

June 22, 2005

Daniel J. Malone  
Site Vice President  
Nuclear Management Company, LLC  
27780 Blue Star Memorial Highway  
Covert, MI 49043

SUBJECT: REQUESTS FOR ADDITIONAL INFORMATION (RAIs) FOR THE REVIEW OF  
THE PALISADES NUCLEAR PLANT, LICENSE RENEWAL APPLICATION  
(TAC NO. MC6433)

Dear Mr. Malone:

By letter dated March 22, 2005, Nuclear Management Company, LLC, (NMC or the applicant) submitted an application pursuant to 10 CFR Part 54, to renew the operating license for Palisades Nuclear Plant (PNP), for review by the U.S. Nuclear Regulatory Commission (NRC). Subsequently, on May 5, 2005, the NRC received a supplement to the license renewal application. The NRC staff is reviewing the information contained in the license renewal application (LRA) and supplement and has identified, in the enclosure, areas where additional information is needed to complete the review.

These RAIs were discussed with your staff, Mr. Robert Vincent, and a mutually agreeable date for this response is within 30 days from the date of this letter. If you have any questions, please contact me at 301-415-2232 or e-mail [MJM2@nrc.gov](mailto:MJM2@nrc.gov).

Sincerely,

*/RA/*

Michael J. Morgan, Project Manager  
License Renewal Section A  
License Renewal and Environmental Impacts Program  
Division of Regulatory Improvement Programs  
Office of Nuclear Reactor Regulation

Docket No.: 50-255

Enclosure: As stated

cc w/encl: See next page

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Palisades Nuclear Plant

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Palisades Nuclear Plant

- 2 -

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DISTRIBUTION: Letter to D. Malone, Re: RAIs for Palisades LRA, Dated: June 22, 2005  
**ADAMS Accession No.: ML051730577**

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RLEP RF

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**PALISADES NUCLEAR PLANT  
LICENSE RENEWAL APPLICATION (LRA)  
REQUESTS FOR ADDITIONAL INFORMATION (RAIs)**

**RAI 4.5-1**

In Section 5.8.5.3.1 of the final safety analysis report (FSAR), the applicant provides the final pre-stress ( $F_f$ ) as 140.6, 138, and 143 ksi for the dome, hoop, and the vertical tendons, respectively. The applicant appears to have used these values as the minimum required values (MRVs). As these values are not at the anchorages, these values should not be used as MRVs without modifying them for appropriate friction losses. The applicant is requested to provide the MRVs in terms of force per tendon.

**RAI 4.5-2**

In describing the scope of the program related to NUREG-1801 AMP X.S1, in AMP B2.1.7, the applicant states: "The pre-stressing force in the common tendon is measured during each surveillance and is used to establish the trend of pre-stressing loss of the group." This practice is not consistent with AMP X.S1 and NRC's Information Notice (IN) 99-10, "Degradation of Pre-stressing Tendon Systems in Pre-stressed Concrete Containments." The information notice recommends the use of all available measured pre-stressing forces for developing trend lines for each group of tendons. As Palisades started using random sampling of tendons since 15<sup>th</sup> year surveillance of tendons (FSAR Section 5.8.8.3.3), the applicant has at least three sets of measured pre-stressing forces for performing regression analyses and developing trend lines. The applicant is requested to provide trend lines for each group of tendons for comparison with the predicted lower limits (PLLs) and the minimum required values (MRVs). The applicant is also requested to provide a tabulation of the measured pre-stressing forces (not individual wire forces) used in the corrected regression analyses.

**RAI 4.5-3**

In order for the staff to arrive at the reasonable assurance conclusion regarding the adequacy of the TLAA, at a point and time (i.e. during the LRA review), the applicant is requested to provide a tabulated comparison of the minimum required values (MRVs) for each group of tendons, and the projected pre-stressing forces at 40 and 60 years based on the regression analyses performed, utilizing the procedure recommended in NUREG-1801, AMP X.S1, and in IN 99-10.

Enclosure