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October 10, 1985

Mr. H. R. Denton, Director
Office of Nuclear Reactor Regulation
U. S. NUCLEAR REGULATORY COMMISSION
Washington, D. C. 20555

Attention: Mr. Edward Butcher, Acting Chief
Operating Reactors, Branch 3

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
CONTROL ROD LIFETIMES
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

Our letters of August 18, 1983 and June 27, 1984 provided results of our examinations of the Rod Cluster Control Assemblies (RCCA's) at Point Beach Unit 2 and Unit 1, respectively. These letters also discussed future plans for RCCA examination and replacement at Point Beach. Since that time, further information has become available and some of the plans outlined in the earlier letters have changed. The following is provided to inform you of our change in plans and the current status of RCCA replacement at Point Beach.

UNIT 1

The June 27, 1984 letter indicated that the 12 reinserted RCCA's would be reexamined during the "next refueling outage". That reexamination was not done. Instead, it was decided to replace those RCCA's with 12 new RCCA's. This was completed during the spring 1985 refueling. All of the original equipment Unit 1 RCCA's have now been replaced.

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UNIT 2

One of the Westinghouse recommendations discussed in the August 18, 1983 letter was that 17 RCCA's should be examined during the "next Unit 2 refueling shutdown". Since that time, Westinghouse has performed further evaluations on the conservatism of the wear depth limit and on the method used to interpret the depth of wear scars from the inspection photographs. As a result of that work, Westinghouse concluded that the 17 RCCA's in question could be used for an additional cycle without further examination. Nevertheless, six of the 17 RCCA's were replaced during the fall 1984 refueling.

HOT CELL EXAMINATIONS

As you may be aware, Westinghouse has been evaluating reactor control material lifetime studies in cooperation with the Electric Power Research Institute (EPRI). As part of their work, three RCCA rodlets from R-26 were sent off site for hot cell examination. In addition to determining the service lifetime of the RCCA's, the examination program was intended to accomplish two other objectives affecting Point Beach plans. The first was to correlate wear depths obtained from on-site photographs with actual wear depths. The second objective was to determine the cause of the rodlet tip fracture noted on one of the R-26 rodlets as well as that observed earlier on R-71.

The results of the hot cell work will be reported by EPRI. The following are some of the preliminary conclusions which are of most significance to Point Beach:

1. In general, fretting wear at the guide tube "cards" is more limiting than the sliding wear resulting from RCCA vertical motion.
2. Changing the fully withdrawn or "parked" position of the shutdown banks and rotating the RCCA's through several locations is an effective method of extending RCCA lifetime.
3. A detailed quantitative measurement of RCCA wear is not necessary prior to achieving the specified service lifetime (15 years).
4. The hot cell examination results will provide a good correlation between the photographic measurement of the wear scar width and the depth of the wear scar.

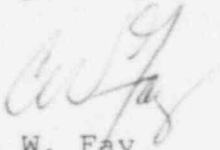
Mr. H. R. Denton
October 10, 1985
Page 3

5. The cause of the two longitudinal hairline cracks at the rodlet tips has not been determined conclusively but experience to date indicates that these cracks cause no loss in functionality of the RCCA's

As mentioned above, all of the original Unit 1 RCCA's have been replaced and there are presently no immediate plans for further examination of the Unit 1 RCCA's.

At the end of their specified service life those Unit 2 RCCA's which are original equipment will be replaced with either new RCCA's or with Unit 1 RCCA's which are capable of additional service. Alternatively, the original equipment Unit 2 RCCA's will be examined prior to further operation to determine whether their service life can be extended.

Very truly yours,



C. W. Fay
Vice President
Nuclear Power

Copy to NRC Resident Inspector

