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

December 1, 1983

BLRD-50-438/83-44
BLRD-50-439/83-37

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 - VIOLATION OF SPACING REQUIREMENTS FOR GROUTED ANCHORS - BLRD-50-438/83-44, BLRD-50-439/83-37- FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Linda Watson on July 1, 1983 in accordance with 10 CFR 50.55(e) as NCR 2408. This was followed by our interim report dated July 28, 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

L. M. Mills
by RHS

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

IE 27

1/1

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
VIOLATION OF SPACING REQUIREMENTS FOR GROUTED ANCHORS
BLRD-50-438/83-44, BLRD-50-439/83-37
NCR 2408
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

General Specification G-32 Appendix D (implemented onsite by BNP-QCP-2.8) requires that in large holes or chipped out areas where grouted anchors are used, the chipped out area shall extend at least three nominal bolt diameters for individual and six nominal bolt diameters for multiple anchors beyond the end of the anchor. These chipped areas should then be refilled with concrete for support. Seismic pipe supports have been installed with anchor bolts such that the chipped areas have possibly been chipped only to the bottom of the anchor. This condition occurred because personnel received insufficient training and consequently failed to follow the applicable procedure.

Safety Implications

Installation of anchors in violation of G-32 spacing requirements could lead (in this case by increasing loads) to inadequate support of safety-related piping systems. This could possibly lead to failure of safety-related piping and subsequently damage safety-related equipment during a seismic event, and thus have adverse affects on the safe operations of the plant.

Corrective Action

TVA's Division of Engineering Design (EN DES) has dispositioned NCR 2408 to "use as is." The 47 supports referenced in the subject NCR have been evaluated by EN DES and the anchorage was found to be adequate for the current loads; however, these must be reevaluated if there is any load increase. Engineering change notice (ECN) 2569 has been prepared to add the following note to all involved support drawings: "Any modification to this support which increases the load on the anchor bolts shall be submitted to EN DES Project Civils for approval." The applicable personnel will be retrained to the requirements of Appendix D of G-32.

All corrective action will be completed by June 30, 1984.