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January 12, 1990

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

Gentlemen:

DOCKET NOS. 50-266 AND 50-301
RESPONSE TO GENERIC LETTER 89-13
SAFETY RELATED SERVICE WATER PROBLEM
POINT BEACH NUCLEAR PLANT

On July 18, 1989, the Nuclear Regulatory Commission issued Generic Letter 89-13, "Service Water System Problems Affecting Safety-Related Equipment." This letter presented recent operating experience and studies which have led the NRC to question the compliance by licensees with the minimum requirements for service water systems in nuclear power plants. Licensees were directed by the NRC to perform five action items listed in the letter, or equally effective alternative actions, to ensure that their service water systems are, and will be maintained, in compliance with 10CFR50, Appendix A, General Design Criteria 44, 45 and 56, and Appendix B, Section XI.

Attached to this letter is Wisconsin Electric's response to the five action items identified in Generic Letter 89-13. These responses confirm that we have, or will soon, establish programs to implement the recommendations of the letter and thus assure the adequacy of the service water system at the Point Beach Nuclear Plant to perform its safety related functions. Our schedule for implementation of several of these items is also provided in the attachment. As further required by the generic letter, we shall notify you when all recommended actions have been implemented within 30 days of the implementation of the latest item.

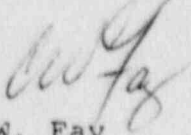
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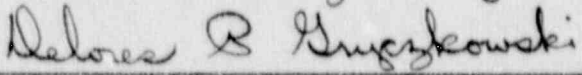
Please contact us if you have any questions concerning our actions in this matter.

Very truly yours,


C. W. Fay
Vice President
Nuclear Power

Copies to NRC Regional Administrator, Region III
NRC Resident Inspector

Subscribed and sworn to before me
this 12th day of January, 1990.



Notary Public, State of Wisconsin

My Commission expires: 5-27-90

RESPONSE TO ACTION ITEMS FROM GENERIC LETTER 89-13
"SERVICE WATER SYSTEM PROBLEMS AFFECTING SAFETY-RELATED EQUIPMENT"
POINT BEACH NUCLEAR PLANT

Action Item 1: For open-cycle service water systems, implement and maintain an ongoing program of surveillance and control techniques to significantly reduce the incidence of flow blockage problems as a result of biofouling.

Response:

Macroscopic biological fouling has not been observed at Point Beach Nuclear Plant yet; however, infestation by zebra mussels of Lake Michigan in the vicinity of Point Beach Nuclear Plant within the next two years is considered possible. The discharge flumes and the outside of the intake structure will be checked at least semiannually for macroscopic biofouling, i.e., zebra mussels. The outside of the intake structure will also be inspected for excessive corrosion semi-annually. These inspections will be incorporated into existing spring and fall intake inspection call-ups during 1990. The call-ups currently specify only a general visual inspection of the outside of the intake structure by a diver. Inspecting these areas is considered appropriate for determining the presence of macrobiological fouling or corrosion inside the intake structure and does not involve the risks of an inspection utilizing a diver inside the structure.

The forebay and pumphouse have been inspected and sand removed as necessary on a regular basis. Future inspections of the forebay will be scheduled so that the entire forebay is inspected every two years. Half of the forebay will be inspected during a Unit 1 refueling outage and the other half during a Unit 2 refueling outage. These inspections will include checks for zebra mussels.

Point Beach Nuclear Plant has already installed a chlorination/dechlorination system designed to control microscopic fouling. If zebra mussels or the mussel veligers are found near Point Beach Nuclear Plant, this system may be used as part of the control program for the mussels. Wisconsin Electric will utilize current research data and information on control methods used at other power plants to determine appropriate operation of the existing system, or consider installation of an alternative system, to control zebra mussel infestation at Point Beach Nuclear Plant.

Most of the infrequently used pipes in the safety-related portion of the service water system have full flow established to them on a periodic basis during functional tests of safety-related equipment. The standby component cooling water heat exchangers are not on a frequent full flow test schedule. The operation of these heat exchangers, including blowdown frequency, is currently being reviewed. The blowdown frequency will be optimized for controlling corrosion and preventing flow blockage due to biofouling. The fire protection system emergency backup to the cooling for the auxiliary feedwater pumps is also not currently flow-tested. These lines will also be periodically tested for flow availability by using existing drain lines.

- * * Action Item 11: Conduct a test program to verify the heat transfer capability of all safety-related heat exchangers cooled by service water.

Response:

The heat transfer capability of the safety-related heat exchangers cooled by service water will be determined by a combination of testing, inspection, and maintenance. For specific heat exchangers this will be accomplished as follows:

1. The adequacy of the cooling water supply for the auxiliary feedwater pumps, both steam driven and electrically driven, will be determined by recording the oil temperature during functional testing. Full flow tests of these pumps are performed yearly during refueling outages. Therefore, the heat transfer capability of the cooling water system is verified for emergency conditions. This recording will begin during the fall 1990 refueling outage.
2. The component cooling water heat exchangers were replaced in 1986 and are now on a yearly cleaning schedule with a visual inspection and an alternating year eddy current inspection schedule. This schedule will be continued. The A&B heat exchangers are normally used to cool Unit 1 components. These units will have a 100% tube cleaning with a 20% inspection during the Unit 1 spring 1991 refueling outage. The C&D heat exchangers are normally used to cool Unit 2 components. These units will have a 100% tube cleaning and a 20% inspection during the Unit 2 fall 1990 refueling outage.
3. The heat transfer capabilities of the diesel generator glycol coolers will be monitored during functional testing. The service water/glycol coolers for the G01 diesel are scheduled for a cleaning and inspection during the Unit 1 spring 1991 refueling outage. The service water/glycol coolers for the G02 diesel are scheduled for a cleaning and inspection during the Unit 2 fall 1990 refueling outage. Baseline data for temperatures and delta P will be taken after the coolers are cleaned.
4. The battery room heat exchangers will be replaced in 1990. Baseline data and a method for continued monitoring will be determined when they are replaced.
5. Spent fuel pool heat exchangers will be instrumented to monitor the heat transfer capability. The instrumentation will be installed by the end of the Unit 2 fall 1990 refueling outage.
6. The containment fan coolers will be monitored during normal operation for maintaining heat transfer capability. Performance testing will be done annually during normal plant operation so that a larger heat load is available. The instrumentation for the Unit 2 containment fan coolers will be installed during the Unit 2 fall 1990 outage. The instrumentation for the Unit 1 containment fan coolers will be installed during the Unit 1 spring 1991 refueling outage.

Action Item III: Ensure by establishing a routine inspection and maintenance program for open-cycle service water system piping and components that corrosion, erosion, protective coating failure, silting, and biofouling cannot degrade the performance of the safety-related systems supplied by service water.

Response:

Representative areas of the service water system will be selected based on susceptibility to corrosion, erosion and silting. These areas will be inspected to verify that the system has not degraded and can continue to perform its safety-related function. The initial inspection will be done before the end of the Unit 2 fall 1990 refueling outage. The representative areas selected for piping supplying Unit 1 components will have the initial testing before the end of the Unit 1 spring 1991 refueling outage.

Action Item IV: Confirm that the service water system will perform its intended function in accordance with the licensing basis for the plant.

Response:

Walkdowns of the service water and component cooling water systems have been done during the past two years as part of the work for IE Bulletin 79-14 and for developing updated hydraulic models of the systems. The applicability of these walkdowns to licensing basis verification will be reviewed and the need for further walkdowns will be determined by August 1990. Hydraulic models of the service water and component cooling water systems have been developed. These models can be used to verify that future modifications to these systems do not compromise their ability to perform their safety-related functions.

Action Item V: Confirm that maintenance practices, operating and emergency procedures, and training that involves the service water system are adequate to ensure that safety-related equipment cooled by the system will function as intended and that operators of this equipment will perform effectively.

Response:

Point Beach Nuclear Plant procedures are reviewed on a biennial basis in accordance with Procedure PBNP 2.1.2. The training department reviews industry experience reports and plant modifications for applicability to the training modules. Therefore, the training modules are kept current with the design of the plant systems.

All procedures and training relating to the service water and component cooling water systems will be reviewed for accuracy and applicable experiences described in NUREG-1275 Vol. 3 by the end of the Unit 2 fall 1990 refueling outage.