NMC
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Nuclear Management Company, LLC

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10 CFR 50.54(f)

July 11, 2005

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
11555 Rockville Pike
Rockville, Maryland 20852

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

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

Nuclear Management Company Response to Request for Additional Information on Generic Letter 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors"

By letter dated March 7, 2005, Nuclear Management Company, LLC (NMC) provided the 90-day response to Generic Letter (GL) 2004-02. Subsequent to this, NMC received a request for additional information (RAI). Enclosure 1 contains the NMC response for the above listed nuclear plants. The NMC response was prepared in accordance with the guidance of the June 30, 2005, document entitled, "NRC Staff Responses to Industry Questions on Generic Letter 2004-02."

Summary of Commitments

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

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I declare under penalty of perjury that the foregoing is true and correct. Executed on July 11, 2005.

Edward J. Weinkam
Director, Regulatory Services
Nuclear Management Company, LLC

Enclosure (1)

CC Administrator, Region III, USNRC
Project Manager, Palisades Nuclear Plant, Prairie Island Nuclear Generating Plant, USNRC
Resident Inspector, Palisades Nuclear Plant, Prairie Island Nuclear Generating Plant Units 1 and 2, USNRC

ENCLOSURE 1
NUCLEAR MANAGEMENT COMPANY, LLC
RAI RESPONSE TO GENERIC LETTER 2004-02

Nuclear Regulatory Commission (NRC) Requested Information

By letter dated March 7, 2005, Nuclear Management Company, LLC, (the licensee) provided the 90-day response to U. S. Nuclear Regulatory Commission (NRC) Generic Letter (GL) 2004-02 for Palisades Plant and Prairie Island Nuclear Generating Plant, Units 1 and 2. The GL requested that addressees perform an evaluation of the emergency core cooling system and containment spray system recirculation functions in light of the information provided in the GL and, if appropriate, take additional actions to ensure system function. Additionally, addressees were requested to submit to the NRC the information specified in the GL. The staff has completed its preliminary review of your response and has determined it needs the following additional information to complete our review:

In your 90-day response to GL 2004-02, you indicated that you intend to use future test results, industry guidance, and NRC guidance to account for chemical precipitants in your evaluation and their availability will impact the schedule for performing an evaluation. The cooperative NRC-Electric Power Research Institute tests in progress at the University of New Mexico are designed to determine if chemical effects occur, but are not designed to measure head loss associated with any chemical effects. The staff notes that some chemical effects have been observed in the initial three tests.

In your 90-day response to GL 2004-02, you also indicated that you intend to use industry owners' group guidance and component manufacturer data to evaluate long-term performance degradation of downstream susceptible components caused by debris-laden fluid and their availability will impact the schedule for performing an evaluation.

For both of these issues, you stated the evaluation may occur after the September 1, 2005, response due date, depending on the schedule for testing and the availability of industry guidance. This is contrary to the information request in GL 2004-02, which requests that chemical and downstream effects be addressed in the September 1, 2005, response. This delay is also contrary to the staff's position that there are sufficient bases to address sump vulnerability to chemical effects and that the September response will be incomplete if the evaluation is incomplete, the design is not complete, or there is no schedule for upgrades. In this light, please discuss your plans and schedule for evaluating chemical effects and the longterm downstream effects. In addition, please discuss any plans for performing testing to support your evaluation of these effects.

Nuclear Management Company (NMC), LLC Response

NMC provided the 90-day response to Generic Letter (GL) 2004-02, "Potential Impact of Debris Blockage on Emergency Recirculation During Design Basis Accidents at Pressurized Water Reactors," based on the information available at that time. Additional information pertaining to chemical effects and downstream effects has subsequently become available.

WCAP-16406-P, "Evaluation of Downstream Sump Debris Effects in Support of GSI-191," was made available. WCAP-16406-P provides guidance for assessing the downstream impact of sump debris on the performance of emergency core cooling systems (ECCS) following a loss-of-coolant accident (LOCA). NMC plans to apply the methodology outlined in the WCAP-16406-P, along with industry data and manufacturer's data, to the downstream effects evaluations of each plant. NMC plans on performing these evaluations in support of the September 1, 2005, response to GL 2004-02. However, the evaluations may not be finalized until a detailed design of the strainer is complete, as the final strainer design may affect the parameters applied in the evaluations. In addition, the downstream effects evaluations are based on methodologies that have not been approved by the Nuclear Regulatory Commission (NRC). Therefore, these evaluations may need to be revised at a later date when industrial and regulatory standards are established.

The Integrated Chemical Effects Testing (ICET) program has indicated that precipitant material may be formed under post-LOCA containment environment. The effects of this precipitant on screen head loss have not been quantified nor has a methodology been formulated for determining this component of the total head loss. NMC plans to perform an evaluation for each plant, addressing sump vulnerability to chemical effects in support of the September 1, 2005, response to GL 2004-02. The evaluation will determine if the NRC-Electric Power Research Institute tests bound site-specific post-LOCA parameters, and will assess whether sufficient margin has been reserved in the strainer head loss design to account for chemical effects. The evaluations may not be finalized until a detailed design of the strainer is complete, as strainer specific testing (if required) could affect the analysis. In addition, as the guidance for addressing chemical effects is still being developed, these evaluations may need to be revised at a later date when additional guidance becomes available.

NMC plans to determine the extent of necessary testing when evaluating sump strainer options, as certain options may require additional testing based on plant specific design parameters. The testing, if required, would be performed during detailed design of the strainer. NMC plans to install strainers no later than December 2007. Detailed design of the strainers will be completed in support of this schedule.