



Wisconsin Electric POWER COMPANY
231 W. MICHIGAN, P.O. BOX 2046, MILWAUKEE, WI 53201

August 5, 1980

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

Attention: Mr. Robert A. Clark, Chief
Operating Reactors Branch 3

Gentlemen:

DOCKET NO. 50-266
RESULTS OF STEAM GENERATOR INSPECTION
POINT BEACH NUCLEAR PLANT, UNIT 1

In accordance with the Nuclear Regulatory Commission's Modification of the November 30, 1979 Order, dated April 4, 1980, Point Beach Nuclear Plant Unit 1 was taken out of service on July 25, 1980, for hydrostatic tests and eddy current examinations of the steam generator tubes. This letter is to present the results of these tests and inspections, as required by the modified Order, and to request your written determination that the results of these tests are acceptable.

The hydrostatic leak checks of both steam generators were successfully completed on July 28. A detailed inspection of the tubesheets during the secondary-to-primary hydrostatic leak check revealed two "dripping" tube plugs and two "wet" tube plug ends in the "A" steam generator hot leg. One wet tube plug end and one dripping tube, at the rate of one drop in two minutes, were observed in the "B" steam generator hot leg. The dripping tube, R21C48, was initially hand probed and subsequently inspected over the U-bend during the multi-frequency eddy current inspection program but revealed only a 46% through-wall defect located three inches above the tube end.

The eddy current inspection program, as discussed in our letter to you dated July 7, 1980, consisted of an examination of 100% of the tubes to the first support plate on the hot leg side and 3% of the tubes inspected over their entire length. A listing of all hot leg eddy current indications found during this inspection and a comparison to previous inspections for

A001
S
1/1

8008070476

August 5, 1980

both the "A" and "B" steam generators is provided in Attachment 1 to this letter. A listing of tubes plugged during this inspection is provided in Attachment 2.

In the "A" steam generator hot leg, 30 tubes were identified with eddy current indications of which at least 8 previously existed. Twenty-eight indications were in the tubesheet crevice region and two tubes, R10C54 and R33C54, had 34% small volume indications at the top of the tubesheet and one-half inch above the tubesheet, respectively. All 28 tubes with indications in the tubesheet crevice region have been mechanically plugged. Three additional tubes, R7C58, R7C59 and R7C51, were plugged inadvertently. The two dripping plugs in the "A" steam generator have been weld repaired and the steam generator was successfully hydrostatically leak checked on August 3, 1980. The two tubes with indications outside the crevice area have been left unplugged since these indications do not exceed the Technical Specification plugging criterion and these indications appear to have remained unchanged since at least October 1979. These tubes will be reexamined during the next eddy current inspection.

In the "B" steam generator hot leg, 22 tubes were identified with tubesheet crevice indications of which at least 4 existed previously. Tube R21C48 which had been observed to be dripping during the hydrostatic leak check gave no through-wall eddy current indication during the inspection. All 22 tubes identified with tubesheet crevice indications have been mechanically plugged.

We are reviewing the available eddy current tapes from October and December 1979 and from March 1980 for each of the tubes with eddy current indications. A summary of this review to date is provided in Attachment 1. Thus far, this review demonstrates that the majority of these indications were not previously detectable. As demonstrated by analysis of tubes pulled in November 1979 and March 1980, the presence of intergranular corrosion attack cannot be reliably detected with the available eddy current techniques until the intergranular attack results in small volume cracks. For some tubes, we have determined that small volume indications were probably present during one or more previous inspections by reviewing the previous tapes in close detail over the specific region of interest. Because of the small volume of the defects, the signal-to-noise ratio in previous inspections was so small that the evaluators were unable to identify the indications during their reviews.

Attachment 3 provides a listing of all cold leg eddy current indications found during the inspection of 3% of the tubes over their entire length. These results indicate that tube degradation on the cold leg side remains insignificant. No eddy current indications were found in the tubesheet crevice region, confirming previous experience.

August 5, 1980

In accordance with the November 30, 1979 Order as modified, tubesheet photographs for verification of plugged tubes will be submitted under separate cover. We expect that confirming photographs will be forwarded to you within one week. A description of the quality assurance program used during the tube examination and plugging program is provided in Attachment 3 of our March 28, 1980 submittal.

Based on the results of this inspection, we believe that the condition of Point Beach Unit 1 steam generators has not changed significantly since our last inspection. The cumulative total number of steam generator tubes removed from service now represents 12.2% of tubes installed, which is well within assumptions utilized in the accident analysis for this unit. Accordingly, on receipt of your determination, we plan to return Unit 1 to service for an additional 90 effective full power days. This is based on the unit remaining in operation until the Fall 1980 refueling outage which is presently scheduled to commence in early November 1980. We propose that all the other conditions of the April 4, 1980 Modification to the November 30, 1979 Order remain in effect.

We anticipate being ready to return to power on August 7 or 8. We request your prompt consideration of these results and written determination that the results of the steam generator tests and examinations are satisfactory. Should you have questions regarding the results of this inspection, please contact us at once.

Very truly yours,


C. W. Fay, Director
Nuclear Power Department

Copies to: NRC Resident Inspector
Point Beach Nuclear Plant

Mr. C. F. Riederer
Public Service Commission of Wisconsin

Mr. Peter Anderson
Wisconsin's Environmental Decade

Ms. Joan Estes
Lakeshore Citizens for Safe Energy