

August 31, 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](mailto:MJM2@nrc.gov).

Sincerely,

**/RA/ (S. Lee for)**

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

August 31, 2005

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION (RAIs) 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](mailto:MJM2@nrc.gov).

Sincerely,

**/RA/ (S. Lee for)**

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

DISTRIBUTION: See next page

**ADAMS Accession No.: ML052430767**

Document Name: E:\Filenet\ML052430767.wpd

OFFICE	PM:RLEP	LA:RLEP	SC:RLEP
NAME	MMorgan (S. Lee for)	MJenkins	SLee
DATE	08/31/05	08/31/05	08/31/05

OFFICIAL RECORD COPY

Palisades Nuclear Plant

cc:

Robert A. Fenech, Senior Vice President  
Nuclear, Fossil, and Hydro Operations  
Consumers Energy Company  
1945 Parnall Rd.  
Jackson, MI 49201

Arunas T. Udry, Esquire  
Consumers Energy Company  
1 Energy Plaza  
Jackson, MI 49201

Regional Administrator, Region III  
U.S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, IL 60532-4351

Supervisor  
Covert Township  
P.O. Box 35  
Covert, MI 49043

Office of the Governor  
P.O. Box 30013  
Lansing, MI 48909

U.S. Nuclear Regulatory Commission  
Resident Inspector's Office  
Palisades Plant  
27782 Blue Star Memorial Highway  
Covert, MI 49043

Michigan Department of Environmental  
Quality  
Waste and Hazardous Materials Division  
Hazardous Waste and Radiological  
Protection Section  
Nuclear Facilities Unit  
Constitution Hall, Lower-Level North  
525 West Allegan Street  
P.O. Box 30241  
Lansing, MI 48909-7741

David Lewis  
Pillsbury Winthrop Shaw Pittman, LLP  
2300 N Street, N.W.  
Washington, D.C. 20037

Manager, Regulatory Affairs  
Nuclear Management Company, LLC  
27780 Blue Star Memorial Highway  
Covert, MI 49043

Director of Nuclear Assets  
Consumers Energy Company  
Palisades Nuclear Plant  
27780 Blue Star Memorial Highway  
Covert, MI 49043

John Paul Cowan  
Executive Vice President & Chief Nuclear  
Officer  
Nuclear Management Company, LLC  
700 First Street  
Hudson, WI 54016

Jonathan Rogoff, Esquire  
Vice President, Counsel & Secretary  
Nuclear Management Company, LLC  
700 First Street  
Hudson, WI 54016

Douglas E. Cooper  
Senior Vice President - Group Operations  
Palisades Nuclear Plant  
Nuclear Management Company, LLC  
27780 Blue Star Memorial Highway  
Covert, MI 49043

Robert A. Vincent  
Licensing Lead - License Renewal Project  
Palisades Nuclear Plant  
27780 Blue Star Memorial Highway  
Covert, MI 49043

Palisades Nuclear Plant

- 2 -

cc:

Darrel G. Turner  
License Renewal Project Manager  
Palisades Nuclear Plant  
27780 Blue Star Memorial Highway  
Covert, MI 49043

Mr. James Ross  
Nuclear Energy Institute  
1776 I Street, NW, Suite 400  
Washington, DC 20006-3708

Mr. Douglas F. Johnson  
Director, Plant Life Cycle Issues  
Nuclear Management Company, LLC  
700 First Street  
Hudson, WI 54016

Secretary  
Federal Energy Regulatory Commission  
888 First Street, NE, Room 1A  
Washington, DC 20426

Chairperson  
Michigan Public Service Commission  
PO Box 30221  
Lansing, MI 48909-7721

DISTRIBUTION: Letter to P. Harden, Re: RAIs for Palisades LRA, Dated: August 31, 2005  
**ADAMS Accession No.: ML052430767**

**HARD COPY**

RLEP RF  
M. Morgan (PM)

**E-MAIL:**

RidsNrrDrip  
RidsNrrDe  
G. Bagchi  
K. Manoly  
W. Bateman  
J. Calvo  
R. Jenkins  
J. Fair  
RidsNrrDssa  
RidsNrrDipm  
D. Thatcher  
R. Pettis  
G. Galletti  
C. Li  
K. Winsberg (RidsOgcMailCenter)  
R. Weisman  
M. Mayfield  
A. Murphy  
S. Smith (srs3)  
S. Duraiswamy  
Y. L. (Renee) Li  
RLEP Staff  
-----

P. Lougheed, RIII  
J. Ellegood, RIII  
M. Garza, RIII  
A. Stone, RIII  
L. Raghavan  
T. Mensah  
OPA

**PALISADES NUCLEAR PLANT  
LICENSE RENEWAL APPLICATION (LRA)  
REQUEST FOR ADDITIONAL INFORMATION (RAI)**

**RAI 2.3.3.7-1**

LRA Section 2.3.3.7, on Page 2-114, states that the boundaries of the portions of the Fire Protection System within the scope of license renewal include five legs that tap off the fire main loop to supply various sprinkler systems, deluge systems and hose stations within the auxiliary building, turbine building, intake structure, and hydrant stations.

LRA Section 2.1.1.1 identifies the current licensing basis as a plant information source for license renewal. The current licensing basis for fire protection is contained in the PNP fire hazards analysis (FHA), 10 CFR Part 50 Appendix R analysis and fire protection safety evaluation report(s).

License renewal Drawing, LR-216, Sheet 2, shows fire hose stations FHS 1, FHS 6, FHS 2 and FHS 4 (Locations F-3 and F-4) as outside the scope of license renewal. Based on the information available in the PNP current licensing basis, the staff cannot determine if these fire hose stations should be excluded from the scope of license renewal.

In order for the staff to complete its review, provide the fire area and the room number in which these fire hose stations are located. Justify the exclusion of these fire hose stations from the scope of license renewal in accordance with the requirements of 10 CFR Part 54.4(a)(3).

**RAI 2.3.3.7-3**

The PNP Plant Fire Hazards Analysis (FHA) Report, Section II, "Definitions," states that a fire area, as used in Appendix R, is defined as an area sufficiently bounded to withstand hazards associated with the area and, as necessary, to protect important equipment within the area from fire outside the area. The FHA report describes Fire Areas 1 through 19 and 21 through 36. Each fire area evaluation contains a section, "Fire Barriers Defining the Areas." These fire barriers are included in the current licensing basis and are within the scope of license renewal. Fire Area 9, "Screen House (Intake Structure)," describes "A radiant energy shield wall and a horizontal distance of at least 20' separates one diesel fire pump from the others..."

LRA Section 2.3.3.7 of the fire protection system states, "The Fire Protection System (FPS) includes the diverse design and operational features intended to prevent and mitigate the effects of fires. Building structures have been designed and arranged to prevent the spread of fire and to ensure integrity of redundant safe shutdown systems and areas."

LRA Section 2.4.7, "Intake Structure," lists building framing-concrete, below grade (wall, foundation, slab, grout, reinforcement, trenches, cable pits, tunnels, etc.) as a component group subject to an AMR. Although fire barrier is identified as one of intended functions for this component group, based on review of the above LRA sections it is not clear that all fire barriers and the radiant energy shield wall in the screen house (intake structure) described in the Fire Hazards Analysis (Fire Area 9) are included within the scope of license renewal.

Enclosure

Confirm that all fire barriers and components such as, doors, dampers and penetration seals described in the plant FHA report are included within the scope of license renewal or provide information to describe why any of the fire barriers or the radiant energy shield are excluded from the scope of license renewal.

#### **RAI 2.3.3.7-4**

The current licensing basis for fire protection is contained in the Plant Fire Hazards Analysis (FHA) Report, 10 CFR Part 50 Appendix R analysis, and fire protection safety evaluation report (SER). The plant FHA describes Fire Areas 25A, South Heating Boiler Room, and 25B, North Heating Boiler Room, located in the turbine building elevation 590'. The fire hazards analysis describes each of these rooms as being protected by automatic wet pipe suppression systems.

License renewal drawing LR-216, Sheet 2, depicts sprinkler systems in the following areas as outside the scope of license renewal: boiler rooms , office (elevation 607'), cold chemical and IC labs (elevation 590'), and office (elevation 590') at Location F-7 and maintenance storage (elevation 590'), and tech and maintenance office (elevation 590').

Provide the basis for excluding the sprinkler systems for the above-mentioned rooms from the scope of license renewal or revise the license renewal drawings accordingly.

#### **RAI 2.3.3.7-5**

LRA Section 2.4.3, on page 2-225, System Function Listing, S0100-FP, has a comment that containment exterior wall is an Appendix R fire barrier. However, LRA Table 2.4.3-1 does not include fire barrier/protection as an intended function.

Provide information to clarify that Table 2.4.3-1 does not need to describe fire protection as an intended function, or revise the table to define fire protection as an intended function.

#### **RAI 2.3.3.7-6**

LRA Section 2.4.6 for the feedwater purity building, on Page 2-234, states that the water purity building is within the scope of license renewal based on fire protection requirements to achieve safe shutdown. It also states that, on page 2-235, the feedwater purity boiler room in the south end of the building houses a diesel fuel oil transfer pump and piping, and this is the only area in this structure that is within the scope of license renewal. Further, the system function S0800-FP, on Page 2-235, states that the building provides structural and/or functional support to fire protection-related components. However, LRA Table 2.4.6-1 does not identify fire protection/barrier as an intended function.

Provide information to clarify that fire barrier is not an intended function for the feedwater purity building, or revise Table 2.4.6-1 to define fire barrier as an intended function.

#### **RAI 2.3.3.7-7**

LRA Section 2.4.10 of the turbine building, on Page 2-251, states that the turbine building also contains fire barrier concrete commodities credited in fire protection requirements for achieving safe shutdown. Further, the system function listing, on Page 2-252 states that this section includes fire protection as one of the functions. However, LRA Table 2.4.10-1 does not include fire protection as an intended function.

Provide information to clarify that fire barrier is not an intended function for the turbine building, or revise Table 2.4.10-1 to define fire barrier as an intended function.

**RAI 2.3.3.7-9**

The following components are shown on the fire protection license renewal drawings as within the scope of license renewal. However, LRA Table 2.3.3-7 of the fire protection system does not list these components as being subject to an AMR. These components serve a pressure boundary intended function, and are passive and long-lived. Clarify if these components are included in Table 2.3.3-7 as part of any other component group. If not, justify the exclusion of these components from being subject to an AMR in accordance with the requirements of 10 CFR Part 54.21(a)(1).

- a. Flexible connections on LR-216, Sheet 1, at Locations B-4, C-4, and E-5.
- b. Lube oil coolers on LR-216, Sheet 1, at Locations B-4 and

**RAI 3.3.2.7-1**

The PNP fire hazards analysis (FHA), in fire area 9 screen house (intake structure), describes, "A radiant energy shield wall ... separates one diesel fire pump from the others..." Table 3.5.2-8 of the LRA does not specifically identify radiant energy shields, but references carbon steel fire barriers in the auxiliary building, intake building and containment. It is unclear what these metal barriers are and what their function is. Table 3.5.2-8 references the Fire Protection Program, Section B2.1.10, as the Aging Management Program addressing these barriers. However, Section B2.1.10 does not specifically address radiant energy shields, and refers to the Structural Monitoring Program, Section B2.1.19 for fire barriers, such as walls, floors, and ceilings. Identify where the radiant energy shields referenced in the FHA are included in the AMR and which program manages their aging effects. Also verify that the Table 3.5.2-8 should include a reference to the Structural Monitoring Program, Section B2.1.19 for these barriers or identify where in the Fire Protection Program, Section B2.1.10 they are addressed.