

ILLINOIS POWER COMPANY



CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

August 28, 1985

Docket No. 50-461

Mr. James G. Keppler
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Subject: IE Bulletin 84-02, "Failure of General Electric
Type HFA Relays in Use in Class 1E Safety Systems"

Dear Mr. Keppler:

In response to questions raised during the routine safety inspection conducted by Mr. T. P. Gwynn of the NRC Region III office on July 10, 1985, through August 19, 1985, the following supplemental information regarding IE Bulletin 84-02 is provided for your review.

In response to the specific concerns of the bulletin, all HFA relays manufactured by the General Electric Company used at the Clinton Power Station (CPS) were inspected. All HFA relays which were found to have Lexan Coils in safety-related applications will be replaced with the Century Series HFA relays prior to the initial fuel load date.

The generic concerns expressed in the bulletin are failures of safety-related electro-mechanical auxiliary relays due to poor manufacturing processes or controls. Illinois Power (IP) investigates all reported relay failures. These failures are currently identified, reviewed, and corrective action (if required) is implemented at CPS through two processes:

1. IE Document Reviews
 - a. Notices
 - b. Bulletins
 - c. Circulars
2. Condition Reports
 - a. INPO "Notepad" items
 - b. Manufacturer's technical information
 - c. CPS equipment failures

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The IE document review or a Condition Report (CR) is generated upon notification of the potential of relay failures by the NRC, INPO, or manufacturer's information or by actual relay failures at CPS. The normal review process includes document review and a field inspection for applicability of defect at CPS which is followed by replacement or maintenance of any defective parts. This work, if necessary, is tracked to completion through IP's Corrective Action Program. Manufacturer's and NRC's recommendations are followed unless an engineering justification is completed.

Illinois Power has investigated several reports of electro-mechanical relay failures in the last few years. The following are examples of these investigations and their disposition:

| <u>Document</u> | <u>Description</u> | <u>Disposition</u> |
|-----------------------------------|--|---|
| IE Notice 84-20 | Continuously energized Sylvania relays | Not applicable to CPS |
| CR 1-85-02-049 (INPO SER 3-85) | Failures of SA-1 relays due to improper lamp replacement | Addition of correct spare part number to vendor data |
| CR 1-83-12-057 | Continuously energized Agastat relays | Instituted maintenance procedures to change out Agastats every five years |
| IE Bulletin 83-04 | Failure of under-voltage trip devices | Not applicable to CPS |
| IE Notice 83-63 | Potential failures of Westinghouse SA-1 relays | Modification of safety and non-safety relays per Westinghouse recommendations |
| IE Notice 82-13 | General Electric HFA relay failure | Replacement of safety-related relays per manufacturer's recommendations |
| IE Notice 82-48 | Failure of Agastat relay sockets | Field inspection revealed no defects |
| IE Notice 83-19 | Improper adjustment of HFA contacts | Field inspection to readjust any miscalibrated relays |

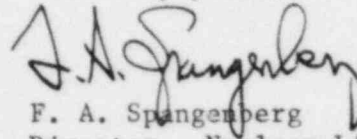
| <u>Document</u> | <u>Description</u> | <u>Disposition</u> |
|---------------------------------|--|--|
| INPO SER 4-83 | Defective Potter and Brumfield relays | Operation procedures revised to include periodic inspection |
| GE Service Advice 721-PSM-175.1 | Defective HEA relays | Field inspection to adjust and rework defective relays according to manufacturer's recommendations |
| CR 1-83-03-044 | 50Hz voltage balance relay used at Clinton | Field modification to the relay to convert to 60Hz |
| Service Advice 721-PSM-174.1 | Defective PVD and HGA relays | Drawing and specification review determined no defective relays at CPS |
| Service Advice 721-PSM-169.1 | Defective HFA (Century Series) relays | Field inspection and implementation of manufacturer's recommendations |

The recommendations of equipment vendors are considered during the development and revision of maintenance and surveillance test procedures which affect safety-related equipment. The requirements included in the maintenance and surveillance test procedures have received reviews by the following organizations prior to final approval: cognizant maintenance Group Supervisor, Assistant Power Plant Manager - Maintenance, CPS Technical Department, Quality Assurance Department, and the Facility Review Group. The sources of vendor recommendations which were included in each procedure are documented in the reference section of the procedure, and have been entered into a computerized Procedure Cross Reference (PCR) which permits a rapid bidirectional cross reference between vendor documents and procedures. The diversity of reviewing organizations and the establishment of the automated cross reference-to-vendor equipment manuals provides IP with reasonable assurance that vendor recommendations have been properly considered in the development of CPS Maintenance and Surveillance Test procedures, and that changes to vendor source documents can be quickly assessed to identify the procedures which may be affected. In addition, all safety-related relays are periodically bench tested. Operating parameters are checked against acceptance criteria to verify proper performance.

This supplemental information resolves the concerns on IE Bulletin 84-02 identified by the referenced inspection.

I hereby affirm that the information in this letter is correct to the best of my knowledge.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "F. A. Spangenberg". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

F. A. Spangenberg
Director - Nuclear Licensing
Nuclear Station Engineering

SMK/kaf

cc: B. L. Siegel, NRC Clinton Licensing Project Manager
NRC Resident Office
Illinois Department of Nuclear Safety
Director, IE USNRC, Washington, DC 20555