August 19, 2003

Mr. David L. Wilson
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— REQUEST FOR ADDITIONAL INFORMATION RELATED TO REVISED LONG-TERM CONTAINMENT RESPONSE AND NET-POSITIVE SUCTION HEAD ANALYSES (TAC NO. MB7185)

Dear Mr. Wilson:

The Nuclear Management Company, LLC's (NMC's), December 6, 2002, application requested that the U.S. Nuclear Regulatory Commission (NRC) approve proposed changes to the Updated Safety Analysis Report for the Monticello Nuclear Generating Plant. The NRC staff is reviewing your request and finds that additional information is needed as shown in the enclosed Request for Additional Information (RAI).

I discussed the enclosed RAI with Mr. R. Loeffler of your organization on August 7, 2003. We agreed that NMC will respond to the RAI within 30 days of receipt of this letter. Please contact me at (301) 415-1423 if you have questions or need to revise this date.

Sincerely,

/RA/

L. Mark Padovan, Project Manager, Section 1
Project Directorate III
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-263

Enclosure: Request for Additional Information

cc w/encl: See next page

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NAME	MPadovan	RBouling	LRaghavan
DATE	08/15/03	08/14/03	08/19/03

OFFICIAL RECORD COPY

cc:

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REQUEST FOR ADDITIONAL INFORMATION
RELATED TO REVISED LONG-TERM CONTAINMENT RESPONSE
AND NET-POSITIVE SUCTION HEAD ANALYSES
NUCLEAR MANAGEMENT COMPANY, LLC (NMC)
MONTICELLO NUCLEAR GENERATING PLANT
DOCKET NO. 50-263

The Nuclear Regulatory Commission (NRC) staff requests the following additional information related to NMC's December 6, 2002, application:

1. (a) What assurance is there that the K value will remain at 147 or above?
   (b) How often does NMC verify this?
   (c) Has NMC made a measurement to verify that the K value is currently greater than 147?

2. If NMC has revised the calculation of residual heat removal room temperature from the analysis provided in NMC's March 4, 1997, letter to the NRC, briefly describe the changes and the conclusions.

3. Briefly describe the analysis that concludes that the piping temperature limit can be increased to 196.7 degrees F.

4. Describe the SAFER/GESTR models and the assumptions used to calculate Monticello's response to a vessel isolation with high-pressure coolant injection (HPCI) unavailable. Include a nodalization diagram. Describe any conservatism in this analysis.

5. Regarding Section 4.5 of General Electric's report GE-NE-0000-0002-8817-01, R1, dated September 2002, "Monticello Nuclear Generating Plant Long-term Containment Analysis," explain how it is physically possible to have a service water temperature of 94 degrees F and a suppression pool temperature of 90 degrees F under steady state conditions.

6. Section 4.4 of GE-NE-0000-0002-8817-01, R1, page 4-12, begins by discussing the design-basis loss-of-coolant accident (LOCA) analysis with the updated heat exchanger K value and "updated data." What are these updated data?

ENCLOSURE

7. Verify that the information in the table below is correct.

Break Size	Residual Heat Removal (RHR) Heat Exchanger K	Service Water Temp °F	Peak Suppression Pool (SP) Temp	Comment
Large break*	143.1**	90	195.6	Direct SP cooling
Large break	147	90	194.1	Direct SP cooling
Large break	147	90	194.2	Containment spray cooling
Large break	147	94***	195.8	Direct SP cooling
Large break	147	94	196.5	Containment spray cooling
Reactor isolation	143.1	90	194.0	One RHR loop, HPCI unavailable, direct SP cooling
Reactor isolation	143.1	90	167.0	Two RHR loops with HPCI unavailable, direct SP cooling
.01 ft^2	143.1	90	190.0	One RHR loop with HPCI unavailable, direct SP cooling
.1 ft^2	143.1	90	191.2	One RHR loop with HPCI unavailable, direct SP cooling

* A study of single failures in the June 19, 1997, NMC application showed the failure of one emergency diesel generator with loss of offsite power to be most limiting.

** As stated above, the original K value for the RHR heat exchanger is 143.1 BTU/sec-°F while the updated value is 147 BTU/sec-°F.

*** SP water temperature remains at 90 degrees F.

7. Describe how heat transfer to structures is modeled for the net positive suction head calculations.

8. In Exhibit F, Figures 8, 9, 10, and 11, NMC showed required and available overpressure for the isolation event and the Appendix R event. What is the source of the pressure for these events since the steam from the safety/relief valves is condensed in the suppression pool?

10. Verify that the table below is correct.

Accident Scenario	Current Licensing Basis	Value	Proposed Change to Licensing Basis	Value
Peak containment pressure ((short-term large-break (LB) LOCA))	Date: 7/26/96 Power: 1880 megawatts thermal (Mwt)	40 psig	Unchanged	
Peak containment temperature (short-term LB LOCA)	Date: 7/26/96 Power: 1880 Mwt	331 degrees F	Unchanged	
Peak bulk pool temp (long-term LB LOCA)	Date: 6/19/97 Power: 1880 Mwt	194.2 degrees F	Date: 12/6/02 Power: 1775 Mwt	195.6 degrees F
Max local pool temperature (short-term LB LOCA)	Date: 7/26/96 Power: 1880 Mwt	194 degrees F	Unchanged	
Drywell wall temperature (small steam line break)	Date: 7/26/96 Power: 1880 Mwt	273 degrees F	Unchanged	
Reactor isolation peak pool temperature	None		Date: 12/6/02 Power: 1775 Mwt	194 degrees F

11. Verify that there has been no change in Monticello's licensing basis for calculating the debris loading on the emergency core cooling system suction strainers.

12. What value of required net position suction head used for the calculation of required containment overpressure?

13. Regarding Exhibit F, describe, or reference, how the effects of pipe friction are accounted for, including the increase to account for aging?