



Kewaunee Nuclear Power Plant
N490, Highway 42
Kewaunee, WI 54216-9511
920-388-2560

Point Beach Nuclear Plant
6610 Nuclear Road
Two Rivers, WI 54241
920-755-2321

*Kewaunee / Point Beach Nuclear
Operated by Nuclear Management Company, LLC*

November 14, 2001

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Ladies/Gentlemen:

DOCKET 50-305
OPERATING LICENSE DPR-43
KEWAUNEE NUCLEAR POWER PLANT
POTENTIAL FOR A REQUEST FOR APPROVAL OF ALTERNATIVE TO ASME CODE
REQUIREMENTS

- References:
- 1) Letter from Douglas F. Johnson (Wisconsin Electric Power Company) to Document Control Desk (NRC) dated April 3, 1998, "Request for Approval of Alternative To ASME Code Requirements."
 - 2) Letter from Joel P. Sorensen (Northern States Power Company) to Document Control Desk (NRC) dated November 30, 1998, "Request for Approval of Alternative to ASME Code Requirements."

As discussed by Mr. John Lamb of the Nuclear Regulatory Commission (NRC) and Mr. Gerald Riste of the Nuclear Management Company (NMC) on November 6, 2001, NMC is currently evaluating our plans to address a part-length control rod drive mechanism (CRDM) housing issue identified at the Kewaunee Nuclear Power Plant (KNPP). The purpose of this letter is to inform the NRC of a potential relief request from the American Society of Mechanical Engineers (ASME) Code Requirements associated with such a repair. Based on our evaluation of the issue, we may decide to remove the part-length CRDM housings during our current refueling outage.

Removal of the part-length CRDMs requires capping of the associated reactor vessel head penetrations. The preferred method for capping the penetrations is installation of a cap that will be screwed onto the threaded end of the penetration and then seal welded. Based on N-518.4 of the 1968 ASME Boiler and Pressure Vessel Code, Section III, a liquid penetrant examination of the seal weld is required. However, liquid penetrant examination of the seal weld would be difficult and require high radiation exposure. The CRDM penetrations under consideration for repair are located in a high radiation area. Additionally, access to the seal welds is difficult because of the limited clearance between the adjacent control rod drive housings. The separation between the outer rod travel housings is approximately 7 inches. This is not an adequate

A047

clearance to gain complete access to the housings to perform the liquid penetrant examination of the possible weld locations. Final weld surface preparation, the liquid penetrant examination and the subsequent cleanup would be difficult and time consuming due to the limited access, and personnel performing these operations would incur substantial radiation exposure.

10 CFR Part 50, Section 50.55a(a)(3) allows the use of an alternative to the ASME Code requirements, when authorized by the Director of the Office of Nuclear Reactor Regulation, if it can be demonstrated that:

1. The proposed alternative would provide an acceptable level of quality and safety, or
2. Compliance with the specified requirements of this section would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Should we decide to remove the part-length CRDM housings, we would propose an alternative to the liquid penetrant testing requirement of N-518.4 of the 1968 ASME Boiler and Pressure Vessel Code, Section III. The request would be similar to that requested by Point Beach Nuclear Plant (Reference 1) and Prairie Island Nuclear Plant (Reference 2). Both facilities have previously removed their part-length CRDM housings and have received corresponding approval for an alternative to the liquid penetrant testing requirement.

We plan to include in any such request an analysis demonstrating that a through-wall flaw could be detected by visual examination with a flaw size that is sufficiently smaller than the critical flaw size, thus assuring sufficient safety margin.

If you have any questions regarding this letter, please contact Jerry Riste, Licensing Leader, at (920) 388-8424 or me.

Sincerely,



for Kyle A. Hoops
Manager-Kewaunee Plant

ADB

cc - US NRC - Region III
US NRC NRR Project Manager - Kewaunee
US NRC Senior Resident Inspector - Kewaunee
US NRC Resident Inspector - Kewaunee