaction originating in the non-class 1E components. All design documents will be revised to be in agreement with BLN Design Criteria N4-VP-D740.

Since this deficiency arose from a misinterpretation of Design Criteria N4-VP-D740, and since this design criteria has been revised to more clearly differentiate the safety and nonsafety portions of the system, additional action to prevent recurrence is not required.