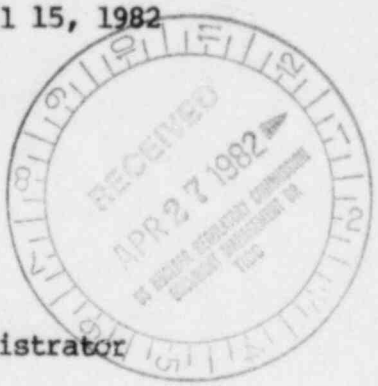
TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37401
400 Chestnut Street Tower II

April 15, 1982



BLRD-50-438/82-04
BLRD-50-439/82-04

U.S. Nuclear Regulatory Commission
Region II
Attn: Mr. James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2 - BONNET STUDS IMPROPERLY TORQUED ON DECAY HEAT REMOVAL VALVES - BLRD-50-438/82-04, BLRD-50-439/82-04 - SECOND INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector R. V. Crlenjak on December 22, 1981 in accordance with 10 CFR 50.55(e) as NCR 1686. This was followed by our first interim report dated January 20, 1982. Enclosed is our second interim report. We expect to submit our next report by June 28, 1982. 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
BONNET STUDS IMPROPERLY TORQUED ON DECAY HEAT REMOVAL VALVES
NCR 1686
BLRD-50-438/82-04, BLRD-50-439/82-04
10 CFR 50.55(e)
SECOND INTERIM REPORT

Description of Deficiency

The following Borg-Warner (Van Nuys, California) bolted bonnet gate valves were furnished on contract 77K38-86163-8 and were found by field inspection to have bonnet studs which were torqued to values less than required by the applicable vendor drawing (i.e., 160-200 foot-pounds).

Mark No.	Item No.	Drawing No.	Borg-Warner Serial No.	Observed Torque (Ft Lbs)
3AW0412-ND-35	636	80140	26165*	50-100
			26166	20-100
			26167	20-100
			26168*	0-180
3AW0412-ND-45	638	80130	26598	20-180

Interim Progress

The portion of the valves which are installed and operational (as indicated by *) have been retorqued to the value presently required by the vendor drawing.

Borg-Warner was contacted and informed of the deficiency. Their response is contained in a letter dated March 22, 1982 (MEB 820330 500). Borg-Warner's investigation concluded that the current torque requirements which were based on a gasket factor from ASME Section VIII, Division J, Table UA-49.1 1971 edition do not in all cases effect a metal to metal contact between body and bonnet flanges. Under such conditions, the gasket could take a set during storage thus reducing the gasket force on the studs/nuts and subsequently contribute to the "low torque" condition.

The torque values have been reassessed based on an increase of the gasket factors by ASME and even higher recommended factors by the gasket manufacturer. Borg-Warner is in the process of updating all documents as required to include the revised torque values. Additionally, they have made recommendations of torque values depending upon stud size.

TVA will retorque the valves listed above to the newly defined values. Additionally, TVA will require Borg-Warner to furnish a list of all valves supplied to TVA where this situation exists and they will be retorqued as required.