

TENNESSEE VALLEY AUTHORITY

CHATANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

USNRC REGION II
ATLANTA, GEORGIA

January 5, 1982

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BLRD-50-438/81-68
BLRD-50-439/81-67

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 - OVERTORQUING OF BOLTS ON FLOW
CONTROL VALVE - BLRD-50-438/81-68, BLRD-50-439/81-67 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
R. V. Crlenjak on October 22, 1981 in accordance with 10 CFR 50.55(e) as
NCR 1620. This was followed by our first interim report dated November 20,
1981. Enclosed is our final report. We consider 10 CFR Part 21 applicable
to this deficiency.

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
OVERTORQUING OF BOLTS ON FLOW CONTROL VALVE
BLRD-50-438/81-68, BLRD-50-439/81-67
10 CFR 50.55(e)
FINAL REPORT

Description of Deficiency

During torquing operation in the field on the motor operator adaptor to the residual heat removal isolation valve (mark No. 3AW0412-ND-3 12-inch ASME III Class 2 motor-operated gate valve), a bolt failed. Other bolts on examination showed elongation. All bolts had been torqued to 518 ft-lbs. The vendor drawing (Borg-Warner drawing 80590) requires 500-550 ft-lbs. These bolts were provided by Borg-Warner of Van Nuys, California.

Safety Implications

When TVA installed the motor operator adaptor to the residual heat removal isolation valve (per Borg-Warner drawing), the 3/4" attaching bolts became overstressed. Had this condition gone uncorrected, these bolts might have broken, thereby rendering the motor operator ineffectual. This condition could violate the integrity of the containment isolation, thus adversely affecting the safety of the operations of the plant.

Corrective Action

Borg-Warner was contacted. Their review of the problem showed that the torque value listed on drawing 80590 for the motor operator adaptor to yoke connection bolts was in error.

Borg-Warner revised the drawing to show the correct torque value (120-140 ft-lbs). TVA has replaced the bolts using the newly defined torque values and verified that tapped threads in the adapter are not damaged.

Additionally, Borg-Warner has reviewed all drawings/contracts supplied to TVA and determined that this situation does not exist elsewhere.