

VIRGINIA ELECTRIC AND POWER COMPANY  
RICHMOND, VIRGINIA 23261

September 4, 1987

W. L. STEWART  
VICE PRESIDENT  
NUCLEAR OPERATIONS

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

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Gentlemen:

VIRGINIA ELECTRIC AND POWER COMPANY  
SURRY POWER STATION UNITS 1 AND 2  
SUPPLEMENTAL RESPONSE TO IE BULLETIN 84-02

In our letter of July 31, 1984, we responded to IE Bulletin 84-02, "Failure of General Electric Type HFA Relays In Use In Class 1E Safety Systems." In that response, we committed to a replacement program for safety related GE HFA relays. Based on a recent review of HFA relays, we identified some additional safety related HFA relays that were not replaced as required.

In light of the discrepancies, the original response to IE Bulletin 84-02 has been amended and is attached.

Should you have any questions or require any further information, please contact us.

Very truly yours,



W. L. Stewart

Attachment

cc: U. S. Nuclear Regulatory Commission  
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**SUPPLEMENTAL RESPONSE TO IEB 84-02**  
**FAILURES OF GENERAL ELECTRIC TYPE HFA RELAYS**  
**IN USE IN CLASS IE SAFETY SYSTEMS**

- 1.A. Some of the GE HFA relays originally identified during the investigation and response to IEB 84-02 were not replaced with the GE "Century Series" HFA relays.

Based on the issuance of the GE Service Advisory Letter dated November 14, 1986 (SAL 188.1) and subsequent investigations that extended until June 1987, a further review of the application of GE HFA relays was performed. During this review, twenty five (25) safety related relays were identified that had not been replaced. (14 relays on Unit 1 and 11 relays on Unit 2). In addition, 8 of these relays (4 per unit) are normally energized.

These relays were identified by a review of the controlled station drawings (FE's and ESK's).

Due to the above, the schedule has been amended to replace these GE HFA relays during the next outage of sufficient duration depending on parts availability. This will include both normally energized and de-energized relays.

- 1.b(1). There are no GE type HFA relays in the Reactor Trip System.
- 1.b(2). Until the normally energized relays are replaced, a monthly visual inspection for the non-"Century Series" relays will be performed to verify that the relays are not deteriorating (visible cracks or melting) and cleanliness of the relay pole pieces.

Following the identification of these additional energized relays, an immediate visual inspection was performed and no discrepancies were noted.

- 1.c. The normally energized relays in safety related applications that were identified in the original response to IE Bulletin 84-02 have been replaced with the Century Series HFA relay.

The additional normally energized relays that have been identified are located in the actuation circuits for valves TV-DA-100A and B (200 A and B) and TV-DG-108A and B (208 A and B). The safety related function of these trip valves is to isolate the containment pressure boundary during a containment phase A actuation. The failure of the relay that would cause the valve solenoid to deenergize would allow the trip valve to close thereby fulfilling the intended safety function.

In order to ensure that the relay will change state upon deenergizing, a monthly visual inspection program will be performed until the relay is replaced. This inspection is specifically designed to identify any possible precursors to mechanical binding, such as cracking in the coil bobbin or indications of melting, and the cleanliness of the pole pieces.

Further bases for operation until the relays can be replaced are:

- A. The valves are in series (redundant) and it is very unlikely that mechanical binding would occur simultaneously on both of the series valves.
- B. A review of station documents since 1982 was conducted and no failures of GE HFA relays have been identified.
- C. Upon initiation of a containment phase A isolation, the Emergency Operating Procedures require the verification of the isolation of containment penetrations. If the valves in question do not reposition correctly, corrective measures can be taken.