

Nebraska Public Power District

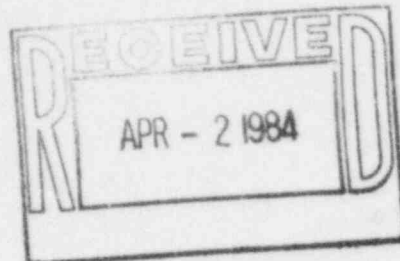
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DMB

March 21, 1984

NLS8400103

Mr. John T. Collins
Regional Administrator
U.S. Nuclear Regulatory Commission
Region IV
611 Ryan Plaza Drive
Suite 1000
Arlington, Texas 76011



Reference: (1) Letter to J. T. Collins from J. Pilant
dated January 5, 1984, same subject

Dear Mr. Collins:

Subject: Cooper Nuclear Station Panelboard Switch Failure
NRC Docket No. 50-298, DPR-46

Nebraska Public Power District has been investigating an electrical panelboard switch that failed testing while attempting to determine its operability in a harsh environment as detailed in Reference (1).

The investigation is complete and the results are as follows:

Two distinct styles of fusible switches exist that could be installed in the General Electric Company Type QMR panelboard. One is a newer style that failed the testing and the other is an older style which successfully completed the testing.

The newer style, identified as a GE Model THFP, has a pivotal mechanism that does not allow the switch blades to fully engage into the blade slot when the switch is closed. The older style, identified as a GE Model QMR221, has a pivotal mechanism which does allow the switch blades to fully engage into the blade slot when the switch is closed. The reduced contact area of the blades in the newer style switch caused a loss of continuity when the steam environment heated and slightly expanded the blade slots. The older style switches successfully passed the testing because the more complete engagement of the blades into the blade slots expanded the slots more than the expansion caused by the steam.

The older style switch was original equipment at Cooper Station and was also purchased in 1976 for a safety-related system modification. The newer style switch was purchased in 1982 for

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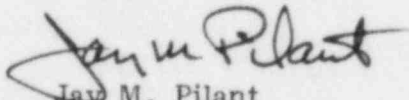
the panelboard testing program and for future spares. The two styles have distinct model numbers along with distinct design differences.

The conclusion of this investigation is that the GE Model THFP fusible switch is not qualified for installation in safety-related equipment when located in harsh environment. The GE Model QMR221 fusible switch has successfully passed the testing and is qualified for a harsh environment.

The investigation further determined that only the older style fusible switches are installed in safety-related panelboards located in post-accident harsh environments at Cooper Nuclear Station. The following will be established at Cooper Station to prevent the installation of the newer style fusible switch in a safety-related panelboard located in a post-accident harsh environment: (1) The Equipment Qualification Program will have a procedure to prevent certain identified components from being used in a harsh environment. This procedure will be implemented in the Equipment Qualification Program by March 31, 1985. (2) In the interim, the computerized Engineering Data File System will be utilized to prevent using the GE type THFP switches in a harsh environment. The GE Model THFP fusible switch was determined to be suitable for use in safety-related panelboards in post-accident mild environments.

Should you have any questions or comments, please contact my office.

Sincerely,



Jay M. Pilant
Technical Staff Manager
Nuclear Power Group

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