

August 15, 2003

Mr. Joseph M. Solymossy  
Site Vice President  
Prairie Island Nuclear Generating Plant  
Nuclear Management Company, LLC  
1717 Wakonade Drive East  
Welch, MN 55089

SUBJECT: PRAIRIE ISLAND NUCLEAR GENERATING PLANT, UNITS 1 AND 2 -  
CORRECTION TO LEAK BEFORE BREAK SAFETY EVALUATION REPORT  
(TAC NOS. MC0022 AND MC0023)

Dear Mr. Solymossy:

By letter dated July 14, 2003, the Nuclear Management Company, LLC (NMC) informed the U.S. Nuclear Regulatory Commission (NRC) that NMC discovered an apparent error in the NRC staff's safety evaluation (SE), dated December 22, 1986 (ADAMS Accession No. ML022200425), related to the Prairie Island Nuclear Generating Plant, Units 1 and 2, licensing basis for application of leak-before-break (LBB) methodology.

The SE documented the NRC staff's completion of its review of the licensee's request for an exemption to allow the application of the LBB methodology as a basis for the elimination of protective devices (i.e., pipe whip restraints, jet impingement barriers, and other related changes) of the primary reactor coolant systems at Prairie Island, Units 1 and 2. The licensee provided technical information by letters dated October 24, 1984, October 21, and November 5, 1985, and supplemented by letter dated September 10, 1986, in response to NRC staff concerns.

The NRC SER states the following on pages 4 and 5:

- (1) For Prairie Island Unit 1, the loads associated with the highest stressed location in the main loop primary system piping are 2,235 kips [thousand pounds] (axial), 28,422 in-kips [inch-kips] (bending moment) and result in maximum stresses of about 60% of the Service Level D limits specified in Section III of the ASME [American Society of Mechanical Engineers] Code. For Prairie Island Unit 2, the loads associated with the highest stressed location in the main loop primary system piping are 1,623 kips (axial), 28,422 in-kips (bending moment) and result in maximum stresses of about 50% of the Service Level D limits specified in Section III of the ASME Code.

In its letter dated July 14, 2003, NMC asserts the following:

The indicated axial pipe stress of 2,235 kips at the highest stressed location in Unit 1 main loop primary system piping is not supported by WCAP-10639 ["Technical Bases for Eliminating Large Primary Loop Pipe Rupture as the Structural Design Basis for Prairie Island Unit 1"]. WCAP-10639, Pages 3-1, 3-3 and 4-5, states that the axial force in the Unit 1 piping is 1,623 kips at the highest stressed location in the main loop primary system piping.

J. Solymossy

- 2 -

The NRC staff has reviewed WCAP-10639 (especially pages 3-1, 3-3, and 4-5), as well as the December 22, 1986, SE. The NRC has determined that the 2,235 kips value stated in the SE was an administrative error. The NRC staff finds that the correct value should be 1,623 kips for the axial load at the critical location for the main loop primary system piping at Prairie Island, Unit 1. The NRC staff also finds that the corrected value does not change the NRC staff's conclusions made in the December 22, 1986, SE. Enclosed is a corrected page 4 for the December 22, 1986, SE.

This completes the NRC staff's efforts under TAC Nos. MC0022 and MC0023. If you have any questions, please feel free to contact me at 301-415-1446.

Sincerely,

***/RA by Anthony C. McMurtray for/***

John G. Lamb, Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-282 and 50-306

Enclosure: Corrected page 4 for December 22, 1986, SE

cc w/encl: See next page

J. Solymossy

- 2 -

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Prairie Island Nuclear Generating Plant,  
Units 1 and 2

cc:

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