PART 21 IDENTIFICATION NO. 81-358-000 COMPANY NAME Tennessee Valley Authority

DATE OF LETTER 2/2/81 DOCKET NO. 50-438/439

DATE DISTRIBUTED 2/5/81 p.m. ORIGINAL REPORT [X] SUPPLEMENTARY [ ]

DISTRIBUTION:

REACTOR (R) [X]

~~" IE FILES "~~

EES

REGIONS I,II,III,IV,V

VENDOR BR. R-IV

LOEB / MPA MNB 5715

AEOD MNB 7602

NRR/DOE

NRR/DSI

NRR/DST

NRR/DOL

ASLBP E/W 450

CENTRAL FILES 016

CENTRAL FILES (CHRON)

PDR

LPDR

TERA

FUEL CYCLE & MATERIALS (M) [ ]

IE FILES

AD/FFMSI

REGIONS I,II,III,IV,V

VENDOR BR. R-IV

NMSS / FCMS SS-396

LOEB / MPA MNB 5715

AEOD MNB 7602

ASLBP E/W 450

SAP/SP MNB-7210A

CENTRAL FILES 016

CENTRAL FILES (CHRON)

PDR

LPDR

TERA

SAFEGUARDS (S) [ ]

IE FILES

AD/SG

AD/ROI

REGIONS I,II,III,IV,V

VENDOR BR. R-IV

NRR/DOL

NMSS / SG SS-881

LOEB / MPA MNB 5715

AEOD MNB 7602

ASLBP E/W 450

CENTRAL FILES 016

CENTRAL FILES (CHRON)

CENTRAL FILES SS-396

PDR

LPDR

TERA

ACTION:

PRELIMINARY EVALUATION OF THE ATTACHED REPORT INDICATES LEAD RESPONSIBILITY FOR FOLLOWUP AS SHOWN BELOW:

IE [X] NRR [ ] NMSS [ ] OTHER [ ]

EES

8102180093

REV. 8/1/80
9/17/80
12/2/80

NRC Rec'd 2/10/81 81-350-000

TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

February 2, 1981

BLRD-50-438/81-08
BLRD-50-439/81-08

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 - SOLID STATE AC VOLTAGE RELAYS - BLRD-50-438/81-08, BLRD-50-439/81-08 - FIRST INTERIM REPORT

The subject deficiency was initially reported to NRC-OIE Inspector M. Thomas on January 2, 1981, in accordance with 10 CFR 50.55(e) as NCR BLN BLP 8012. Enclosed is our first interim report. We expect to submit our next report by May 14, 1981. We consider 10 CFR Part 21 to be applicable to this deficiency.

If you have any questions concerning this matter, please get in touch with D. L. Lambert at FTS 857-2581.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Regulation and Safety

Enclosure
cc: Mr. Victor Stello, Jr., Director (Enclosure) ✓
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

ENCLOSURE

BELLEFONTE NUCLEAR PLANT UNITS 1 AND 2
SOLID STATE AC VOLTAGE RELAYS
BLRD-50-438/81-08, BLRD-50-439/81-08
10 CFR 50.55(e)
FIRST INTERIM REPORT

Description of Deficiency

The solid state ac voltage relays used on the 6.9 kV Class IE switchgear require a source of dc control power for proper operation. The present design configuration of the relays utilizes a contact from the undervoltage relay to energize an auxiliary relay upon detection of an undervoltage condition. The auxiliary relay initiates alarms and breaker trips. However, when dc control power is lost and then restored (such as might accompany a bus transfer), the auxiliary relay will become energized long enough to initiate the supply feeder breaker trip sequence even though an actual undervoltage condition does not exist. If this were to occur at a time when offsite power was not available and the source of power was the emergency onsite power source (diesel generator), this condition would lead to the inadvertent isolation of a 6.9 kV Class IE switchgear board. In this instance, the boards would have to be manually reconnected.

The 6.9 kV switchgear was designed and supplied by Gould-Brown Boveri, Westminster, Maryland.

Interim Progress

TVA and Gould-Brown Boveri are reviewing the application of these solid state relays in order to determine a solution to this problem.