

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

34 AUG 20 1984

BLRD-50-438/83-25

BLRD-50-439/83-20

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 UNITS 1 AND 2 - MANUAL ADJUSTMENT OF DIESEL
GENERATOR SETPOINTS - BLRD-50-438/83-25, BLRD-50-439/83-20 - FINAL REPORT

The subject deficiency was initially reported to NRC-OIE Inspector
P. E. Fredrickson on March 9, 1983 in accordance with 10 CFR 50.55(e) as
NCR BLN EEB 8302. This was followed by our interim reports dated April 6
and October 26, 1983 and February 23, 1984. Enclosed is our final report.

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

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills

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

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ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
MANUAL ADJUSTMENT OF DIESEL GENERATOR SETPOINTS
BLRD-50-438/83-25, BLRD-50-439/83-20
10 CFR 50.55(e)
NCR BLN EEB 8302
FINAL REPORT

Description of Deficiency

For the standby diesel generators at Bellefonte, there are manual voltage and frequency controls in the main control room which can adjust the voltage and/or frequency levels of one or more diesel generators to values below the ready-to-load set points used during the automatic start-automatic load sequence. Because the diesel generators lack an automatic reset capability for output voltage and frequency during automatic starts, low manual setting would prevent the misadjusted generator(s) from initiating the automatic load sequence. Also, since adjustments away from acceptable values are not alarmed, the misadjustment(s) could go undetected until after an automatic start is initiated.

This situation was caused by a failure on the part of TVA to anticipate that operators would be adjusting the generators to values below the ready-to-load set points and a subsequent failure to require an automatic reset of voltage and frequency capability in the procurement documents concerning the diesel generator controls.

Safety Implications

Because the standby diesel generator systems lack the automatic reset capability for voltage and frequency, misadjustment of voltage and/or frequency levels could delay or prevent the generation of sufficient on-site standby power to serve necessary safety-related systems. This situation could adversely affect safe operation of the plant.

Corrective Action

TVA has purchased the necessary equipment from Transamerica Delaval to modify the diesel generator control circuits for an automatic voltage and frequency reset capability and is revising the control circuit drawings through engineering change notice (ECN) 2458. All necessary design and construction work is expected to be completed by June 3, 1986.

To prevent a recurrence of this deficiency, the TVA standard diesel generator specification No. 3887 now contains the requirement for automatic reset of voltage and frequency to ready-to-load set points upon receipt of an emergency start signal.