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400 Chestnut Street Tower II

July 24, 1981

BLRD-50-438/81-43
BLRD-50-439/81-45

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 3100
101 Marietta Street
Atlanta, Georgia 30303



Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - DEFECTS IN FOXBORO REMOVABLE
MANUAL CONTROLLER MODULES - BLRD-50-438/81-43, BLRD-50-439/81-45 -
FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
R. V. Crlenjak on June 26, 1981 in accordance with 10 CFR 50.55(e) as
NCR's 4 and 5. Enclosed is our final report. We consider 10 CFR Part 21
to be applicable to this deficiency.

If you have any questions concerning this matter, please get in touch with
D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

A handwritten signature in cursive script, appearing to read "L. M. Mills".

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure

cc: Mr. Victor Stello, Jr., Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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ENCLOSURE
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
DEFECTS IN FOXBORO REMOVABLE MANUAL CONTROLLER MODULES
BLRD-50-428/81-43, BLRD-50-439/81-45
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

York Electro-Panel Control Company, Incorporated, submitted supplier nonconformance reports (NCR's) 4 and 5 dated May 28, 1981 as a result of a Foxboro Company telegram to them dated May 21, 1981. The nonconformance reports indicated a manufacturing defect in the model 2AC-D+A4+RM, removable manual controller modules. The actual problem was that the wires to cable connector pins 13 and 14 were reversed. The problem was detected during an inspection at the Foxboro manufacturing facility. These defective modules were in panels 1IX-II-011E, 2IX-II-011E, 1IX-II-011N, and 2IX-II-011N, which were still in the manufacturing process. Six of the eight modules in these panels were defective.

Eight of the model 2AC-D+A4+RM modules had been delivered to the Bellefonte plant site mounted in panels 1IX-IR-016C-A, 2IX-IR-016C-A, 1IX-IS-016C-B, 2IX-IS-016C-B, 1IX-II-011P, and 2IX-II-011P. Four of the eight modules in these panels were found to be defective by a Foxboro service representative.

Safety Implications

Had these modules with the crossed wires gone undetected and either the removable manual card or the controller card had been removed from the module while the systems were operating, a loss of controller function would have been experienced. This occurrence would cause an unpredictable controller signal to (1) the auto bypass valves to the condensate storage tank, (2) the short cycle recirculation valves (CM-ILCV-125 and CM-IFCV-081), and (3) the motor-driven auxiliary feedwater pump discharge valves (CA-PCF-046A and CA-PCF-047B). This could adversely affect safety of operations of the plant.

Corrective Action

The defective modules still at the Foxboro manufacturing facility were replaced with modules containing the correct wiring arrangement. A Foxboro field serviceman has inspected those modules already delivered to the Bellefonte plant site and has replaced the defective modules.

TVA does not have similar equipment of the same model series in any nuclear plant applications other than the subject contract for Bellefonte Nuclear Plant.