

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Pilgrim Nuclear Power Station DOCKET NUMBER (2) 0 5 0 0 0 2 9 3 1 OF 0 2

TITLE (4) HFA Relay Problem

EVENT DATE (6)			LER NUMBER (8)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)		
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES	DOCKET NUMBER(S)	
0	3	1	8	8	4	8	4	0	0	0	
0	3	1	8	8	4	0	0	0	0	0	

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)																								
N	<table border="1"><tr><td>20.402(b)</td><td>20.406(e)</td><td>50.73(a)(2)(iv)</td><td>73.71(a)</td></tr><tr><td>20.406(a)(1)(i)</td><td>50.36(a)(1)</td><td>50.73(a)(2)(v)</td><td>73.71(e)</td></tr><tr><td>20.406(a)(1)(ii)</td><td>50.36(a)(2)</td><td>50.73(a)(2)(vi)</td><td>OTHER (Specify in Abstract below and in Text, NRC Form 366A)</td></tr><tr><td>20.406(a)(1)(iii)</td><td>50.73(a)(2)(i)</td><td>50.73(a)(2)(viii)(A)</td><td></td></tr><tr><td>20.406(a)(1)(iv)</td><td>50.73(a)(2)(ii)</td><td>50.73(a)(2)(viii)(B)</td><td></td></tr><tr><td>20.406(a)(1)(v)</td><td>50.73(a)(2)(iii)</td><td>50.73(a)(2)(ix)</td><td></td></tr></table>	20.402(b)	20.406(e)	50.73(a)(2)(iv)	73.71(a)	20.406(a)(1)(i)	50.36(a)(1)	50.73(a)(2)(v)	73.71(e)	20.406(a)(1)(ii)	50.36(a)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)	20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)		20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)		20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)	
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20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)																							
20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)																							
20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)																							

LICENSEE CONTACT FOR THIS LER (12)  
NAME P. J. Hamilton - Plant Engineer TELEPHONE NUMBER 611 774 61-179000  
AREA CODE 611 774 61-179000

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS
B	J C	R L Y	G O 8 0	Y					

SUPPLEMENTAL REPORT EXPECTED (14)  
YES (If yes, complete EXPECTED SUBMISSION DATE) X NO  
EXPECTED SUBMISSION DATE (15) MONTH DAY YEAR  
- - - - -

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On 3/18/84, during a refueling outage, an HFA relay in the Reactor Protection System was found to be hot and smoking. The relay is a GE 51 series AC type and is normally energized. There was no fuel in the Reactor Vessel at the time of the event.

The relay was immediately de-energized and replaced with a GE "Century" series relay. The relay, although smoking, remained operable. Cause is attributed to previously identified generic HFA relay problems.

Long-term corrective action is being developed and will be included in the response to IE Bulletin No. 84-02 entitled "Failures of General Electric Type HFA Relays In Use In Class IE Safety Systems."

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/85

FACILITY NAME (1)  Pilgrim Nuclear Power Station Unit No. 1	DOCKET NUMBER (2)  0 5 0 0 0 2 9 3 8 4 — 0 0 2 — 0 0 0 0 2 OF 0 2	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 305A's) (17)

On 3/18/84, during a refueling outage, HFA Relay 5AK12F in the Reactor Protection System was observed to be hot and smoking. The relay was discovered when control room operators noticed a burning smell coming from the panel (917) which contains the relay. The nameplate of the faulty relay is GE Model 12HFA51A49F, Type HFA, 115V, 60 Cycles. The subject relay is in the "B" channel of the RPS and provides a neutron monitoring trip signal if de-energized. This relay is normally energized and contains a nylon bobbin coil.

Prior to replacement, the smoking relay was de-energized and tested for resistance across the relay contacts. Test results prove that the smoking relay was operable at the time of replacement.

The relay was replaced with a GE Century series relay, Model #12HFA151A9F, Type HFA, 120V, 60 Cycles. Replacement was in accordance with General Electric (GE) Service Information Letter (SIL) #44, Supplement 4.

Cause of the relay smoking is attributed to the generic problems associated with HFA relays previously identified in several GE Service Advice Letters (SAL's), SIL's, and IE Bulletin 84-02. A corrective action plan is being developed to address the generic HFA relay problem and will be included in the response to IE Bulletin 84-02.

There have been four previously identified HFA relay problems, all of which have been with normally energized, AC, nylon bobbin coil relays.

This event did not impact the health and safety of the public.

BOSTON EDISON COMPANY  
800 BOYLSTON STREET  
BOSTON, MASSACHUSETTS 02199

WILLIAM D. HARRINGTON  
SENIOR VICE PRESIDENT  
NUCLEAR

April 18, 1984

BECO Ltr. #84-057

Dr. Thomas E. Murley  
Regional Administrator, Region I  
U.S. Nuclear Regulatory Commission  
631 Park Avenue  
King of Prussia, PA 19406

Docket No. 50-293  
License DPR-35

Dear Sir:

The attached Licensee Event Report 84-002-00, "HFA Relay Problem," is hereby submitted in accordance with the requirements of 10CFR50.73.

If there are any questions on this subject, please do not hesitate to contact me.

Respectfully submitted,

*W.D. Harrington*  
W. D. Harrington

PH:caw

Enclosure: LER 84-002-0

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

Standard BECO LER Distribution