

August 23, 2005

Paul A. Harden
Site Vice President
Nuclear Management Company, LLC
27780 Blue Star Memorial Highway
Covert, MI 49043

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

Dear Mr. Harden:

By letter dated March 22, 2005, Nuclear Management Company, LLC, (NMC or the applicant) submitted an application pursuant to Title 10 of the *Code of Federal Regulations* Part 54 (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.

The question was 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 via e-mail at 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

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DISTRIBUTION: Letter to P. Harden, Re: RAIs for Palisades LRA, Dated: August 23, 2005
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**PALISADES NUCLEAR PLANT
LICENSE RENEWAL APPLICATION (LRA)
REQUEST FOR ADDITIONAL INFORMATION (RAI)**

RAI 3.5.2-1

In Section 3.3.2.2.10 of the license renewal application (LRA), the applicant describes the neutron absorbing panels in the spent fuel pool (SFP) Region 1 racks as B₄C plates sheathed between stainless steel plates. To complete its review, the staff requests the applicant to provide a detailed description of the neutron absorbing panels, to include, at a minimum, the B₄C content, existing areal density, B₄C matrix, and composition. In addition, the staff requests the applicant to clarify that this material is also known as Carborundum.

RAI 3.5.2-2

Section 9.11.3.2 of the applicant's current Final Safety Analysis Report (FSAR) states that the B₄C panels have been in service since 1977. In addition, in Section 3.2.2.10 of the LRA, the applicant states that there is no industry experience that boron carbide sheathed in stainless steel has experienced loss of material due to corrosion. However, a site audit recently identified Corrective Actions (CAPs) CAP032988 (2003) and CAP004729 (1995). These documents discuss the evaluation of stuck fuel assemblies in the spent fuel racks. The possible cause of the stuck assemblies is the swelling of individual cell locations due to vent hole plugging. The vent hole documents indicate that plugging may be caused by any of the following: (1) B₄C degradation, (2) improperly drilled vent holes, and (3) debris in the SFP. The exact root cause for the stuck fuel assemblies has not been determined. In addition, the swelling and stuck fuel assemblies has not been an industry problem, except at Palisades. Therefore, the staff requests the applicant to further discuss and justify that there is no aging effect applicable to this material given the discussion in the referenced documents (i.e., CAPs) report. This discussion should also address Carborundum Test Report No. CBO78-299. This report is typically used to qualify the material for 40 years. For Palisades, the use of this report would bring the service life of the material approximately 6 years into the period of extended operation. The staff requests the applicant to discuss why this component is not defined as a Time Limited Aging Analysis (TLAA) per 10 CFR 54.3.

Enclosure