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MAY 4 2009

L-PI-09-066
10 CFR 50.90

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

Prairie Island Nuclear Generating Plant Units 1 and 2
Dockets 50-282 and 50-306
License Nos. DPR-42 and DPR-60

Clarification of Response To Request For Additional Information Regarding License Amendment Request For Technical Specifications Changes To Allow Use Of Westinghouse 0.422-Inch 14x14 Vantage+ Fuel (TAC Nos. MD9142 and MD9143)

References:
1) Letter from M. Wadley (Nuclear Management Company) to Document Control Desk (NRC), L-PI-08-047, License Amendment Request for Technical Specifications Changes to Allow Use of Westinghouse 0.422-inch OD 14x14 VANTAGE+ Fuel, dated June 26, 2008 (ADAMS Accession No. ML081820137)
2) Letter from T. Wengert (NRC) to M. Wadley (Northern States Power Company - Minnesota), Prairie Island Nuclear Generating Plant, Units 1 and 2 Request For Additional Information Related to License Amendment Request For Technical Specifications Changes to Allow Use of Westinghouse 0.422-Inch OD 14x14 Vantage+ Fuel (TAC Nos. MD9142 and MD9143), dated February 11, 2009 (ADAMS Accession No. ML090140334)
3) Letter from M. Wadley (Northern States Power Company - Minnesota) to Document Control Desk (NRC), L-PI-09-034, Response To Request For Additional Information Regarding License Amendment Request For Technical Specifications Changes To Allow Use Of Westinghouse 0.422-Inch 14x14 Vantage+ Fuel (TAC Nos. MD9142 and MD9143), dated March 12, 2009 (ADAMS Accession No. ML090721087)

When separated from Enclosure 3, this letter may be made publicly available.

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By letter dated June 26, 2008 (Reference 1), Nuclear Management Company, LLC, (now Northern States Power Company, a Minnesota corporation (NSPM)) requested approval of amendments to the Operating Licenses and associated Technical Specifications (TS) for Prairie Island Nuclear Generating Plant (PINGP or "Prairie Island"), Units 1 and 2, as well as certain supporting analyses, in support of the transition from Westinghouse 0.400-inch outside diameter (OD) VANTAGE+ (hereinafter referred to as 400V+) fuel to 0.422-inch OD VANTAGE+ (hereafter referred to as 422V+) fuel.

On February 11, 2009, the NRC staff notified NSPM (Reference 2) that additional information was necessary for the staff to complete its review. NSPM responded on March 12, 2009 (Reference 3); however, the response regarding the specific section, subsection, and edition of the American Society of Mechanical Engineers (ASME) code utilized to evaluate cladding stress and strain requires further amplification. This additional information is held proprietary by Westinghouse Electric Company, LLC (Westinghouse), as supported by an affidavit signed by Westinghouse, the owner of the information (Enclosure 2).

Accordingly, it is requested that the information which is proprietary to Westinghouse be withheld from public disclosure in accordance with 10 CFR 2.390. Enclosure 1 provides a non-proprietary version of the clarified response while Enclosure 3 provides the proprietary response to be withheld.

The supplemental information provided in this letter does not impact the conclusions of the Determination of No Significant Hazards Consideration and Environmental Assessment presented in the June 26, 2008 submittal as supplemented by letters dated August 4, 2008, August 26, 2008, November 14, 2008, January 30, 2009, February 9, 2009, February 20, 2009 and March 12, 2009.

In accordance with 10 CFR 50.91, NSPM is notifying the State of Minnesota of this License Amendment Request supplement by transmitting a copy of this letter and non-proprietary enclosures to the designated State Official.

Summary of Commitments

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

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: MAY 4 2009

Michael D. Wadley
Site Vice-President
Prairie Island Nuclear Generating Plant
Northern States Power Company-Minnesota

Enclosures (3)

cc: Administrator, Region III, USNRC
Project Manager, Prairie Island, USNRC
Resident Inspector, Prairie Island, USNRC
State of Minnesota (Enclosures 1 and 2 only)

ENCLOSURE 1
Non-Proprietary Revised Response to Request for Additional Information
License Amendment Request for Technical Specifications Changes to Allow Use of Westinghouse 422V+ Fuel

By letter dated June 26, 2008 (ADAMS Accession No. ML081820137), Nuclear Management Company, LLC, (now Northern States Power Company, a Minnesota corporation (NSPM)) requested approval of amendments to the Operating Licenses and associated Technical Specifications (TS) for Prairie Island Nuclear Generating Plant (PINGP or "Prairie Island"), Units 1 and 2, as well as certain supporting analyses, in support of the transition from Westinghouse 0.400-inch outside diameter (OD) VANTAGE+ (hereinafter referred to as 400V+) fuel to 0.422-inch OD VANTAGE+ (hereafter referred to as 422V+) fuel. On February 11, 2009 (ADAMS Accession No. ML090140334), the NRC staff notified NSPM that additional information was necessary for the staff to complete its review. NSPM responded on March 12, 2009 M090721087); however, the response regarding the specific section, subsection, and edition of the American Society of Mechanical Engineers (ASME) code utilized to evaluate cladding stress and strain requires further amplification. The NRC request for additional information (RAI) is repeated below with the NSPM response following:

Mechanical and Civil Engineering Branch (EMCB) RAIs

EMCB RAI-1:

(a) Section 2.4, Cladding Stress and Strain, first bullet, page 2-6 of Reference 1 mentions that the stress limit is based on the American Society of Mechanical Engineers (ASME) code. Provide the specific section, subsection, and edition of the ASME code utilized.

NSPM Supplemental Response:

EMCB RAI-1 requested the specific section, subsection and edition of the ASME code utilized for Section 2.4 of the Prairie Island Units 1&2 422V+ Fuel Transition Licensing Report, Cladding Stress and Strain. NSPM responded that ASME Boiler and Pressure Vessel Code, Section VIII: Pressure Vessels, Division 2: Rules for Construction of Pressure Vessels - Alternate Rules, Appendix 4: Mandatory Design Based on Stress Analysis, (2001 version) was used as this was the reference cited in the corresponding Westinghouse calculation note. However, upon further review, it was determined that the licensing documentation issued at that time presented a different section of the ASME code as discussed below.

In December 2002, Westinghouse issued Addendum 1 to WCAP-10125, *Extended Burnup Evaluation of Westinghouse Fuel*, to the NRC for review and approval. The purpose of the submittal was to update certain fuel licensing criteria that are applied to Westinghouse fuel. The update promoted convergence with the practices of all other Westinghouse business segments and consistency with current industry guidelines. In this Addendum, it was specifically noted that the Fuel Cladding Transient Stress parameter criterion was being changed from "the transient stress will be less than the [ ]^{a,c}" to "Cladding stresses will be consistent with ASME Code Section III requirements." In this addendum it is specifically stated that the maximum cladding stress will be evaluated using ASME Pressure Vessel Code, Section III,

Article NG-3000, 1998. In the Safety Evaluation issued by the NRC dated April 14, 2003 (see Reference A), it states the following.

> "SRP Section 4.2 indicates that stress limits are acceptable if they are obtained using methods based on the ASME Code, Section III criteria. Section III describes various stress state criteria and limits, and is widely accepted in the nuclear industry. The Westinghouse proposal for a fuel rod cladding stress limit based on the ASME Code, Section III is consistent with the SRP Section 4.2 recommendations. Based on the use of the acceptable ASME Code, Section III methods, the staff approves the Westinghouse proposal to revise the fuel cladding stress limit."

A review of the Westinghouse calculation note which documents the fuel cladding stresses indicates that the approach used is consistent with both the ASME Section VIII, Division 2, Appendix 4 and ASME Code, Section III criteria. Based on the above, the appropriate reference for the response to EMCB RAI-1 should have been ASME Code, Section III, Article NG-3000, 1998. The Westinghouse calculation note will be revised to reference ASME Code Section III, Article NG-3000, consistent with the US NRC approved licensing basis documentation.

Reference A: WCAP-10125-P-A, Addendum 1-A, Revision 0, *Addendum 1 to WCAP-10125-P-A Revisions to Design Criteria*, Approved May 2003.