

WISCONSIN PUBLIC SERVICE CORPORATION



P.O. Box 1200, Green Bay, Wisconsin 54305

May 6, 1976

Mr. J. G. Keppler, Regional Director
Office of Inspection & Enforcement
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Dear Mr. Keppler:

Subject: Docket 50-305
Operating License DPR-43

REF: IE Bulletin 76-05, April 6, 1976

The Kewaunee Plant has received and responded to the Westinghouse Technical Bulletin concerning BFD relays. The following addresses our status relative to each of the Westinghouse recommendations:

1. We have advised Westinghouse that the DC Bus Voltage at Kewaunee is 132 volts, the equalizing charge is 138 volts, and the normal duration of the equalizing charge is 5 minutes which is applied once a year. A 24 hour equalizing charge is only performed if a battery cell voltage drops below 1.75 volts. This has not occurred to date.
2. Drop-time measurements on BFD relays providing reactor trip functions or safeguard initiation which are energized during normal operation and are subjected to battery equalizing potential have not been conducted.
3. Ambient temperatures of the relay racks housing the BFD relays has been measured to be between 80 and 85 degrees Fahrenheit.
4. The BFD relays at the Kewaunee Plant have not been exposed to an equalizing charge of greater than 138 volts or for a period of longer than 5 minutes.
5. The Kewaunee Plant procedures currently call for an equalizing charge of 138 volts for no longer than 24 hours.

At this time, it is our opinion that Kewaunee is not subject to the BFD relay problem addressed in the Westinghouse Technical Bulletin as a result of the rather low ambient temperature conditions in the relay racks and since an equalizing charge of only 138 volts has been applied for only 5 minutes to the DC buses while the BFD relays in question were energized. Furthermore, a

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visual examination of several BFD relay coils removed from protection circuits was performed and no abnormal discoloration of the nylon sleeve was observed. To date the Kewaunee Plant has not experienced any coil failures or hang-ups due to nylon inserts of the BFD relay.

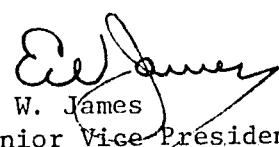
An informal request has been made to Westinghouse for more information concerning the conditions under which BFD relays have failed. One BFD relay installed at Kewaunee has been replaced at Westinghouse's request, and returned to Westinghouse for testing, however, no results of these tests have been received to date.

As addressed above, no drop-time tests have been conducted to date. However, drop-time measurements will be completed on as many of the BFD relays in question which provide Reactor trip or Safeguard functions and are normally energized during the next shut-down period as conditions permit. Due to environment and operating practice stated above, it is not considered that this situation warrants a shut-down to only measure the drop-times of BFD relays.

Concerning item 4 of the subject I/E Bulletin, the ambient temperatures in the relay racks have been measured to be between 80 and 85 degrees Fahrenheit. The temperature on the surface of the relay coils varies between 129 and 154 degrees Fahrenheit as measured on a representative sample of relays, therefore, no further action is required.

We intend to measure the drop-time and replace the relays that do not meet the acceptance criteria of 30 milliseconds as soon as proper procedures are developed and approved. Due to the magnitude of this project we expect to attain completion of these measurements by the end of the Kewaunee Plant's second cycle.

Very truly yours,


E. W. James
Senior Vice President
Power Supply & Engineering

EWJ:sna

cc - Mr. Dwane Boyd, US NRC

Director - Office of Inspection & Enforcement, US NRC