TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

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December 29, 1981

BLRD-50-438/81-22
BLRD-50-439/81-24

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 - USE OF UNAPPROVED MASONRY BITS - BLRD-50-438/81-22, BLRD-50-439/81-24 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on March 6, 1981, in accordance with 10 CFR 50.55(e) as NCR 1396. Interim reports were submitted on April 6, June 3, and October 20, 1981. Enclosed is our final report.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure
cc: Mr. Richard C. DeYoung, 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
USE OF UNAPPROVED MASONRY BITS
BLRD-50-438/81-22, BLRD-50-439/81-24
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

Attachment D of Quality Control Procedure (QCP) BNP-QCP-2.8 specifies sizes of masonry drill bits to be used when installing wedge bolts. In order to ensure that these sizes are not exceeded, all carbide-tipped masonry drill bits should be ordered as engineering-controlled material, which requires the bits to be checked for maximum size. However, at least three orders have been received as construction material and not engineering-controlled material. Therefore, there is a possibility that wedge bolt anchors have been installed using masonry drill bits which exceed the maximum size specified.

Safety Implications

As indicated in the corrective action (below), anchors which may have been installed with the uncontrolled masonry bits are acceptable for use. Therefore, this condition would not have adversely affected the safe operation of the plant.

Corrective Action

All crafts checked their stock of masonry bits for uncontrolled bits. All bits which did not have a unique stamp on the shank (signifying their acceptance for installing wedge bolt anchors) were returned to the Quality Control Records Unit (QCRU) trailer. TVA has instructed all employees who order construction materials that all masonry drill bits must be ordered as engineering-controlled material and has incorporated this provision into the BNP-QCP-10.3 R9, Addendum No. 1, paragraph 4.1.2 (effective July 15, 1981).

TVA field employees carried out a testing program using the largest of the oversized bits for each anchor size. Test samples of each type of wedge bolt used on the project were installed in the oversized holes and tested to failure. The results indicate that all sizes and brands of wedge bolt anchors installed with oversize bits have an acceptable ultimate tensile capacity. The anchors may be used as-is.

BNP-QCP-2.8 R8, paragraph 6.3.1.4 (effective July 15, 1981) has been changed to ensure that proper drill bits are used by requiring a prework inspection hold point. This requires that an engineer measure any bit before its use.