UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
230 PEACHTREE STREET, N. W. SUITE 318
ATLANTA, GEORGIA 30303

AUG 18 1976

In Reply Refer To:
IE:II:NCM
50-413 50-269
50-414 50-270
50-369 50-287
50-370

POOR ORIGINAL

Duke Power Company
ATTN: Mr. W. H. Owen, Vice President
Engineering
422 South Church Street
P. O. Box 2178
Charlotte, North Carolina 28242

Gentlemen:

The enclosed Circular, 76-02 is forwarded to you for information and action. This is the second issue of an expanded system for communication from the Office of Inspection and Enforcement to applicants and licensees, to supplement the issuance of IE Bulletins.

Bulletins have been, and will continue to be limited to subjects considered to be of appropriate significance to require prompt response. Circulars will cover subjects of lesser significance, immediacy or for which a longer response time appears appropriate. Future IE Circulars may be addressed to any class of NRC licensees, and may or may not require response.

Sincerely,

N. C. Moseley
Regional Director

Enclosure:
IE Circular 76-02

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August 18, 1976
IE Circular No. 76-02

RELAY FAILURES-WESTINGHOUSE BF (ac) AND BFD (dc) RELAY

DESCRIPTION OF CIRCUMSTANCES:

DURING TESTING OF Westinghouse BFD relays, the Point B ach nuclear power plant experienced malfunctions with two relays in the reactor trip system. The malfunctions were caused by the pin that connects the plunger to the operating head rubbing against the contact block. Although the coils were fully energized the relay contacts remained in the deenergized position. A similar malfunction occurred in one of a set of relays undergoing accelerated aging tests at the Westinghouse Beaver facility.

The malfunction relating to pin misalignment may be common to both BF (ac) and BFD (dc) relays. Portions of a Westinghouse service letter containing information about these relays are attached to this circular. Further instructions regarding this relay problem can be obtained from Westinghouse Nuclear Service Division, Pittsburgh, Pennsylvania 15230.

ACTION TO BE TAKEN BY LICENSEES AND PERMIT HOLDERS:

The following actions should be taken with respect to all Westinghouse BF (ac) and BFD (dc) relays in safety related systems:

1. Describe the action taken or that you plan to take to verify that normally energized relays in safety related systems are in fact operable and that the relay contacts are in the energized position.

2. Describe the action taken or that you plan to take to verify that normally deenergized relays in safety related systems operate properly when energized and that the relay contacts are in the energized position.

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Reports for facilities with operating licenses should be submitted within 60 days after receipt of this circular, and reports for facilities with construction permits should be submitted within 90 days after receipt of this circular. Your report should include the date when the above actions were or will be completed.

Reports should be submitted to the Director of the NRC Regional Office and a copy should be forwarded to the NRC Office of Inspection and Enforcement, Division of Reactor Inspection Programs, Washington, D. C. 20555.

Approval of NRC requirements for reports concerning possible generic problems has been obtained under 44 U.S.C 3152 from the U. S. General Accounting Office. (GAO Approval B180255 (R0072), expires 7/31/77)

ATTACHMENT:
Extract from Westinghouse Service Letter:
BF (ac) AND BFD (dc) RELAYS

POOR ORIGINAL

EXTRACT FROM WESTINGHOUSE SERVICE LETTER:

B & BFD RELAYS

DURING THE TESTING OF CERTAIN Westinghouse BFD relays at an operating nuclear power plant, two relays in the reactor trip system were found to have malfunctions. Although the coils were fully energized, the relay contacts remained in the deenergized position. It was determined that, in both cases, the pin that connects the plunger to the operating head was rubbing against the contact block. This rubbing action resulted in friction that impeded the plunger movement when the relay coil was energized thereby preventing contact movement. The malfunctioning relays were immediately replaced. When dissassembled it was found that the relays would operate normally when the pin was centered in the plunger.

COINCIDENTLY, Westinghouse (Beaver) the relay manufacturer, experienced a similar malfunction in one of a set of similar relays which are currently undergoing accelerated aging tests.

Westinghouse (Beaver) and Westinghouse (NES) are currently investigating this situation in detail as it applies to both BF (ac) and BFD (dc) models. Consideration is being given to various means by which the pin could be held captive, thereby precluding further pin misalignment, if such a course of action becomes necessary.

RECOMMENDED ACTION

Visually inspect normally energized relays to verify that such relays are in fact picked up. Observe the performance of normally deenergized relays during normal periodic testing.