CENTRAL FILES

JAN 16 '78

Docket No. 50-263
Docket No. 50-282
Docket No. 50-306

Northern States Power Company
ATTN: Mr. Leo Wachter, Vice
President
Power Production and
System Operation
414 Nicollet Mall
Minneapolis, MN 54401

Gentlemen:

Enclosed is IE Bulletin No. 78-01 which requires action by you with regard to your power reactor facilities having an operating license or a construction permit.

Should you have any questions regarding this Bulletin or the actions required, please contact this office.

Sincerely,

James G. Keppler
Director

Enclosures:
1. IE Bulletin No. 78-01, w/attachment
2. List of IE Bulletins issued during last 12 months

cc w/encls:
L. R. Eliason, Plant Manager
F. P. Tierney, Jr., Plant Manager
Central Files
Reproduction Unit NRC 20b
PDR
Local PDR
NSIC
TIC
Anthony Roisman, Esq., Attorney

OFFICE	RIII	RIII				
SURNAME	Fiorelli/jb	Keppler				
DATE	1/16/78					

January 16, 1978
IE Bulletin No. 78-01

FLAMMABLE CONTACT-ARM RETAINERS IN G.E. CR120A RELAYS

Description of Circumstances:

On April 18, 1977, a fire was discovered in a relay cabinet in the Peach Bottom Unit 3 facility. The fire damaged eight relays, type CR120A, manufactured by the General Electric Company. The fire was investigated by the licensee, the Philadelphia Electric Company, who concluded that it was caused by an overheated relay coil that ignited the relay's plastic contact-arm retainer. Subsequently, on July 29, 1977, fire damage was discovered in a relay cabinet during surveillance testing in the Peach Bottom Unit 2 facility. This fire damaged 18 G.E. type CR120A relays.

Discussion:

The investigation revealed that the relay's contact-arm retainer was made from Celcon M90 Acetal Copolymer which is a flammable material. In June 1972, this material was changed to Valox 310-SED, which is self extinguishing and flame resistant. Both materials are white and have the same surface appearance. A G.E. Service Information Letter SIL-NO-229 (a copy of the text is attached for information) indicates that there is no generic overheating problem with this type relay. However, they recommend that BWR owners replace the contact-arm retainer of all relays (including BOP applications) marked with manufacturers date code between E.D. (May 1968) and A.J. (January 1973) with the improved, self extinguishing flame resistant contact arm retainers.

Action To Be Taken By Licensees And Permit Holders:

Licensees of power reactor facilities with an operating license and construction permit holders shall take the following actions:

1. Determine if you have installed G.E. type CR120A relays in safety-related equipment or in areas wherein fires have the potential for damaging safety equipment. Also determine if you have such relays in spares inventory or on order.

2. Identify all of the relays that have Celcon contact-arm retainers.

3. For those relays which have Celcon retainers, develop a program for their replacement with Valox retainers. The program should include:

   a. Identification of the location of the relays

   b. The schedule for the replacement of the Celcon retainers

   c. The procedure that will be used to perform the replacement, including the means that you will use to differentiate between the Valox and Celcon retainers.

4. For facilities with an operating license, a report of the above actions, including the date(s) when they will be completed, shall be submitted within 30 days of receipt of this Bulletin.

5. For facilities with a construction permit, a report of the above actions, including the date(s) when they will be completed, shall be submitted within 60 days of receipt of this Bulletin.

Reports should be submitted to the Director of the appropriate NRC Regional Office. A copy of your report should be sent to the U.S. Nuclear Regulatory Commission, Office of Inspection and Enforcement, Division of Reactor Operations Inspection, Washington, D.C. 20555.

Approved by GAO, B-180225 (R0072); clearance expires 7-31-80. Approval was given under a blanket clearance specifically for identified generic problems.

Attachment:
Copy of Text of General
Electric Service
Instruction Letter
(SIL)-SIL-No. 229

(COPY OF TEXT OF GE SIL-No. 229)
FWD. BY LTR MFN 373-77
8-10-77

IMPROVED CONTACT ARM RETAINERS FOR TYPE CR120A RELAYS

Recently, at an operating BWR a small electrical fire occurred in a relay panel. The purpose of this Service Information Letter is to discuss this occurrence and to recommend an improved contact arm retainer for certain CR120A relays to help avoid or mitigate this type of occurrence.

DISCUSSION

In a relay panel at an operating BWR, one relay, Type CR120A, overheated, subsequently ignited, and resulted in seven other similar relays in the proximity being burned. No definite cause could be determined for the relay overheating. Moreover, subsequent investigation concluded that there is no generic overheating problem with relays of this type.

The investigation also noted that the contact arm retainers of these relays, and of relays manufactured between May 1968 and June 1972, were made of Celcon M90 acetal copolymer which is flammable. In June 1972 this material was changed to Valoz 310-SEO which is self extinguishing and flame resistant.

RECOMMENDED ACTION

General Electric recommends that BWR owners replace the contact arm retainers of all Type CR120A relays (including those in B.O.P. applications) marked with a manufacturing date code between ED (May 1968) and AJ (January 1973) with the improved, self extinguishing flame resistant contact arm retainers, as follows:

1. For four pole CR120A relays use replacement contact arm retainer Part No. 55650378P3.

2. For two pole adder CR120A relays use replacement contact arm retainer Part No. 55501383P3.

3. For two pole CR120A relays use replacement contact arm retainer Part No. 55651401P3.

(COPY)

(Copy of Text of GE SIL-No. 229 - Continued)

BWR owners should survey CR120A relay applications throughout their plants, in both the nuclear steam supply system (NSSS) and balance-of-plant (BOP), to ascertain the total amount of contact arm retainers required for each type of relay. Upon notification of their requirements, NEDs' Spare and Renewal Parts service will furnish BWR owners the requested amount of replacement parts.

Contact your local General Electric service representative for additional information and for assistance in obtaining the recommended replacement parts.

JW:caj/70

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LISTING OF IE BULLETINS
ISSUED IN 1977

Bulletin No.	Subject	Date Issued	Issued To
77-08	Assurance of Safety and Safeguards During an Emergency - Locking Systems	12/28/77	All Power Reactor Facilities with an Operating License (OL) or Construction Permit (CP)
77-07	Containment Electrical Penetration Assemblies at Nuclear Power Plants under Construction	12/19/77	All Power Reactor Facilities with a Construction Permit
77-06	Potential Problems with Containment Electrical Penetration Assemblies	11/22/77	All Power Reactor Facilities with an Operating License (OL)
77-05A	Supplement 77-05A to IE Bulletin No. 77-05 - Electrical Connector Assemblies	11/14/77	All Power Reactor Facilities with an Operating License (OL) or Construction Permit (CP)
77-05	Electrical Connector Assemblies	11/8/77	All Power Reactor Facilities with an Operating License (OL) or Construction Permit (CP)
77-04	Calculational Error Affecting the Design Performance of a System for Controlling pH of Containment Sump Water Following a LOCA	11/4/77	All PWR Power Reactor Facilities with an Operating License (OL) or Construction Permit (CP)

LISTING OF IE BULLETINS
ISSUED IN 1977

Bulletin No.	Subject	Date Issued	Issued To
77-03	On-Line Testing of the W Solid State Protection System	9/12/77	All W Power Reactor Facilities with an Operating License (OL) or Construction Permit (CP)
77-02	Potential Failure Mechanism in Certain W AR Relays with Latch Attachments	9/12/77	All Holders of Operating Licenses (OL) or Construction Permits (CP)
77-01	Pneumatic Time Delay Relay Set Point Drift	4/29/77	All Holders of Operating Licenses (OL) or Construction Permit (CP)