



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
REGION I  
631 PARK AVENUE  
KING OF PRUSSIA, PENNSYLVANIA 19406

JAN 16 1981

Docket No. 50-293

Boston Edison Company M/C Nuclear  
ATTN: Mr. A. V. Morisi  
Nuclear Operations Support Manager  
800 Boylston Street  
Boston, Massachusetts 02199

Gentlemen:

The enclosed IE Information Notice No. 81-01, "Possible Failures of General Electric Type HFA Relays," is forwarded to you for information. No written response is required. If you desire additional information regarding this matter, please contact this office.

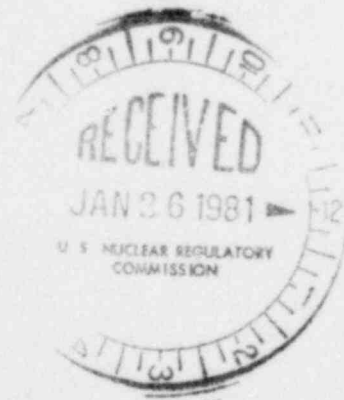
Sincerely,

*Boyce H. Grier*  
Boyce H. Grier  
Director

Enclosures:

1. IE Information Notice No. 81-01
2. List of Recently Issued IE Information Notices

CONTACT: E. G. Greenman  
(215-337-5267)



cc w/encls:

R. D. Machon, Nuclear Operations Manager - Pilgrim Station

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SSINS No.: 6835  
Accession No.:  
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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.

IE Information Notice No. 81-01  
January 16, 1981

Enclosure 2

RECENTLY ISSUED  
IE INFORMATION NOTICES

Information Notice No.	Subject	Date Issued	Issued to
80-45	Potential Failure of BWR Backup Manual Scram Capability	12/17/80	All holders of a power reactor OL or CP
80-44	Actuation of ECCS in the Recirculation Mode While in Hot Shutdown	12/14/80	All holders of a PWR power reactor 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 holders of a BWR power reactor OL or CP
80-29 Supplement No. 1	Broken Studs on Terry Turbine Steam Inlet Flange	11/26/80	All holders of a power reactor OL or CP
80-42	Effects of Radiation on Hydraulic Snubber Fluid	11/24/80	All holders of a power reactor 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 holders of a power reactor OL or CP
80-40	Excessive Nitrogen Supply Pressure Activates Safety-Relief Valve Operation to Cause Reactor Depressurization	11/6/80	All holders of a power reactor OL or CP
80-39	Malfunctions of Solenoid Valves Manufactured by Valcor Engineering Corporation	10/31/80	All holders of a power reactor OL or CP
80-38	Cracking in Charging Pump Casing Cladding	10/30/80	All holders of a PWR power reactor OL or CP