



April 1, 2004

NRC-04-044
GL 96-06

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

Kewaunee Nuclear Power Plant
Docket 50-305
License No. DPR-43
Final Resolution Schedule for Resolution of Generic Letter 96-06 issues at the
Kewaunee Nuclear Power Plant

- Reference:
- 1) Letter from A.J. Cayia (NMC) to Document Control Desk (NRC), "Electric Power Research Institute Report TR-113594, 'Resolution of Generic Letter 96-06 Waterhammer Issues,' Volumes 1 and 2 (TAC Nos. M96824, M96852, and M95853)," dated July 30, 2002.
 - 2) Letter from Thomas Coutu (NMC) to Document Control Desk (NRC), "Responses To NRC Clarification Questions On Responses To Requests For Additional Information Regarding License Amendment Request 195, Stretch Power Uprate For Kewaunee Nuclear Power Plant (TAC NO. MB9031)," dated January 30, 2003
 - 3) Letter from John G. Lamb (NRC) to Thomas Coutu (NMC), "Kewaunee Nuclear Power Plant - Issuance Of Amendment Regarding Stretch Power Uprate (TAC NO. MB9031)," dated February 27, 2004.
 - 4) Letter from Mark L. Marchi (WPSC) to Document Control Desk (NRC), "Wisconsin Public Service Corporation's response to the request for additional information on Generic Letter 96-06," dated July 30, 1998.

In reference 1, the Nuclear Management Company, LLC, (NMC) stated that with the approval of the EPRI report, NMC would evaluate the CFC units in accordance with the EPRI methodology. NMC anticipated this analysis would be completed in 2003 but now is expected to be complete in April of 2004. NMC also stated that when the analysis was completed, NMC would inform the NRC and provide details of the resolution and if additional modifications were required including a schedule for completion of the modifications. Subsequently, NMC made a commitment in reference 2 to provide the NRC with a status update and schedule for resolution of GL 96-06 water hammer issues at the KNPP by April 2, 2004.

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In the NRC's safety evaluation (SE) associated with EPRI TR-113594 approval the NRC stated that licensees who choose to use the methodology in TR-113594, Volumes 1 and 2, for addressing the GL 96-06 waterhammer issue, may do so by supplementing their response to include:

- a. Certification that the EPRI methodology, including clarifications, was properly applied, and that plant-specific risk considerations are consistent with the risk perspective that was provided in the EPRI letter dated February 1, 2002. If the uncushioned velocity and pressure are more than 40 percent greater than the cushioned values, also certify that the pipe failure probability assumption remains bounding. Any questions that were asked previously by the staff with respect to the GL 96-06 waterhammer issue should be disregarded.
- b. The additional information that was requested in RAIs that were issued by the NRC staff with respect to the GL 96-06 two-phase flow issue (as applicable).
- c. A brief summary of the results and conclusions that were reached with respect to the waterhammer and two-phase flow issues, including problems that were identified along with corrective actions that were taken. If corrective actions are planned but have not been completed, confirm that the affected systems remain operable and provide the schedule for completing any remaining corrective actions.

In response to the above listed item a and b NRC SE requests NMC provides the following:

- a. NMC used the EPRI methodology for the KNPP analysis.
- b. Wisconsin Public Service Corporation (WPSC) responded to this request for additional information (RAI) regarding two-phase flow in reference letter 4.

In response to item "c", NMC utilized the EPRI methodology for addressing the GL 96-06 water hammer issue at the KNPP. Results of the analysis indicate that a Column Closure Water hammer (CCHW) is predicted to occur in the service water return piping from the "A" train containment fan coil units during loss-of-coolant accident (LOCA)/loss-of-offsite power (LOOP) event.

The magnitudes and durations of the pressure pulses were determined for the predicted water hammer and used to analyze the loading on the piping and supports. The results of the analysis were first compared to the established design criteria for loading on piping and pipe supports associated with the GL 96-06 water hammer condition. If the criteria were not met, then the results were compared to the IE Bulletin 79-14 operability criteria established for KNPP. The design and operability criteria used are consistent with the USAR Appendix B and procedures developed in response IE Bulletin 79-14.

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Results of the analysis indicate that some components would not meet the design criteria for the predicted water hammer loading. However, for each of these conditions, it was subsequently verified that the piping system met the operability criteria and therefore remains operable.

In reference 4, WPSC stated that the current plans were to resolve the GL 96-06 issues one to two refueling outages after the EPRI work is completed. The engineering analysis associated with this issue is expected to be complete in April of 2004. NMC plans to perform walkdowns of the supports requiring modification prior to or during the 2004 refueling outage. From these walkdowns, NMC will develop plant modification packages for final resolution of GL 96-06 issues at the KNPP during the spring 2006 refueling outage.

Summary of Commitments

This letter makes the following new commitments:

- 1) NMC will develop plant modification packages for final resolution of GL 96-06 at the KNPP to be completed during the spring 2006 refueling outage.

I declare under penalty of perjury that the foregoing is true and correct.
Executed on April 1, 2004.



Thomas Coutu
Site Vice President Kewaunee Nuclear Power Plant
Nuclear Management Company, LLC

cc: Administrator, Region III, USNRC
Senior Resident Inspector, Kewaunee, USNRC
Project Manager, Kewaunee, USNRC
Public Service Commission of Wisconsin