



November 6, 2006

10 CFR 50.90

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

License Amendment Request: Realistic Large Break Loss-of-Coolant Accident

Pursuant to 10 CFR 50.90, Nuclear Management Company, LLC (NMC) requests Nuclear Regulatory Commission (NRC) review and approval of a proposed license amendment for the Palisades Nuclear Plant. NMC proposes to revise Appendix A, Technical Specifications (TS), Core Operating Limits Report (COLR) analytical methods referenced in Technical Specification (TS) 5.6.5.b.

The current fuel vendor for the Palisades Nuclear Plant, Areva NP, has performed a Palisades specific large break loss-of-coolant accident (LBLOCA) analysis (Reference 2) using their realistic LBLOCA (RLBLOCA) methodology (Reference 1). The proposed license amendment request would add this RLBLOCA methodology to the analytical methods referenced in TS 5.6.5.b.

Enclosure 1 provides a detailed description of the proposed change, background and technical analysis, No Significant Hazards Consideration Determination, and Environmental Review Consideration. Enclosure 2 provides the revised TS pages reflecting the proposed change. Enclosure 3 provides the annotated TS pages showing the changes proposed.

Enclosure 4 provides the Areva NP proprietary authorization affidavit supporting the Palisades specific RLBLOCA analysis. The affidavit sets forth the basis on which the information may be withheld from public disclosure by the Commission and addresses with specificity the considerations listed in 10 CFR 2.390.

Enclosure 5 contains the Areva NP Realistic Large Break LOCA analysis report for Palisades with the proprietary information enclosed in brackets. NMC requests that

Enclosure 5, which is proprietary to Areva NP, be withheld from public disclosure in accordance with 10 CFR 2.390. Correspondence regarding the proprietary aspects of the items listed above, or the supporting Areva NP affidavit, should reference the affidavit and be addressed to Jerald S. Holm, Manager, Product Licensing, Areva NP, 2101 Horn Rapids Road, Richland, WA 99352.

Enclosure 6 contains the non-proprietary version of the Areva NP report with the proprietary information deleted.

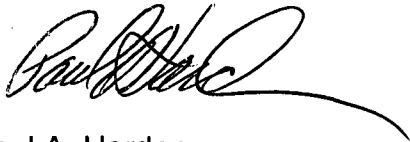
NMC requests approval of this proposed license amendment by November 1, 2007, with the amendment being implemented within 90 days.

A copy of this request has been provided to the designated representative of the State of Michigan.

Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

I declare under penalty of perjury that the foregoing is true and correct. Executed on November 6, 2006.



Paul A. Harden
Site Vice-President, Palisades Nuclear Plant
Nuclear Management Company, LLC

Enclosures (6)

CC Regional Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
NRC Resident Inspector, Palisades USNRC

ENCLOSURE 1

DESCRIPTION OF REQUESTED CHANGES

1.0 DESCRIPTION

Nuclear Management Company, LLC (NMC) requests to amend Operating License DPR-20 for the Palisades Nuclear Plant. The proposed change would revise the Appendix A, Technical Specifications (TS), Core Operating Limits Report (COLR) analytical methods referenced in Technical Specification (TS) 5.6.5.b. This change is needed for NMC to use the Areva NP realistic large break loss-of-coolant accident (RLBLOCA) methodology (Reference 1) in future operating cycle designs for the Palisades Nuclear Plant.

2.0 PROPOSED CHANGE

NMC proposes to revise Technical Specification 5.6.5.b to add EMF-2103 (P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors."

3.0 BACKGROUND

The NRC safety evaluation for EMF-2103 (P)(A) (Reference 1) states, "The licensee or applicant using the approved methodology must submit the results of the plant-specific analyses, including the calculated worst break size, PCT, and local and total oxidation."

4.0 TECHNICAL ANALYSIS

Areva NP has performed a RLBLOCA analysis for Palisades. The results are described in the Enclosure 5 (proprietary) and Enclosure 6 (non-proprietary) reports.

These proposed changes will have no adverse effect on plant safety.

One of the limitations specified in the NRC safety evaluation states, "The model does not determine whether Criterion 5 of 10 CFR 50.46, long term cooling, has been satisfied. This will be determined by each applicant or licensee as part of its application of this methodology." For Palisades Nuclear Plant, the long term cooling analysis currently described in the FSAR is not affected by this submittal.

5.0 REGULATORY SAFETY ANALYSIS

5.1 No Significant Hazards Consideration

Nuclear Management Company, LLC (NMC) has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.92, "Issuance of Amendment," as discussed below:

1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed license amendment adds approved analytical methods used to determine the core operating limits per Technical Specification 5.6.5.b. Accidents previously evaluated will be unaffected because they will continue to be analyzed using applicable methodologies approved by the Nuclear Regulatory Commission to ensure all required safety limits are met. The proposed amendment does not affect the acceptance criteria for any Final Safety Analysis Report (FSAR) safety analysis analyzed accidents and anticipated operational occurrences. As such, the proposed amendment does not increase the probability or consequences of an accident. The proposed amendment does not involve operation of the required structures, systems or components (SSCs) in a manner or configuration different from those previously recognized or evaluated.

Therefore, operation of the facility in accordance with the proposed amendment would not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No.

The proposed amendment does not involve a physical alteration of any SSC or a change in the way any SSC is operated. The proposed amendment does not involve operation of any required SSCs in a manner or configuration different from those previously recognized or evaluated. No new failure mechanisms will be introduced by the changes being requested.

Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does the proposed amendment involve a significant reduction in a margin of safety?

Response: No.

The proposed amendment does not, by itself, introduce a failure mechanism. The proposed amendment does not involve any physical changes to the plant or manner in which the plant is operated. The proposed changes do not affect the acceptance criteria for any FSAR safety analysis analyzed accidents or anticipated operational occurrences.

All required safety limits would continue to be analyzed using methodologies approved by the Nuclear Regulatory Commission.

Therefore, the proposed amendment would not involve a significant reduction in a margin of safety.

Based on the evaluation above, NMC concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

5.2 Applicable Regulatory Requirements/Criteria

As indicated in Section 3 above, the addition of the realistic large break loss-of-coolant accident (RLBLOCA) methodology requires prior NRC review and approval based on the stipulations stated in the safety evaluation approving EMF-2103.

In conclusion, based on the considerations described above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

6.0 ENVIRONMENTAL CONSIDERATION

NMC has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

7.0 REFERENCE

1. EMF-2103 (P)(A), Revision 0, "Realistic Large Break LOCA Methodology for Pressurized Water Reactors," dated April 2003.
2. BAW-2501 (P), Revision 1, "Palisades Nuclear Plant Realistic Large Break LOCA Summary Report", dated August 2006.

8.0 PRECEDENT

By letter dated March 3, 2005, as supplemented by letter dated July 6, 2006, Carolina Power & Light Company submitted a license amendment request (LAR) for H. B. Robinson Steam Electric Plant, Unit 2. The LAR requested changes to the H.B. Robinson Operating License and Technical Specifications, specifically, changes to the methodology for large break (LB) loss-of-coolant accident (LOCA) analyses. The LAR requested approval to apply the NRC approved AREVA best estimate (BE) LBLOCA methodology described in EMF-2103(P)(A), "Realistic Large Break Loss-of-Coolant Accident Methodology for Pressurized Water Reactors," Revision 0, April 2003. As required per the NRC safety evaluation for EMF-2103 (P)(A), a plant-specific analysis was submitted with the LAR for H.B. Robinson. By letter dated September 20, 2006, the NRC approved the LAR for H.B. Robinson.

Similar to H. B. Robinson, NMC also is requesting approval to apply the NRC approved AREVA BE LBLOCA methodology, described in EMF-2103(P)(A), for the Palisades Nuclear Plant (PNP). As required per the NRC safety evaluation for EMF-2103 (P)(A), a plant-specific analysis is being submitted with the LAR for PNP.

ENCLOSURE 2

LICENSE AMENDMENT REQUEST: REALISTIC LARGE BREAK LOCA

REVISED TECHNICAL SPECIFICATION PAGE 5.0-27
AND
OPERATING LICENSE PAGE CHANGE INSTRUCTIONS

2 Pages Follow

ATTACHMENT TO LICENSE AMENDMENT NO.

FACILITY OPERATING LICENSE NO. DPR-20

DOCKET NO. 50-255

Remove the following pages of Appendix A Technical Specifications and replace with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

5.0-27

INSERT

5.0-27

5.6 Reporting Requirements

5.6.5 COLR (continued)

14. EMF-92-116(P)(A), "Generic Mechanical Design Criteria for PWR Fuel Designs," Siemens Power Corporation. (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.2.4)
 15. EMF-2087(P)(A), "SEM/PWR-98: ECCS Evaluation Model for PWR LBLOCA Applications," Siemens Power Corporation. (LCOs 3.1.6, 3.2.1, & 3.2.2)
 16. ANF-87-150 Volume 2, "Palisades Modified Reactor Protection System Report: Analysis of Chapter 15 Events," Advanced Nuclear Fuels Corporation. [Approved for use in the Palisades design during the NRC review of license Amendment 118, November 15, 1988] (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.4.1)
 17. EMF-1961(P)(A), Revision 0, Siemens Power Corporation, July 2000, "Statistical Setpoint/Transient Methodology for Combustion Engineering Type Reactors." (LCOs 3.1.6, 3.2.1, 3.2.2, 3.2.4, & 3.4.1)
 18. EMF-2328 (P)(A), Revision 0, Framatome ANP, Inc., March 2001, "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based." (LCOs 3.1.6, 3.2.1, & 3.2.2)
 19. BAW-2489P, "Revised Fuel Assembly Growth Correlation for Palisades." (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.2.4)
 20. EMF-2103 (P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors." (LCOs 3.1.6, 3.2.1, & 3.2.2)
- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems limits, nuclear limits such as shutdown margin, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any mid cycle revisions or supplements, shall be provided, upon issuance for each reload cycle, to the NRC.

ENCLOSURE 3

LICENSE AMENDMENT REQUEST: REALISTIC LARGE BREAK LOCA

MARK-UP OF TECHNICAL SPECIFICATION PAGE 5.0-27
(showing proposed changes)
(additions are highlighted; deletions are strikethrough)

1 Page Follows

5.6 Reporting Requirements

5.6.5 COLR (continued)

14. EMF-92-116(P)(A), "Generic Mechanical Design Criteria for PWR Fuel Designs," Siemens Power Corporation. (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.2.4)
 15. EMF-2087(P)(A), "SEM/PWR-98: ECCS Evaluation Model for PWR LBLOCA Applications," Siemens Power Corporation. (LCOs 3.1.6, 3.2.1, & 3.2.2)
 16. ANF-87-150 Volume 2, "Palisades Modified Reactor Protection System Report: Analysis of Chapter 15 Events," Advanced Nuclear Fuels Corporation. [Approved for use in the Palisades design during the NRC review of license Amendment 118, November 15, 1988] (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.4.1)
 17. EMF-1961(P)(A), Revision 0, Siemens Power Corporation, July 2000, "Statistical Setpoint/Transient Methodology for Combustion Engineering Type Reactors." (LCOs 3.1.6, 3.2.1, 3.2.2, 3.2.4, & 3.4.1)
 18. EMF-2328 (P)(A), Revision 0, Framatome ANP, Inc., March 2001, "PWR Small Break LOCA Evaluation Model, S-RELAP5 Based." (LCOs 3.1.6, 3.2.1, & 3.2.2)
 19. BAW-2489P, "Revised Fuel Assembly Growth Correlation for Palisades." (LCOs 3.1.6, 3.2.1, 3.2.2, & 3.2.4)
 20. EMF-2103 (P)(A), "Realistic Large Break LOCA Methodology for Pressurized Water Reactors." (LCOs 3.1.6, 3.2.1, & 3.2.2)
- c. The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal mechanical limits, core thermal hydraulic limits, Emergency Core Cooling Systems limits, nuclear limits such as shutdown margin, transient analysis limits, and accident analysis limits) of the safety analysis are met.
- d. The COLR, including any mid cycle revisions or supplements, shall be provided, upon issuance for each reload cycle, to the NRC.

ENCLOSURE 4

LICENSE AMENDMENT REQUEST: REALISTIC LARGE BREAK LOCA

AREVA NP AFFIDAVIT

3 Pages Follow

ENCLOSURE 4

LICENSE AMENDMENT REQUEST: REALISTIC LARGE BREAK LOCA

AREVA NP AFFIDAVIT

3 Pages Follow

AFFIDAVIT

STATE OF WASHINGTON)
) ss.
 COUNTY OF BENTON)

1. My name is Jerald S. Holm. I am Manager, Product Licensing, for AREVA NP Inc. and as such I am authorized to execute this Affidavit.

2. I am familiar with the criteria applied by AREVA NP to determine whether certain AREVA NP information is proprietary. I am familiar with the policies established by AREVA NP to ensure the proper application of these criteria.

3. I am familiar with the AREVA NP information contained in the report BAW-2501P Revision 1, *Palisades Nuclear Plant Realistic Large Break LOCA Summary Report*, dated August 2006, and referred to herein as "Document." Information contained in this Document has been classified by AREVA NP as proprietary in accordance with the policies established by AREVA NP for the control and protection of proprietary and confidential information.

4. This Document contains information of a proprietary and confidential nature and is of the type customarily held in confidence by AREVA NP and not made available to the public. Based on my experience, I am aware that other companies regard information of the kind contained in this Document as proprietary and confidential.

5. This Document has been made available to the U.S. Nuclear Regulatory Commission in confidence with the request that the information contained in this Document be withheld from public disclosure. The request for withholding of proprietary information is made in accordance with 10 CFR 2.390. The information for which withholding from disclosure is

requested qualifies under 10 CFR 2.390(a)(4) "Trade secrets and commercial or financial information".

6. The following criteria are customarily applied by AREVA NP to determine whether information should be classified as proprietary:

- (a) The information reveals details of AREVA NP's research and development plans and programs or their results.
- (b) Use of the information by a competitor would permit the competitor to significantly reduce its expenditures, in time or resources, to design, produce, or market a similar product or service.
- (c) The information includes test data or analytical techniques concerning a process, methodology, or component, the application of which results in a competitive advantage for AREVA NP.
- (d) The information reveals certain distinguishing aspects of a process, methodology, or component, the exclusive use of which provides a competitive advantage for AREVA NP in product optimization or marketability.
- (e) The information is vital to a competitive advantage held by AREVA NP, would be helpful to competitors to AREVA NP, and would likely cause substantial harm to the competitive position of AREVA NP.

The information in the Document is considered proprietary for the reasons set forth in paragraphs 6(b) and 6(c) above.

7. In accordance with AREVA NP's policies governing the protection and control of information, proprietary information contained in this Document have been made available, on a limited basis, to others outside AREVA NP only as required and under suitable agreement providing for nondisclosure and limited use of the information.

8. AREVA NP policy requires that proprietary information be kept in a secured file or area and distributed on a need-to-know basis.

9. The foregoing statements are true and correct to the best of my knowledge, information, and belief.

Gerald S. Holm

SUBSCRIBED before me this 17th
day of October, 2006.

Susan K. McCoy

Susan K. McCoy
NOTARY PUBLIC, STATE OF WASHINGTON
MY COMMISSION EXPIRES: 1/10/2008

