

PHILADELPHIA ELECTRIC COMPANY

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SHIELDS L. DALTROFF
VICE PRESIDENT
ELECTRIC PRODUCTION

October 1, 1984

Docket Nos. 50-277
50-278

Dr. Thomas E. Murley
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region I
631 Park Avenue
King of Prussia, PA 19406

SUBJECT: Follow-up Information to I.E. Bulletin 84-02 -
"Failure of General Electric Type HFA Relays in
Use in IE Safety Systems"

Dear Dr. Murley:

This letter provides additional information to our response to I.E. Bulletin 84-02, which we forwarded in our June 28, 1984, letter (S. L. Daltroff to T. E. Murley). This information completes our response to the subject Bulletin.

In addition to our previous review of HFA relays, a review of other auxiliary relays at Peach Bottom has been completed. This review included all the different types of relays used in safety systems to see if they contained materials similar to the HFA spools and could cause problems similar to the HFA failures. We have also checked past operating history and manufacturer's recommendations to see if replacement was appropriate for any other reason.

Our review has determined that we do not have any auxiliary relays, with materials as used in the HFA relays, that are subject to deterioration or failures similar to the HFA relays. The check with manufacturers and review of operating history also indicates that there are no additional problems of relay failures due to materials problems that would cause us to consider relay replacements.

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Our review also considered the service life of our various auxiliary relays. In connection with this review, we have decided to initiate a replacement program for four different type class IE relays. The details of the four replacement programs are as follows:

1. As a result of IE Information Notice No. 84-20, we are replacing a total of 68 Agastat GP series relays on Units 2 and 3. These relays are used in a normally energized application and are being replaced due to service life considerations. We intend to replace the relays, subject to material availability, on Unit 2 during the current refueling outage and on Unit 3 during the next refueling outage in 1985.
2. As a result of two LER's (Nos. 2-84-02 and 2-84-05) which identified burned-out coils in General Electric Type CRL20A relays, we reviewed the service life of these relays. Our review indicated that these relays should be replaced due to service life considerations. The relay failures occurred in two CRL20A relays that are used in a normally energized application. We are planning to replace approximately 66 of these relays on Units 2 and 3. Subject to material availability, we intend to replace the relays on Unit 2 during the current refueling outage and on Unit 3 during the next refueling outage in 1985.
3. We have experienced failure of two Cutler-Hammer Type M 120V dc relays used in a normally energized application. Our investigation showed these failures to be premature coil aging due to a higher than expected voltage at the relay. We are replacing 58 of these relays with relays having a higher voltage rating in order to obtain a longer service life. We intend to replace the relays, subject to material availability, on Unit 2 during the current refueling outage and on Unit 3 during the next refueling outage in 1985.
4. Our review indicated that certain Agastat 7000 Series relays should be replaced due to service life considerations. Approximately 6 of these relays will be replaced on Units 2 and 3. We intend to replace the relays, subject to material availability, on Unit 2 during the current refueling outage and on Unit 3 during the next refueling outage in 1985.

Subsequent to our previous response to I.E. Bulletin 84-02, we have experienced two HFA relay failures on Peach Bottom Unit 3. On September 6, 1984, a GE HFA relay type 51, used in a normally energized application, failed in the Primary Containment Isolation System (PCIS) of Peach Bottom Unit 3. The relay was discovered smoking and when de-energized failed to drop out. It was discovered that material from the overheated spool had melted and then cooled on the armature assembly to cause the relay to stick. After discovery of the failed relay, a visual inspection was made of the remaining normally energized relays on Unit 3. One additional HFA relay was found that showed beginning signs of coil overheating. The relay, which was installed in the Reactor Protection System, was still operable when it was replaced.

In an effort to assure reliable operation of Unit 3 from now until the refueling outage in 1985, we have increased our visual inspections of energized HFA relays from once per month to once per two weeks. Since these two failures are the first end-of-life type failures on Unit 3, we feel that this added surveillance will allow reliable operation of Unit 3 until its refueling outage in 1985. Unit 2 is in an outage at the present time and the HFA relay coils are being replaced.

Should you have any further questions or require additional information, please do not hesitate to contact us.

Very truly yours,



cc: A. R. Blough, Site Inspector


COMMONWEALTH OF PENNSYLVANIA :

: SS.

COUNTY OF PHILADELPHIA :

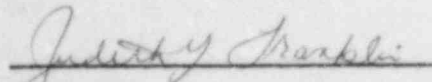
S. L. Daltroff, being first duly sworn, deposes and says:

That he is Vice President of Philadelphia Electric Company; that he has read the foregoing response to I.E. Bulletin 84-02 relative to Peach Bottom Units 2 and 3 and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.



A handwritten signature in cursive script, appearing to read "S. L. Daltroff", is written over a horizontal line.

Subscribed and sworn to
before me this 1st day
of October, 1984



A handwritten signature in cursive script, appearing to read "Judith Y. Franklin", is written over a horizontal line.

Notary Public

JUDITH Y. FRANKLIN
Notary Public, Phila., Phila. Co.
My Commission Expires July 28, 1987