

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

83 OCT 17 P 1:31 October 14, 1983

BLRD-50-438/81-30
BLRD-50-439/81-33

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, NW, Suite 2900
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - GENERIC IMPLICATIONS OF FAILURE TO
IMPLEMENT DESIGN CRITERIA IN DESIGN DRAWINGS - BLRD-50-438/81-30,
BLRD-50-439/81-33 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
R. V. Crlenjak on April 1, 1981, in accordance with 10 CFR 50.55(e) as
NCR BLN QAB 8101. This was followed by our interim reports dated May 1 and
October 22, 1981, January 22 and July 7, 1982, and January 14 and July 19,
1983. Enclosed is our final report.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

DS Kammer

for L. M. Mills, Manager
Nuclear Licensing

Enclosure

cc (Enclosure):

Mr. Richard C. DeYoung, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
GENERIC IMPLICATIONS OF FAILURE TO IMPLEMENT DESIGN CRITERIA
IN DESIGN DRAWINGS
NCR BLN QAB 8101
BLRD-50-438/81-30, BLRD-50-439/81-33
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

Various functional control logic diagrams (FCLDs) and the associated wiring diagrams do not adequately reflect design criteria requirements. Nonconformance reports (NCRs) are initiated when a drawing discrepancy is found, and as a result the following nonconformances were written: BLN BLP 8003 (BLRD-50-438, 439/81-13), BLN BLP 8010 (BLRD-50-438, 439/81-07), BLN BLP 8101 (BLRD-50-438, 439/81-17), and BLN BLP 8016 (BLRD-50-438, 439/81-10). These design discrepancies were discovered when reviewing designs to make revisions.

Due to the apparent trend in failing to properly reflect the design criteria in these design drawings, the subject nonconformance was written to identify the possible programmatic deficiency in the production of the drawings. The cause of this deficiency was determined to be random errors occurring during the design review process.

Safety Implications

Failure to properly reflect design criteria in design drawings could result in the deficient design and construction of safety-related structures, systems, and components, thereby, adversely affecting the safety of operations of the plant.

Corrective Action

A review to assure compatibility between the design criteria and the FCLDs has been completed. As a result of the review, eight additional nonconformances were identified. The following NCRs were generated to track and correct these deficiencies: BLN BLP 8106, (BLRD-50-438/81-26, BLRD-50-439/81-29) BLN BLP 8110, BLN BLP 8118, BLN BLP 8119 (BLRD-50-438/81-48, BLRD-50-439/81-51), BLN BLP 8222 (BLRD-50-438/82-53, BLRD-50-439/82-47), BLN BLP 8235 (BLRD-50-438/83-10, BLRD-50-439/83-07), BLN BLP 8312, and BLN BLP 8321.

The corrective action for each discrepancy identified is an FCLD revision followed by a revision of the corresponding wiring diagrams where applicable. These revisions will be completed by March 1, 1984.

As discussed above, TVA believes that the discrepancies identified were of a random nature and do not represent a programmatic breakdown in the translation of design criteria into FCLDs. This is further substantiated by the relatively small number of deficiencies identified (i.e., 12 total deficiencies versus an approximate 250 FCLD drawings). However, TVA has allocated more manpower to the review of FCLDs in an effort to reduce the amount of random deficiencies occurring.