

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

December 23, 1983 87 DEC 29 4 8: 59

BLRD-50-438/83-40
BLRD-50-439/83-34

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:

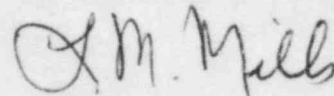
BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - FIELD CABLES NOT TERMINATED IN
PENETRATIONS PROPERLY - BLRD-50-438/83-40, BLRD-50-439/83-34 - SECOND
INTERIM REPORT

The subject deficiency was initially reported to NRC-OLE Inspector
Linda Watson on June 14, 1983 in accordance with 10 CFR 50.55(e) as NCRs
2383, 2384, 2385, and 2395. This was followed by our interim report
submitted on July 14, 1983. Enclosed is our second interim report. We
expect to submit our next report by August 1, 1984.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY



L. M. Mills, Manager
Nuclear Licensing

Enclosure

cc: Mr. Richard C. DeYoung, 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

8401040312 831223
PDR ADCK 05000438
S PDR

1983-TVA 50TH ANNIVERSARY

An Equal Opportunity Employer

OFFICIAL COPY
IE 27
11

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
FIELD CABLES NOT TERMINATED IN PENETRATIONS PROPERLY
BLRD-50-438/83-40, BLRD-50-439/83-34
NCRs 2383, 2384, 2385, AND 2395
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

NCRs 2383, 2384, and 2385 identify that in several electrical cable penetration terminations the correct application of Raychem tubing, end caps, or cable breakouts was not adhered to per TVA drawings. This has resulted in incorrect lengths of Raychem tubing on cable splices, insufficient distance between Raychem 2- and 3-point cable breakouts, and no end caps on spare conductors. NCR 2395 was issued to identify the generic implication of the three previously mentioned NCRs and a possible generic deficiency in the electrical quality control (EQC) training and inspection program. The apparent cause of these deficiencies is a lack of proper interpretation of TVA drawings by TVA Construction (CONST) craft and EQC inspectors.

Interim Progress

NCR 2383 - TVA has determined that the subject applications of Raychem tubing identified by this NCR are adequate, and the disposition of the deficiency is to "use-as-is." TVA electrical standard drawing SD-E12.5.6 is being revised to provide clarification of the minimum acceptable seal length for Raychem tubing, after shrinking. Training in the proper installation procedures for Raychem heat shrinkable sleeves and shims, for all affected EQC, craft, and engineering personnel, has been accomplished.

NCRs 2384 and 2385 - TVA is in the process of issuing a work release to reinspect and rework as necessary all of the in-line cable terminations, requiring Raychem breakout tubing, which were previously installed per the TVA 5RA0216-NI series drawings. This action will also be taken for the application of heat shrinkable end caps on spare conductors of reactor building electrical penetration modules. All affected craft and EQC personnel have received training on electrical penetration termination procedures.

NCR 2395 - All EQC personnel have been retrained to the requirements of BNP-QCP-3.4 R6, "Electrical cables and jumpers installation (pulling) and preparation (terminating)," and to the requirements of the TVA 5RA0216-NI series drawings. Also, all EQC personnel have been trained to the requirements of 10 CFR 50 Appendix B, with an emphasis on the role of the quality organization in construction activity.

When activity in the area of penetration terminations, which is not being conducted at this time, is resumed for a sufficient length of time, the following actions will also be taken:

1. A documented audit program will be implemented for random surveillance of penetration terminations, until such time that a trend of acceptable installations can be documented.
2. Actions will be taken to ensure that EQC inspectors receive adequate field training, under the supervision of a qualified inspector, in the area of penetration terminations.