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50-439 Bellefonte Nuclear Plant, Unit 2, Tennessee Valley Au 05000439
AUTH.NAME AUTHOR AFFILIATION
MILLS,L.M. Tennessee Valley Authority
RECIP.NAME RECIPIENT AFFILIATION
O'REILLY,J.P. Region 2, Atlanta, Office of the Director

SUBJECT: Second interim deficiency rept,initially reported on 810102, re defective solid state ac voltage relays supplied by Gould-Brown Boveri.Relays are to be returned to vendor for mods.Next rept by 810910.

DISTRIBUTION CODE: B019S COPIES RECEIVED:LTR 1 ENCL 1 SIZE: 2
TITLE: Construction Deficiency Report (10CFR50.55E)

NOTES:

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| ACTION: | A/D LICENSNG | 04 | 1 | 1 | LIC BR #4 BC | 05 | 1 | 1 |
| | LIC BR #4 LA | 06 | 1 | 1 | LIC BR #4 PM | 07 | 1 | 1 |
| INTERNAL: | ASLBP/J.HARD | | 1 | 1 | D/DIR HUM FAC | 15 | 1 | 1 |
| | EDO & STAFF | 19 | 1 | 1 | EQUIP QUAL BR | 11 | 1 | 1 |
| | HYD/GEO BR | 22 | 1 | 1 | I&E | 09 | 1 | 1 |
| | IE/EES | | 1 | 1 | LIC QUAL BR | 12 | 1 | 1 |
| | NRR | 20 | 1 | 1 | NRC PDR | 02 | 1 | 1 |
| | OELD | 21 | 1 | 1 | PROC/TST REV | 13 | 1 | 1 |
| | QA BR | 14 | 1 | 1 | REG FILE | 01 | 1 | 1 |
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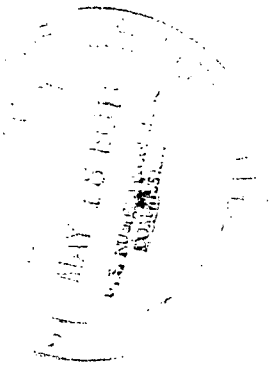
400 Chestnut Street Tower II

May 14, 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 - SECOND 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. This was followed by our first interim report dated February 2, 1981. Enclosed is our second interim report. We expect to submit our next report by September 10, 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

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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)
SECOND 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

The deficient relays are to be shipped back to the vendor (Gould-Brown Boveri) for modifications to alleviate the incorrect operation. We will supply further information in the final report.