

July 12, 2005

Paul A. Harden
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. 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.

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.

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

July 12, 2005

Paul A. Harden
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. 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.

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.

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

DISTRIBUTION: See next page

ADAMS Accession No.: ML051940189

Document Name: E:\Filenet\ML051940189.wpd

OFFICE	PM:RLEP	LA:RLEP	SC:RLEP
NAME	MMorgan	MJenkins	SLee
DATE	07/11/05	07/12/05	07/12/05

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. Udryns, 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

Michigan Department of Attorney General
Special Litigation Division
525 West Ottawa St.
Sixth Floor, G. Mennen Williams Building
Lansing, MI 48913

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, Michigan 48909-7721

DISTRIBUTION: Letter to P. Harden, Re: RAIs for Palisades LRA, Dated: July 12, 2005
ADAMS Accession No.:ML051940189

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
D. Jaffe
L. Raghavan
T. Mensah
OPA

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

RAI B.2.1.3-1(b)

The LRA AMR Tables and AMP B.2.1.3 or AMP B.2.1.5 do not identify if any bolting is exposed to soil. The applicant is requested to identify if any bolting is used in buried applications and to clarify if the Bolting Integrity Program or the Buried Services Corrosion Monitoring Program manage such bolting.

RAI B.2.1.3-1(c)

LRA Section B.2.1.3 references EPRI NP-5769 which identifies that loss of preload is caused by a number of factors including stress relaxation (both at room temperature and elevated temperature), thermal cycling (particularly for gaskets), creep and flow of gasket material during initial compression, vibration and shock, and elastic interactions between separately-tightened bolts. Notes 206, 324 and 406 in LRA AMR Tables state that loss of preload is included here in response to recent NRC RAIs on non-primary system, high temperature bolting that may experience loss of preload. Considering EPRI NP-5769, loss of preload may occur at room temperature, the applicant is requested to define high temperature and clarify if loss of preload is managed for all closure bolting within scope of license renewal.

RAI B.2.1.3-1(d)

The applicant is requested to clarify if there are any in-scope, high strength (actual yield strength > 150 ksi) structural bolting or fasteners used for Palisades NSSS component supports or other non-class 1 applications.

RAI B.2.1.3-2(a)

LRA Section B.2.1.3, preventive actions, states that the use of lubricants generally meet the recommendations of EPRI NP-5769 and NUREG-1339 and under enhancements the applicant plans a revision to the procedures that implement the credited programs, including use of lubricants and sealants to bring the Bolting Integrity Program into conformance with the NUREG-1801 program description. With regards to the use of lubricants, the use of the term "generally meet" is not clear. The applicant is requested to clarify if any exceptions to the NUREG-1801 program and its bases are necessary for the use of lubricants.

RAI B.2.1.3-3(a)

NUREG-1801 AMP XI.M18, element 4, recommends inspection techniques such as removing the bolt, proof test by tension or torquing, by situ ultrasonic tests or hammer tests. The applicant credits both visual and volumetric inspections of bolting. It is not clear how crack initiation due to cyclic loading or SCC is detected by visual inspection where the thread surface is not readily visible. Where visual inspection is applied, the applicant is requested to clarify how crack initiation due to cyclic loading or SCC is detected for applications where the thread surface is not readily visible. If leakage detection is the only method applied, the applicant should so clarify. In addition, if removal of the bolting and inspection during maintenance or augmented inspection is credited, the applicant should so clarify.

Enclosure

RAI B.2.1.3-3(b)

LRA Section B2.1.3 identifies the ASME Section XI Inservice Inspection Program for managing non-class 1 safety related pressure retaining and support bolting. The LRA B2.1.2 Inservice Inspection Program references the requirements of 10 CFR 50.55a for the Section XI edition. GALL XI.M3 recommends visual, surface and volumetric examinations in accordance with IWA-2000 of the 1995 edition through the 1996 addenda of ASME Section XI. The applicant is requested to clarify if detection of aging effects in bolting using the ASME Section XI edition identified in 10 CFR 50.55(a) is consistent with or conservative compared to the 1995 edition through the 1996 addenda identified in NUREG-1801 XI.M3. If the new code edition is less restrictive, the applicant is requested to submit an evaluation to the NRC for review to demonstrate that aging effects are being adequately managed.

RAI B.2.1.3-3(c)

Under “Detection of Aging Effects” item of Section B2.1.3, Bolting Integrity Program, it is indicated that structural bolting and fasteners both inside and outside containment are inspected by visual examination in accordance with the Structural Monitoring Program. The applicant is requested to clarify how the visual examination of structural bolting and fasteners is implemented pursuant to the Palisades’ Structural Monitoring Program, including a list of plant-specific programs or procedures that will be used to timely dispose the identified bolting or fastener degradation events.

RAI B.2.1.3-4 (a)

NUREG-1801 AMP XI.M18 element 6 (Acceptance Criteria) recommends that immediate repairs be done for major leaks that may cause corrosion or contamination. LRA AMP B2.1.3 states that the Palisades Bolting Integrity Program makes no distinction regarding “immediate” repairs, but instead relies upon the plant inservice inspection program and corrective action process to evaluate, prioritize and schedule repairs. The operating experience section of AMP B2.1.3 states that the Bolting Integrity program has been effective in identifying bolting degradation in a timely manner, thus ensuring that age related degradation of bolting will be effectively managed throughout the license renewal period. The applicant identifies six instances where the ISI program has been instrumental in discovering bolting degradation. The applicant concludes that reviews of internal and external assessments of the program have been reviewed and the reports demonstrate that the program has effectively identified and dispositioned issues that could have led to degraded conditions. The applicant is requested to specifically address if these reports represent objective evidence to demonstrate that the Action Request Process and Corrective Action Process have been effective in initiating timely repairs for bolting, including structural bolting and fasteners. The applicant is also requested to explain plant specific operating experience regarding aging management of any non-class 1 high strength bolting, including structural bolting.

RAI B.2.1.3-5 (a)

Section A2.3 of the LRA states that the program considers the guidelines delineated in NUREG-1339 for a Bolting Integrity Program, EPRI NP-5769 (with the exceptions noted in NUREG-1339) for safety related bolting, and EPRI TR-104213 for non-safety related bolting. The use of the term “considers” is not definitive. The applicant is requested to clarify if the program “relies on” or is consistent with these documents.