

# TENNESSEE VALLEY AUTHORITY

5N 105B Lookout Place

January 24, 1986

BLRD-50-438/86-01

U.S. Nuclear Regulatory Commission  
Region II  
Attention: Dr. J. Nelson Grace, Regional Administrator  
101 Marietta Street, NW, Suite 2900  
Atlanta, Georgia 30323

Dear Dr. Grace:

BELLEFONTE NUCLEAR PLANT UNIT 1 - BROKEN MOTOR MOUNTING STUDS ON DIESEL  
BUILDING EXHAUST FANS - BLRD-50-438/86-01 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector Steve Weise on December 26, 1985 in accordance with 10 CFR 50.55(e) as SCR BLN 3668 R1. Enclosed is our first interim report. We expect to submit our next report no later than one year before fuel load. We consider 10 CFR Part 21 applicable to this deficiency.

If there are any questions, please get in touch with R. H. Shell at FTS 858-2688.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

*J. A. Domer*

J. A. Domer, Chief  
Nuclear Licensing Branch

Enclosure

cc: Mr. James Taylor, 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

8602130340 860124  
PDR ADOCK 05000438  
S PDR

00 FEB 4 P4:11

IE 27  
1/1  
117

ENCLOSURE  
BELLEFONTE NUCLEAR PLANT UNIT 1  
BROKEN MOTOR MOUNTING STUDS ON DIESEL BUILDING EXHAUST FANS  
BLRD-50-438/86-01  
SCR BLN 3668 R1  
10 CFR 50.55(e)  
FIRST INTERIM REPORT

Description of Deficiency

Seven of eight motor mounting studs broke from the mounting base on two diesel building exhaust fans (IVG-MFAN-001-A and 002-A), and motor shaft-to-sheave key came out on fan 001-A. In addition, vendor drawing indicates four studs required, but equipment has eight studs.

The cause of this deficiency is due to excessive fan vibrations during operation. The discrepancy in the number of mounting studs appears to be an oversight during release for shipment inspections. The inspection incident appears to be an isolated occurrence; however, the vibration problem appears to exist in sister fans from the vendor--Industrial Air Incorporated, Amelia, Ohio.

Safety Implications

The fans provide cooling for the diesel generator spaces. A failure of one fan would bring a standby fan on. However, the vibration seems to be present in all these fans, which could lead to a common-mode failure. This would result in possible overheating of essential components, which would result in loss of essential power and would jeopardize the capability to bring the plant to a safe shutdown condition.

Interim Progress

TVA has contacted the vendor about the problem. Documentation of the balance condition at the time of shipment indicates acceptable levels of vibration. A request for a field representative from Industrial Air Incorporated to field balance and adjust the fans is in process now. If Industrial Air cannot balance the fans in the field, they will make the necessary modifications to the fans in order to balance them. Should drawing revisions be required, an ECN will be written at that time. A final report will be provided upon determination of corrective action but no later than one year before fuel load.