

September 30, 2005

Mr. Paul A. Harden
Site Vice President
Nuclear Management Company, LLC
Palisades Nuclear Plant
27780 Blue Star Memorial Highway
Covert, MI 49043-9530

SUBJECT: PALISADES PLANT - ENVIRONMENTAL ASSESSMENT AND FINDING OF NO
SIGNIFICANT IMPACT (TAC NO. MC7366)

Dear Mr. Harden:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application of June 21, as supplemented August 25, 2005, requesting an exemption from the requirements in Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 68, "Criticality Accident Requirements," Subsection (b)(1). The proposed exemption would allow the handling and storage of spent nuclear fuel in a 10 CFR Part 72 licensed spent fuel storage container in the Palisades spent fuel pool with credit for soluble boron in the criticality analysis.

The Environmental Assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/RA/

L. Mark Padovan, Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-255

Enclosure: As stated

cc w/encl: See next page

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Palisades Plant

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January 2005

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOMINION NUCLEAR CONNECTICUT, INC.

DOCKET NO. 50-255

PALISADES PLANT

ENVIRONMENTAL ASSESSMENT AND FINDING OF

NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (NRC or the Commission) is considering issuance of an exemption from Title 10 of the *Code of Federal Regulations* (10 CFR) Part 50, Section 68, "Criticality Accident Requirements," Subsection (b)(1) for Facility Operating License No. DPR-20, issued to Nuclear Management Company (NMC), for operation of the Palisades Plant, located in Van Buren County, Michigan. Therefore, as required by 10 CFR 51.21, the NRC is issuing this environmental assessment and finding of no significant impact.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would exempt NMC from the requirements of 10 CFR 50.68, "Criticality Accident Requirements," Subsection (b)(1) during the handling and storage of spent nuclear fuel in a 10 CFR Part 72 licensed spent fuel storage container that is in the Palisades' spent fuel pool. The proposed action is in accordance with NMC's application of June 21, as supplemented August 25, 2005.

The Need for the Proposed Action:

Under 10 CFR 50.68(b)(1), the Commission sets forth the following requirement that must be met, in lieu of a monitoring system capable of detecting criticality events:

Plant procedures shall prohibit the handling and storage at any one time of more fuel assemblies than have been determined to be safely subcritical under the most adverse moderation conditions feasible by unborated water.

Section 50.12(a) allows licensees to apply for an exemption from the requirements of 10 CFR Part 50 if the regulation is not necessary to achieve the underlying purpose of the rule and other conditions are met. NMC stated in its August 25, 2005, letter that applying the 10 CFR 50.68(b)(1) criticality prevention standards to dry shielded canister loading operations, conducted in connection with a 10 CFR Part 72 license would result in undue hardship or other costs that are significantly in excess of those contemplated when the regulation was adopted, or that are significantly in excess of those incurred by others similarly situated.

Environmental Impacts of the Proposed Action:

The NRC has completed its evaluation of the proposed action and concludes that if the exemption described above is not granted, it would result in an undue hardship. The details of the NRC staff's safety evaluation will be provided in the exemption that will be issued as part of the letter to the licensee approving the exemption to the regulation.

The proposed action will not significantly increase the probability or consequences of accidents. No changes are being made in the types of effluents that may be released offsite. There is no significant increase in the amount of any effluent release off site. There is no significant increase in occupational or public radiation exposure. Therefore, there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential non-radiological impacts, the proposed action does not have a potential to affect any historic sites. It does not affect non-radiological plant effluents and has

no other environmental impact. Therefore, there are no significant non-radiological environmental impacts associated with the proposed action.

Accordingly, the NRC concludes that there are no significant environmental impacts associated with the proposed action.

Environmental Impacts of the Alternatives to the Proposed Action:

As an alternative to the proposed action, the staff considered denial of the proposed action (i.e., the “no-action” alternative). Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

The action does not involve the use of any different resources than those previously considered in the Final Addendum to the Final Environmental Statement Related to Operation of the Palisades Nuclear Plant dated February 1978.

Agencies and Persons Consulted:

On September 30, 2005, the staff consulted with the Michigan State official, Mary Ann Elzerman, of the Michigan Department of Environmental Quality, regarding the environmental impact of the proposed action. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

On the basis of the environmental assessment, the NRC concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the NRC has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see NMC’s letter of June 21, as supplemented August 25, 2005. Documents may be examined, and/or copied for a fee, at the NRC’s Public Document Room (PDR), located at One White Flint North, 11555 Rockville Pike

(first floor), Rockville, Maryland. Publicly available records will be accessible electronically from the Agencywide Documents Access and Management System (ADAMS) Public Electronic Reading Room on the NRC Web site, <http://www.nrc.gov/reading-rm/adams.html>. Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS, should contact the NRC PDR Reference staff at 1-800-397-4209 or 301-415-4737, or send an e-mail to pdr@nrc.gov.

Dated at Rockville, Maryland, this 30th day of September 2005.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA/

L. Raghavan, Chief, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation