

**Florida
Power**
CORPORATION

June 7, 1984
3F0684-05

Mr. J. P. O'Reilly
Regional Administrator, Region II
Office of Inspection & Enforcement
U.S. Nuclear Regulatory Commission
101 Marietta Street N.W., Suite 2900
Atlanta, GA 30303

Subject: Crystal River Unit 3
Docket No. 50-302
Operating License No. DPR-72
IE Bulletin 84-02
Failure of GE Type HFA Relays In Use In Class IE Safety Systems

Dear Sir:

Attached is Florida Power Corporation's response to the subject IE Bulletin. Staff time to do the requested review was 200 manhours. Staff time to prepare the requested documentation was 160 manhours.

Sincerely,

G. R. Westafer
Manager, Nuclear Operations
Licensing and Fuel Management

Attachments

AEF/feb

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

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I.E. BULLETIN 84-02
FAILURE OF GE TYPE HFA RELAYS IN USE IN CLASS
IE SAFETY SYSTEMS

FLORIDA POWER CORPORATION'S RESPONSE

I. Plants in Operation

I.E. Bulletin Requirement

a. Develop plans and schedules for replacing (1) nylon or Lexan coil spool-type HFA relays used in normally energized safety-related applications and (2) nylon coil spool-type HFA relays used in normally de-energized safety-related applications. The replacement relays and any replacements made in the future should meet the requirements of the applicable IEEE standards. The replacement program for energized and de-energized relays should be performed on a "best efforts" basis during plant outages of sufficient duration. The entire replacement program should be completed within two years from the date of this bulletin.

The replacement schedule should consider the following recommended priority:

- Nylon or Lexan normally energized in the reactor trip system.
- Nylon or Lexan normally energized in other safety-related applications.
- Nylon normally de-energized in the reactor trip system.
- Nylon normally de-energized in other safety-related applications.

FPC Response

Two Modification Approval Records (MARs) have been written to replace 50 safety-related relays and 63 non-safety-related GE HFA relays. The MARs also include procedures for functional testing of the new installed relays.

Due to the critical function of these relays it is not advisable to change the relays on-line. Relays will be replaced each outage of sufficient duration between now and Refuel V and, by the end of Refuel V, all HFA-51 series relays will be replaced with the new type HFA relays.

I.E. Bulletin Requirement

b. During the period before relay replacement, develop and implement surveillance plans that include:

- (1) Monthly functional tests of all reactor trip system normally energized relays that verify relay contacts change state when the relay coil is de-energized.
- (2) Visual inspections of all safety-related normally energized relays as soon as practical upon receipt of this Bulletin. Thereafter, similar inspections should be accomplished in conjunction with the monthly functional test. These visual inspections should verify that relay coils are not deteriorating (e.g., inspect coil bobbins for visible cracks or melting), and should confirm cleanliness of the relay pole pieces.

FPC Response

Procedure SP-905, GE Type HFA Relay Spool Piece Inspection, was written on October 10, 1983, and performed to establish a periodic surveillance (initial, then every six months) of the GE HFA relays which will detect coil spool piece deterioration and establish their integrity until the spool pieces are replaced.

- (1) Crystal River Unit 3 does not have GE HFA type relays in the Reactor Trip System.
- (2) On September 9, 1983, a work request was initiated to identify all GE HFA relays that were installed in safety systems. During this effort, it was determined that the identification of all GE HFA relays installed at CR-3 would be desirable so that more reliable trend data could be collected and all problems identified.

A total of 121 GE HFA relays were identified. Of the total, 58 were in safety systems and 63 were in non-safety systems. During the inspection of the 58 safety-related relays, 8 were discovered to have cracked or broken coil spool pieces, were replaced, and satisfactorily passed functional testing.

I.E. Bulletin Requirement

c. Provide a basis for continuing operation for the period of time until the normally energized relays are replaced. This basis should include a discussion of those measures addressed in Items 1a and 1b and any other preventive and/or corrective measures taken or planned.

FPC Response

SP-905 requires a spool piece integrity test if any signs of deterioration are observed during the visual inspections. An initial inspection followed by a 6 month inspection have been performed to-date. No additional anomalies were identified during these inspections. The actions already taken, combined with the continuing periodic inspection provide assurance that Crystal River 3 can be safely operated until all of these relays are replaced.

I.E. Bulletin Requirement

d. Provide a written report of the above actions, including schedules for completion. This report is to be submitted to the NRC within 120 days of receipt of this bulletin.

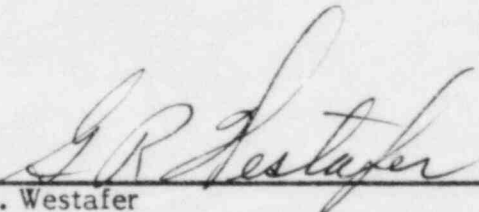
FPC Response

All nylon or Lexan coil spool-type HFA relays in both safety and non-safety-related applications will be replaced by the end of Refuel V, currently scheduled for Spring 1985.

STATE OF FLORIDA

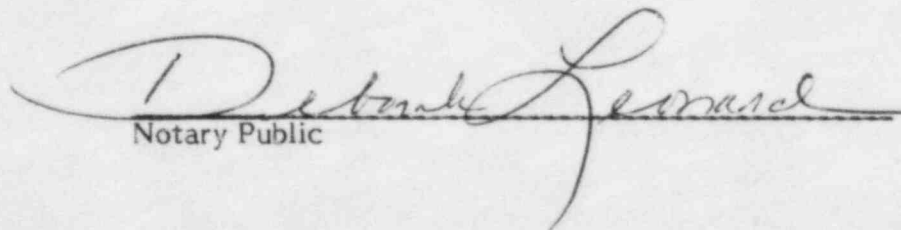
COUNTY OF PINELLAS

G.R. Westafer states that he is the Manager, Nuclear Operations Licensing and Fuel Management for Florida Power Corporation; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the information attached hereto; and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information, and belief.



G.R. Westafer
Manager, Nuclear Operations Licensing and Fuel
Management

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 7th day of June 1984.



Notary Public

Notary Public, State of Florida at Large,

My Commission Expires: November 19, 1986