UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
799 ROOSEVELT ROAD
GLEN ELLYN, ILLINOIS 60137

January 16, 1981

Gentlemen:

This Information Notice No. 81-01 is provided as an early notification of a possibly significant matter. It is expected that recipients will review the information for possible applicability to their facilities. No specific action or response is requested at this time. If further NRC evaluations so indicate, an IE Circular or Bulletin will be issued to recommend or request specific licensee actions. If you have questions regarding this matter, please contact this office.

Sincerely,

for James G. Keppler
Director

Enclosure: IE Information
Notice No. 80-01

Docket No. 50-440
Docket No. 50-441

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SSINS No.: 6835
Accession No.:
8011040254
IN 81-01

UNITED STATES
NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT
WASHINGTON, D. C. 20555

January 16, 1981

IE INFORMATION NOTICE NO. 81-01: POSSIBLE FAILURES OF GENERAL ELECTRIC TYPE HFA RELAYS

Purpose:

The intent of this Information Notice is to alert licensees and holders of construction permits of a potentially generic problem involving defective coil spools used in General Electric (GE) type HFA relays. Such defective relays were recently found at Turkey Point Unit 4 (Docket No. 50-250).

Description of Circumstances:

The defective coil spools are fabricated of either black or clear Lexan, a polycarbonate material that is susceptible to surface cracking when exposed to hydrocarbons. The concern here is that such surface cracks could ultimately deteriorate to such a degree that relay actuation would be blocked by the resultant debris, thereby inhibiting a required safety function.

Indications of the above mentioned cracks were recently detected on the HFA relays used to sequence the emergency loads on the diesel generators at Turkey Point Unit 4 upon a loss-of-coolant accident coincident with a loss of offsite power. After detecting the cracks, the spare coils in the storeroom were inspected and, although these coils are new units, one was found to be cracked. The possible failures of GE type HFA relays highlights two salient points: (1) HFA relays have had a long history of failures (e.g., GE has issued several Service Information Letters (SIL) addressing these relays, the oldest one of which dates back to 1973, and it is anticipated that GE will issue a new SIL in the near future addressing this new concern); (2) the cracking phenomena seems to be similar to that experienced on the cam followers used on GE type SBM switches (e.g., these cam followers are fabricated of Lexan, and after their exposure to hydrocarbons during fabrication or during maintenance severe cracking resulted. See IE Information Notice No. 80-13 for additional details.)

The above information identifies means whereby the integrity of a major safety-related system can be jeopardized or compromised by the blocking of relay actuation. Accordingly, this Information Notice is provided as an early notification of a possibly significant matter that is still under review by the NRC staff. Recipients should, therefore, review the information for possible applicability to their facilities. Although no specific action or response is requested at this time, further licensee actions may be requested or required pending the outcome of the NRC staff evaluation.

If you have any question regarding this matter, please contact the director of the appropriate NRC Regional Office.

RECENTLY ISSUED
IE INFORMATION NOTICES

Information Notice No.	Subject	Date of Issue	Issued to
80-45	Potential Failure of BWR Backup Manual Scram Capability	12/17/80	All PWR facilities with an OL or CP
80-44	Actuation of ECCS in the Recirculation Mode While in Hot Shutdown	12/16/80	All PWR facilities with an OL or CP
80-43	Failures of the Continuous Water Level Monitor for the Scram Discharge Volume at Dresden Unit No. 2	12/5/80	All power reactor facilities with OL or CP
80-42	Effect of Radiation on Hydraulic Snubber Fluid	11/24/80	All power reactor facilities with OL or CP
80-41	Failure of Swing Check Valve in the Decay Heat Removal System at Davis-Besse Unit No. 1	11/10/80	All power reactor facilities with an OL or CP
80-40	Excessive Nitrogen Supply Pressure Actuates Safety-Relief Valve Operation to Cause Reactor Depressurization	11/10/80	All power reactor facilities with OL or CP
80-39	Malfunctions of Solenoid Valves Manufactured By Valcor Engineering Corporation	10/31/80	All light water reactor facilities with OLs or CPs
80-38	Cracking in Charging Pump Casing Cladding	10/30/80	All PWR facilities with an OL or CP
80-37	Containment Cooler Leaks and Reactor Cavity Flooding at Indian Point Unit 2	10/24/80	All power reactor facilities with OLs or CPs

OL = Operating Licenses
CP = Construction Permits