

September 9, 2008

Mr. Timothy J. O'Connor
Site Vice President
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT (MNGP) – GENERIC LETTER 2008-01, “MANAGING GAS ACCUMULATION IN EMERGENCY CORE COOLING, DECAY HEAT REMOVAL, AND CONTAINMENT SPRAY SYSTEMS,” PROPOSED ALTERNATIVE COURSE OF ACTION (TAC NO. MD7847)

Dear Mr. O'Connor:

On January 11, 2008, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, “Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems” (Agencywide Documents Access and Management System Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the “subject systems”) are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the “9-month submittal”) of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the “3-month submittal”) of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

By letter dated April 11, 2008, Nuclear Management Company, LLC (the licensee) submitted a 3-month response to GL 2008-01 for Monticello Nuclear Generating Plant. The NRC staff's assessment of the responses for Monticello Nuclear Generating Plant is contained in the enclosure to this letter.

The NRC staff reviewed the licensee's proposed alternative course of action and the associated basis for acceptance and concluded that for Monticello Nuclear Generating Plant, with the exception of the clarifications and associated requests discussed in the enclosure, are acceptable. This letter allows the licensee to implement its proposed alternative course of action provided that implementation is consistent with the clarifications and associated requests discussed in the enclosure.

T. J. O'Connor

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If you have any questions regarding this letter, please feel free to contact me.

Sincerely,

/RA/

Peter S. Tam, Senior Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-263

cc: See next page

T. J. O'Connor

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ASSESSMENT OF 3-MONTH RESPONSE TO GENERIC LETTER 2008-01

NUCLEAR MANAGEMENT COMPANY, LLC (NMC)

MONTICELLO NUCLEAR GENERATING PLANT (MNGP)

DOCKET NO. 50-263

1.0 BACKGROUND

On January 11, 2008, the U.S. Nuclear Regulatory Commission (NRC) issued Generic Letter (GL) 2008-01, "Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems" (Agencywide Documents Access and Management System Accession No. ML072910759). The GL requested licensees to submit information to demonstrate that the emergency core cooling, decay heat removal, and containment spray systems (hereinafter referred to as the "subject systems") are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance. Specifically, the GL requested licensees to provide: (1) a description of the results of evaluations that were performed in response to the GL; (2) a description of all corrective actions that the licensee determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

In accordance with Section 50.54(f) of Title 10 of the *Code of Federal Regulations* (10 CFR), GL 2008-01 required that each licensee submit the requested information within 9 months (hereinafter referred to as the "9-month submittal") of the date of the GL. The GL also stated that if a licensee cannot meet the requested 9-month response date, the licensee is required to provide a response within 3 months (hereinafter referred to as the "3-month submittal") of the date of the GL, describing the alternative course of action it proposes to take, including the basis for the acceptability of the proposed alternative course of action.

2.0 NMC'S PROPOSED ALTERNATIVE COURSE OF ACTION

By letter dated April 11, 2008, NMC submitted a 3-month response to GL 2008-01 for MNGP. NMC stated in the letter that it cannot meet the requested 9-month schedule for submitting the requested information because the required walkdowns of some segments of piping in the GL subject systems, including the high-pressure coolant injection (HPCI), core spray, residual heat removal (RHR), and automatic depressurization systems, cannot be completed for the following reasons: (1) inaccessible during power operation; (2) walkdowns of these systems would require entry into areas of high radiation or inerted atmosphere (less than 4 percent oxygen concentration in the drywell); (3) erection of some scaffolding is impractical due to locations in high radiation areas, or near sensitive or safety-related equipment; and (4) surveying of areas not routinely accessed, such as overheads, and installation of shielding to reduce exposure to personnel performing inspections would be required.

NMC also stated that the walkdowns of the accessible portions of the GL subject systems will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008). As an alternative course of action, the licensee plans to complete the walkdowns of the inaccessible portions described above by the next refueling outage, which is currently scheduled for spring of 2009. The licensee's April 11, 2008, letter, listed the following commitments:

1. Complete the walkdowns of the inaccessible portions of the GL systems prior to startup from the next refueling outage that is planned for the spring of 2009.
2. Complete evaluations of the GL subject systems within 90 days following return to full power from the 2009 refueling outage. A summary of the evaluation results will be submitted to the NRC.

The licensee stated that the alternative course of action is acceptable based on the following:

1. MNGP is continuously evaluating for (and resolving if found) gas accumulation issues as a result of site and industry operating experience.
2. Surveillance testing is routinely performed on the subject systems and has demonstrated acceptable performance.
3. Routine evolutions during plant shutdowns and refueling outages, e.g., RHR shutdown cooling mode for decay heat removal, demonstrate system operability.
4. Operating procedures include monthly venting of the low pressure systems to ensure the systems are maintained sufficiently filled. No current issues have been identified during performance of these procedures.
5. Venting procedures were improved and vent valves were added in the early 1990's to ensure adequate system venting and filling as part of corrective actions for previous gas accumulation issues.
6. An HPCI "keep-fill" system was installed during the last refueling outage to specifically address a gas voiding issue.

NMC stated that based on operating experience, testing (performance and surveillance), and prior corrective actions, it has a high confidence that the systems discussed in GL 2008-01 can perform their required design functions at MNGP. As such, NMC concluded that completing performance of the detailed walkdowns on those portions of the subject piping systems requiring refueling outages and subsequent evaluations outside of the requested 9-month timeframe is an acceptable alternative course of action.

3. NRC STAFF ASSESSMENT

The NRC staff finds that, with the exception of the clarifications and associated requests discussed below, the licensee's proposed alternative course of action is acceptable based on the above-described operating experience, testing, procedures, and corrective actions associated with managing gas accumulation at MNGP.

The NRC staff notes examples where the licensee's April 11, 2008, 3-month submittal does not clearly describe the content and/or schedule for the 9-month submittals. Specifically, although the submittal states that the walkdowns of the accessible portions of the GL subject systems will be completed during the 9-month timeframe prescribed in the GL (i.e., by October 11, 2008), it is not clear if the results of these walkdowns and other GL-requested information for accessible portions will be submitted to the NRC by October 11, 2008. In addition, although the submittal states NMC will complete evaluations of the GL subject systems within 90 days following return to full power from the 2009 refueling outage and a summary of the evaluation results will be submitted to the NRC, it is not clear if that is the date the information will be submitted to the NRC.

Thus, the NRC staff requests the licensee to submit the information requested in GL 2008-01 as follows:

- (1) 9-Month Initial Submittal - For the portions of the subject systems that are accessible prior to the spring 2009 refueling outage, provide all GL requested information to the NRC by October 11, 2008.
- (2) 9-Month Supplemental (Post-Outage) Submittal - Except for the long-term items described below, provide all remaining GL-requested information for the subject systems to the NRC within 90 days from return to full power from the 2009 refueling outage.

For each of these two submittals (the 9-month initial and supplemental submittals), and consistent with the information requested in the GL, the licensees should provide: (a) a description of the results of evaluations that were performed in response to the GL; (b) a description of all corrective actions that NMC determined were necessary; and (3) a statement regarding which corrective actions were completed, the schedule for completing the remaining corrective actions, and the basis for that schedule.

The NRC staff noted that the licensee's April 11, 2008, submittal did not mention other potential long-term actions that are identified in the GL. For instance, the industry is assessing whether it is necessary to perform pump testing to determine the allowable limits on ingested gas volume in pump suction, as well as the need to develop an analysis capability to adequately predict void movement (entrapped gas) from piping on the suction side of the pumps into the pumps. It is unlikely this industry effort will be complete for the 9-month initial or supplemental submittals. Further, technical specification changes may be necessary to reflect the improved understanding achieved during response to the GL, but these cannot be fully developed for the 9-month initial or supplemental submittals. A Technical Specifications Task Force traveler may provide a generic example that can be adopted by licensees. The NRC staff requests that the licensee address in its 9-month submittal how it plans to track such long-term actions (e.g., Corrective Action Program and/or commitment tracking). The NRC plans to perform follow up inspections of licensee responses to GL 2008-01 at all plants using a Temporary Instruction inspection procedure.

Principal Contributor: Summer Sun

Date: September 9, 2008

Monticello Nuclear Generating Plant

cc:

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