

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401  
400 Chestnut Street Tower II

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October 3, 1984

BLRD-50-438/83-02

U.S. Nuclear Regulatory Commission  
Region II  
Attn: Mr. James P. O'Reilly, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

Dear Mr. O'Reilly:

BELLEFONTE NUCLEAR PLANT UNIT 1 - FAILURE OF AIR COMPRESSOR MOTOR -  
INGERSOLL RAND - BLRD-50-438/83-02 - FOURTH INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector  
P. E. Fredrickson on December 9, 1982 in accordance with 10 CFR 50.55(e)  
as NCR 2102. This was followed by our interim reports dated January 7 and  
May 26, 1983 and January 9, 1984. Related NCRs 2285 and 2535 had also been  
reported and are now being included as part of this 50.55(e) concern.  
Enclosed is our fourth interim report. We expect to submit our next report  
on or about April 22, 1985.

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* by R.H.

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

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNIT 1  
FAILURE OF AIR COMPRESSOR MOTOR - INGERSOLL RAND  
NCRs 2102, 2285 AND 2535  
BLRD-50-438/83-02  
10 CFR 50.55(e)  
FOURTH INTERIM REPORT

Description of Deficiency

During performance of a functional test on stationary air compressor motor 1RJ-EMOT-002-B, the motor failed during an attempted restart. This was the second instance of this type of failure on this type and size motor (nonconformance report 1942). NCRs 2285 and 2535 document the third and fourth failures respectively, of the same size and type motor.

Bellefonte is the only TVA nuclear plant to use this size motor and system configuration.

Interim Progress

TVA has determined that the environmental conditions in which the compressors were operated contributed to the cited failures. Accordingly, the compressor motors will be replaced with totally enclosed, fan-cooled, class IE, QA motors. In addition, dedicated service air compressors are being installed to avoid using safety-related essential air compressors for construction service air requirements. However, TVA has not determined if other factors may have contributed to these motor failures. Consequently, TVA is still investigating this deficiency and will supply a final report when the root cause(s) and actions required to prevent recurrence have been established.