



Wisconsin Electric POWER COMPANY

231 W. MICHIGAN, P.O. BOX 2046, MILWAUKEE, WI 53201

(414) 221-2345

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Document Control Desk
U. S. NUCLEAR REGULATORY COMMISSION
Mail Station Pl-137
Washington, D.C. 20555

Attention: Mr. Warren Swenson, Project Director
PWR Project Directorate No. III-3

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
BORAFLEX SURVEILLANCE PROGRAM
POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

The purpose of this letter is to submit for NRC approval a revised proposal to modify the Boraflex surveillance program at the Point Beach Nuclear Plant. In a letter dated February 12, 1988, the NRC Staff rejected our original proposal to revise the Boraflex surveillance program for our 10-year examination. The Staff concurred that revision of the present surveillance program was desirable but requested that we also address additional specifics. In preparing this revised program we have addressed NRC Staff concerns as well as the Safety Evaluation which was referenced on the Boraflex Surveillance Program at Waterford 3. In addition, we have been active in the Boraflex study conducted by the Electric Power Research Institute (EPRI) and have reviewed their final report, which was issued in December 1988 entitled An Assessment of Boraflex Performance in Spent-Nuclear-Fuel Storage Racks, EPRI NP-6159.

The average Boraflex panel in our spent fuel storage racks has accumulated a gamma dose of about 4.5×10^9 rads over the past nine years. The average panel will have freshly discharged fuel placed next to it only three times in 40 years and receive a total exposure of $1.8-2.0 \times 10^{10}$ rads. Freshly discharged fuel placement is distributed to ensure the gamma exposure to all Boraflex panels is as even as possible.

We have been placing freshly discharged fuel adjacent to our sample coupons every six months for the past nine years. This has accelerated the gamma dose to the four Boraflex panels surrounding these two cells to about 1.5×10^{10} rads, equivalent to the dose

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received by the average Boraflex panel in 30 years. EPRI NP-6159 concluded that the shrinkage that can lead to gap formation in restrained Boraflex panels saturates at an exposure of about 1×10^{10} rads gamma. We have already exceeded this dose on these four panels. If we were to discontinue placing freshly discharged fuel in the two cells adjacent to the sample coupons every six months, and use these cells as we do the others, the four Boraflex panels surrounding these cells would remain the highest exposure panels in the spent fuel storage racks and have a cumulative exposure of about 2.5×10^{10} rads after 40 years.

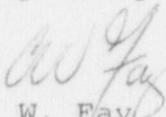
Based on this information, we propose to modify the Boraflex surveillance program. The modified program will include the following elements:

1. Since the sample coupons are not representative of the full length Boraflex sheets and have limited value in predicting the onset of Boraflex degradation in the spent fuel racks, we will terminate the current Point Beach Boraflex coupon surveillance program described in our procedure, REI-25, "Spent Fuel Rack Neutron Absorbing Material Surveillance Specimen Program."
2. We will replace the REI-25 surveillance with non-destructive examination for the presence of gaps of ten representative full-length Boraflex panels using neutron attenuation measurements. The surveillance sample will include the four panels with accelerated exposures on the cells adjacent to the surveillance coupons and six others, selected at random, from those that have been exposed to the greatest number of freshly discharged fuel assemblies at the time of the surveillance. This surveillance will be repeated at five year intervals.
3. We will maintain a data base to track the position and movement of spent fuel assemblies in the spent fuel storage racks.
4. We shall keep abreast of new industry developments on Boraflex integrity and modify this surveillance program if new information or our testing dictates that such is appropriate.
5. If this program is modified, in response to items 2 and 4 above, or for any other reason, we will inform the NRC.

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It is our intention to postpone any further Boraflex surveillance activities under REI-25 until we receive your response to this letter. If you have any questions concerning this request, please contact us.

Very truly yours,


C. W. Fay
Vice President
Nuclear Power

Copies to NRC Regional Administrator, Region III
NRC Resident Inspector