

July 8, 2005

NRC 2005-0086 10 CFR 54

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

Point Beach Nuclear Plant, Units 1 and 2 Dockets 50-266 and 50-301 License Nos. DPR-24 and DPR-27

<u>Clarification to Information Regarding the Point Beach Nuclear Plant</u> <u>License Renewal Application</u> (TAC Nos. MC2099 and MC2100)

By letter dated February 25, 2004, Nuclear Management Company, LLC (NMC), submitted the Point Beach Nuclear Plant (PBNP) Units 1 and 2 License Renewal Application (LRA). On May 2, 2005, the Nuclear Regulatory Commission (NRC) provided a draft Safety Evaluation Report (SER) with open items and confirmatory items. NMC letter to the NRC dated June 10, 2005, provided comments on the SER and provided additional information concerning the open items and confirmatory items. The Nuclear Regulatory Commission (NRC) staff has requested a clarification to the response to Open Item OI 3.5-4 concerning containment liner aging management.

The NMC letter to NRC dated June 10, 2005, provided a response to OI 3.5-4. In an email dated June 27, 2005, the NRC Staff requested additional information as follows:

NRC Question OI 3.5-4:

The staff recognizes the containment liner plate strain criteria of Table CC-3730-1 of ASME III, Division 2, and has accepted them in SRP 3.8.1. The open item is related to how far the applicant can leave the degraded liner without any corrective measures before it starts affecting the margin against leaktightness and structural integrity. As the process used to determine the degradation acceptability will be used during the period of extended operation, the staff evaluated the applicant's evaluation of CR-01-1517 and CR-01-1228 provided in the response.

CR-01-1517: The report refers to the NDE measurements of the basemat liner in 1988. Based on the 13 year period (1975 to 1988), the report calculates the rate of corrosion as .003 in./year. The report concludes that it is very small rate. However, extending the same rate to 60 years will result in corrosion of liner plate as 0.18 in., leaving the plate thickness of 0.10 in. at the end of the period of extended operation. This is not

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acceptable, in view of the fact that the basemat liner is inaccessible for IWE inspections, unless the applicant monitors the affected area(s) under augmented inspection (IWE-1241), and sets a limit on acceptable liner corrosion.

CR-01-1220: For the liner plate attached to the concrete wall, the report statement "under normal operating condition, the liner experience no strain," is not correct. Though the liner is not accounted for in structural calculations, by the virtue of it being anchored to the concrete, it experiences compressive strains due to dead load, prestressing and creep of concrete. This is evidenced by a number of prestressed and reinforced concrete containments having bulging of liners between the anchors. At the bottom of the containment wall, it is subjected to bending strains due to hoop prestressing and concrete creep. Unless an analysis is performed to show that with the reduced thickness of 0.116 in., the liner will be able to withstand the postulated loads without giving rise to different mode of failure (e.g. pullout of the anchors, tearing of the plate because of strain concentration) such corrosion without corrective action is not acceptable. The analysis must consider all the locked in strains and superimposed strains due to pressure, temperature and the postulated seismic loads. The staff has accepted up to 50% loss in liner thickness in a very localized areas without such analysis.

NMC Response:

The steel liner for the concrete containment building receives an inservice inspection in accordance with IWE (92 Edition/92 Addenda). In accordance with Table IWE-2500-1, the acceptance standards for Examination Category E-A, Containment Surfaces, are discussed in IWE-3510 and IWE-3122. Conditions (degradation) that may affect containment structural integrity or leak tightness shall be accepted by engineering evaluation or corrected by repair or replacement. If thickness of the base metal is reduced by more than 10% of the nominal plate thickness, the component shall be acceptable by evaluation if the reduced thickness can be shown by analysis to satisfy the requirements of the design specifications.

If localized area thickness of the containment liner base metal is reduced by 50% or more of the nominal plate thickness, then every attempt should be made to correct by repair or replacement. If the repair or replacement option is impractical, an acceptance by engineering evaluation option may be pursued.

When component examination results require acceptance by engineering evaluation for flaws or areas of degradation (IWE-3122.4) and the component is found to be acceptable for continued service, the areas containing such flaws or degradation shall be reexamined during the next inspection period scheduled in accordance with Table IWE-2500-1, Examination Category E-C (IWE-2420(b)).

When the reexaminations reveal that the flaws or areas of degradation remain essentially unchanged for three consecutive inspection periods, then the areas containing such flaws or degradation no longer require augmented examination in Document Control Desk Page 3

accordance with Examination Category E-C (IWE-2420(c)). If localized area thickness of the base metal is reduced by approximately 50% or more of the nominal plate thickness, then the reexaminations required by IWE-2420(b) will be continued in the succeeding inspection periods and the provisions of IWE-2420(c) will not be applied.

This evaluation, repair or replacement discussion, and reexaminations will be included in the Acceptance Criteria element of the ASME Section XI, Subsections IWE & IWL Inservice Inspection Program of the LRA (Section B2.1.2).

The above evaluation, repair or replacement, and reexamination requirements will assure that leak-tightness and structural integrity of the liner will be maintained.

Should you have any questions concerning this submittal, please contact Mr. James E. Knorr at (920) 755-6863.

This letter contains the following new commitments:

- An evaluation, repair or replacement requirement discussion will be included in the Acceptance Criteria element of the ASME Section XI, Subsections IWE & IWL Inservice Inspection Program of the LRA prior to the period of extended operation. If localized area thickness of the containment liner base metal is reduced by 50% or more of the nominal plate thickness, then every attempt should be made to correct by repair or replacement. If the repair or replacement option is impractical, an acceptance by engineering evaluation option may be pursued.
- If localized area thickness of the base metal is reduced by approximately 50% or more of the nominal plate thickness, then the reexaminations required by IWE 2420(b) will be continued in the succeeding inspection periods and the provisions of IWE-2420(c) will not be applied.

I declare under penalty of perjury that the forgoing is true and correct. Executed on July 8, 2005.

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Dennis L. Koehl Site Vice-President, Point Beach Nuclear Plant Nuclear Management Company, LLC

cc: Administrator, Region III, USNRC Project Manager, Point Beach Nuclear Plant, USNRC Resident Inspector, Point Beach Nuclear Plant, USNRC PSCW