



Monticello Nuclear Generating Plant  
2807 W County Road 75  
Monticello, MN 55362

December 22, 2010

L-MT-10-074  
10 CFR 50.71(e)  
10 CFR 50.59(d)(2)

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

Monticello Nuclear Generating Plant  
Docket 50-263  
Renewed Facility Operating License No. DPR-22

Submittal of Revision 27 to the Updated Safety Analysis Report

Pursuant to 10 CFR 50.71(e), Revision 27 to the Monticello Nuclear Generating Plant (MNGP) Updated Safety Analysis Report (USAR) is provided. This revision completes an update of the information in the USAR for the period from October 9, 2009 to October 1, 2010.

The changes in this revision reflect the incorporation of modifications, License Amendments, and some editorial corrections and clarifications. These changes are made in accordance with the guidance provided in Nuclear Energy Institute (NEI) Report NEI 98-03, "Guidelines for Updating Final Safety Analysis Reports," Revision 1, and Regulatory Guide 1.181, "Content of the Updated Final Safety Analysis Report in Accordance with 10 CFR 50.71(e)," dated September, 1999.

Enclosure 1, "Report of Changes, Tests and Experiments," provides a summary of 10 CFR 50.59 evaluations that were carried out without prior NRC approval, as required by 10 CFR 50.59(d)(2).

Enclosure 2, "Report of Changes to Licensee Docketed Commitments," indicates that for this period there were four changes made to commitments required to be reported to the U.S. Nuclear Regulatory Commission in accordance with the guidance provided in NEI 99-04, "Guidelines for Managing NRC Commitment Changes," dated July 1999.

Enclosure 3, "Summary of Information Removed from the USAR," provides the information removed from the USAR for this revision cycle. This information is provided in accordance with Revision 1 of NEI 98-03 and Regulatory Guide 1.181.

Enclosure 4 contains Revision 27 of the MNGP USAR. The USAR is being submitted electronically, in its entirety, on CD-ROM according to the instructions in RIS 2001-005, "Guidance on Submitting Documents to the NRC by Electronic Information Exchange or on CD-ROM."

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Enclosure 5, "Report of Changes to the Monticello Fire Protection Program," provides a summary of changes to the program. Changes to the Fire Protection Program are provided in accordance with 10 CFR 50.71(e), 10 CFR 50.59, and the guidance contained in Generic Letter 86-10, "Implementation of Fire Protection Requirements," dated April 24, 1986.

Summary of Commitments

This letter contains no new commitments and made revisions to four existing commitments as provided in Enclosure 2.

I certify that the information presented herein accurately presents changes made since the last updated submittal through October 1, 2010.



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Enclosures (5)

cc: Administrator, Region III, USNRC  
Project Manager, Monticello, USNRC  
Resident Inspector, Monticello, USNRC

## ENCLOSURE 1

### MONTICELLO NUCLEAR GENERATING PLANT REPORT OF CHANGES, TESTS AND EXPERIMENTS

The following includes a brief description and summary of the 10 CFR 50.59 evaluation for those changes, tests and experiments that were carried out without prior U.S. Nuclear Regulatory Commission (NRC) approval, pursuant to the requirements of 10 CFR 50.59(d)(2).

**Evaluation 07-001 Revision 1:**  
**Revise Plant Documents to Reflect Securing Cooling Water Flow to HPCI Room Cooler V-AC-8B by Closing SW-107-2**

**Activity Description:**

The proposed activity is to permanently secure cooling water flow to the "B" Division HPCI Room Air Cooling Unit, V-AV-8B, by closing the Service Water outlet valve, SW-107-2. While cooling water flow to V-AC-8B will be secured, cooling water flow to V-AC-8A remains unaffected by the closing of SW-107-2. V-AC-8A will remain functional and supplied from safety related No. 13 ESW system and emergency power sources. V-AC-8A is anticipated to be available to provide additional room cooling during normal and emergency conditions. The V-AC-8A non-safety related function is to maintain HPCI room temperature  $\leq 100^{\circ}\text{F}$  during normal plant operation. This will assure that the assumed initial condition that the HPCI room temperature remains  $\leq 100^{\circ}\text{F}$ . V-AC-8A is not required for any design basis accident and it is also not required for operability of the HPCI system.

**Summary of Evaluation:**

Evaluation 07-001 was revised to incorporate initial room temperature for the HPCI room. The conclusion of the evaluation remained unchanged and does not require prior NRC approval. The activity was performed in 2007 and no changes to the plant were performed during this reporting period.

## ENCLOSURE 2

### MONTICELLO NUCLEAR GENERATING PLANT REPORT OF CHANGES TO LICENSEE DOCKETED COMMITMENTS

This enclosure provides a brief description and a summary of changes to commitments established with the NRC by the Monticello Nuclear Generating Plant. These commitments are identified and reported to the Commission in accordance with guidance provided in NEI Technical Report 99-04 Revision 0, "Guidelines for Managing NRC Commitment Changes."

For Revision 27:

The following changes were made to existing Monticello Nuclear Generating Plant commitments and required the station to provide notification of the change to the NRC.

1. Monticello Commitment Number M82088A

Source Document: Letter from D.M. Musolf / NSP to NRC, "Control of Heavy Loads (Revised Nine Month Submittal and Unresolved Item, Review of Special Lifting Devices 2.1.3d)" October 11, 1982

Commitment: All heavy loads, with the exception of the turbine and generator rotors may be moved over the cross-hatched area providing they are restricted to a maximum height of six (6) inches above the floor during transport.

Change: All heavy loads with the exception of the turbine low pressure and generator rotors may be moved over the cross-hatched area providing they are restricted to a maximum height of six (6) inches above the floor during transport if the weight of the load  $\leq 100,000$  lb or higher than six (6) inches if the weight of the load is  $\leq 100,000$  lb and justification is provided with a load drop analysis. Any load  $> 100,000$  lbs but  $\leq 250,000$  lbs, including the LP rotors, may be moved over a 2 ft section of the cross-hatched area provided they are lifted to a maximum height of 5.25" above the floor, the reactor is in cold shutdown, and Division I Safe Shutdown Equipment is available.

Basis for Change: An analysis for loads between 100,000 and 250,000 lbs was completed to satisfy the lift limit of 5.25" over a limited cross-hatched area with the additional restrictions noted. Load drop analysis is one of the approved methods per NUREG-0612.

2. Monticello Commitment Number M82094A:

Source Document: Letter from D.M. Musolf / NSP to NRC, "Control of Heavy Loads (Revised 6 Month Submittal)", July 7, 1982

Commitment: Procedures for Inspection, Testing, and Maintenance of the Cranes have been reviewed/revised to comply, with no exceptions, to the requirements of ANSI B30.2-1976 Chapter 2-2.

Change: Procedures for Inspection, Testing, and Maintenance of the Cranes have been reviewed/revised to comply to the requirements of ANSI B30.2-1976 Chapter 2-2, with the exception that not all limit switches are checked at the beginning of each shift, only the primary upper hoist limit switch is checked.

Basis for Change: Chapter 2-3.2.4 of ANSI B30.2-1976 only specifically calls out that the hoist upper limit switch be checked at the beginning of each shift. This is consistent with OSHA 1910.179 that also only requires that the hoist upper limit switches be checked at the start of each shift.

3. Monticello Commitment Number M82089A:

Source Document: Letter from D.M. Musolf / NSP to NRC, "Control of Heavy Loads (Revised 6 Month Submittal)", July 7, 1982

Commitment: Only trained Permanent NSP Company employees are permitted to operate the Turbine and Reactor Building cranes.

Change: Deleted the Commitment

Basis for Change: Neither Generic Letter 81-07 (Control of Heavy Loads), NUREG-0612 "Control of Heavy Loads at Nuclear Power Plants", nor ANSI B30.2.0-1976 "Overhead and Gantry Cranes" require that only permanent site employees can operate cranes. All crane operators are required to qualify to the site standard.

4. Monticello Commitment Number M05032A:

Source Document: MNGP Application for Renewed Operating License, Letter to NRC, L-MT-05-014, dated March 16, 2005.

Commitment: The MNGP Fire Water System Program sprinkler heads will be inspected and tested per NFPA requirements or replaced before the end of the 50-year sprinkler head service life and at 10-year intervals thereafter during the extended period of operation to ensure that signs of degradation, such as corrosion, are detected in a timely manner.

Change: The MNGP Fire Water System Program sprinkler heads will be inspected and tested per NFPA requirements. Per the NFPA code, the sprinkler heads will be tested or replaced when the sprinklers have been in service for 50 years. Testing procedures shall be repeated at 10-year intervals thereafter during the extended period of operation to ensure that signs of degradation, such as corrosion, are detected in a timely manner. If the sprinkler heads are replaced testing is not required.

Basis for Change: The original commitment wording can be interpreted that the sprinkler heads can be replaced before the end of the 50-year sprinkler life and then replaced at 10-year intervals there after. This is not in accordance with the NFPA requirements. NFPA 25 Section 5.2 provides guidance for inspection and Section 5.3 provides guidance for testing. Section 5.3 provides that sprinkler heads in service for 50-years shall be replaced or representative samples tested. Test procedures shall be repeated at 10-year intervals. If the sprinkler heads are replaced prior to 50-years then testing is not required. This is a wording clarification and not a change in intent of the commitment.

## ENCLOSURE 3

### MONTICELLO NUCLEAR GENERATING PLANT SUMMARY OF INFORMATION REMOVED FROM THE USAR

Consistent with the guidance in Nuclear Energy Institute (NEI) Report NEI 98-03, "Guidelines for Updated Final Safety Analysis Reports," Revision 1 and Regulatory Guide 1.181, "Content of the Updated Final Safety Analysis Report in Accordance With 10 CFR 50.71(e)," Information removed from the Monticello Nuclear Generating Plant Updated Safety Analysis Report (USAR) is summarized below.

- USAR Change 01253697

Affected section:

Section USAR-05.FIG: Figure 5.2-24, NRC Specified Local Pool Temperature Limit Based on NUREG 0783 for Monticello

CAP AR 01240428 identified USAR Figure 5.2-24 had not been deleted from USAR-05 Figure section per Tech Spec Amendment 126, "Elimination of Local Suppression Pool Temperature."

**ENCLOSURE 4**

**MONTICELLO NUCLEAR GENERATING PLANT  
USAR REVISION 27**

SEE ENCLOSED CD-ROM

<u>File Name Revision 27</u>	<u>File Size (KB)</u>
001 – USAR LOEP	39
002 – USAR TOC	31
003 – USAR Section 1	291
004 – USAR Section 2	1,074
005 – USAR Section 3	7,354
006 – USAR Section 4	823
007 – USAR Section 5	593
008 – USAR Section 6	336
009 – USAR Section 7	735
010 – USAR Section 8	299
011 – USAR Section 9	110
012 – USAR Section 10	377
013 – USAR Section 11	139
014 – USAR Section 12	245
015 – USAR Section 13	95
016 – USAR Section 14	1,226
017 – USAR Section 15	35,749
018 – USAR Appendix A	7,925
019 – USAR Appendix C	11
020 – USAR Appendix D	86
021 – USAR Appendix E	147
022 – USAR Appendix F	288
023 – USAR Appendix G	1,399
024 – USAR Appendix H	3,134
025 – USAR Appendix I	1,099
026 – USAR Appendix J	4,140
027 – USAR Appendix K	229



## ENCLOSURE 5

### MONTICELLO NUCLEAR GENERATING PLANT REPORT OF CHANGES TO THE MONTICELLO FIRE PROTECTION PROGRAM

This enclosure contains a report of changes to the Monticello Fire Protection Program (FPP) in accordance with the provisions of 10 CFR 50.71(e), 10 CFR 50.59, and Generic Letter (GL) 86-10.

In conformance with GL 86-10, the Updated Fire Hazards Analysis (UFHA) and the Safe Shutdown Analysis (SSDA) are incorporated directly into the Updated Safety Analysis Report (USAR) as Appendix J.5 and J.4 respectively. The following summarizes fire protection program documents changes since the previous submittal.

1. USAR J.01, INTRODUCTION
  - No changes.
2. USAR J.02, LICENSING BASIS SUMMARY
  - No changes.
3. USAR J.03, COMPARISON TO REGULATORY GUIDANCE
  - No changes.
4. USAR J.04, SAFE SHUTDOWN ANALYSIS
  - A/R No.: 01196962 – Cables D21-D22/1 and D11-D12/1 are required for Appendix R safe shutdown but were not listed in the safe shutdown analysis (USAR Appendix J.4). These are local cables and their routes meet the divisional separation requirements. Reference NE-36640-2. (USAR 01212579)
  - A/R No.: 01205263 – Corrected cable relationship. USAR Appendix J.4 listed cable 2M2921-A as being associated with G-3A. The cable is associated with G-3B (12 EDG). (USAR 01212579)
  - A/R No.: 01197111 – Corrected compliance strategies for cables associated with MO-1988, MO-2010 and MO-2011. USAR Appendix J.4 Table J.4.6-1 for the Torus Room (Fire Zone 1F) used an incorrect Compliance Strategy for cables associated with MO-1988, MO-2010 and MO-2011. (USAR 01212579)
  - A/R No.: 01160300 – Corrected typographical errors for SRV solenoids. For the cable for SV-2-71K, the associated equipment is listed as RV-2-71F. The correct RV is RV-2-71G. Similarly SV-2-71L is RV-2-71H and SV-2-71M is RV-2-71F. All components are division 2 and are routed correctly with no impact on cable separation or SRV operability. (USAR 01161418)

5. USAR J.05, FIRE HAZARDS ANALYSIS

- No changes

6. 4 AWI-08.01.00, FIRE PROTECTION PROGRAM PLAN

Revision 12 (PCR 01192738)

- A/R No.: 01139350 – Revised to implement License Renewal commitments for fire barrier inspections.

7. 4 AWI-08.01.01, FIRE PROTECTION PRACTICES

Revision 36 (PCR 01228407)

- A/R No.: 01201599 – Revised source document index correcting sources of fire protection program requirements.

Revision 35 (PCR 01211511)

- EC 9561 – Added new air compressor building. Removed old air compressor equipment.
- A/R No.: 01202222 – Removed fire drill requirements from procedure A.3-002 and put them in this AWI (fire protection program requirement).
- A/R No.: 01201874 – Added more detail and prescriptive requirements for local fire department annual training.

8. 4 AWI-08.01.02, COMBUSTION USE SOURCE PERMIT (CSUP)

Revision 11 (PCR 01228414)

- A/R No.: 01201599 – Revised source document index correcting sources of fire protection program requirements.

9. 4 AWI-08.01.04, FIRE PROTECTION COMBUSTIBLE LOADING

Revision 7

- No changes

10. B.08.05-05, FIRE PROTECTION - SYSTEM OPERATION, Tables, A.2-1, A.2-2, A.2-3 and A.2-4

Revision 49 (PCR 01243144)

This was an enhancement PCR and contained the following changes:

- Throughout the document replaced many occurrences of the term “operable” with the term “functional”. This change aligns fire protection with the requirements of FP-OP-OL-01 which defines:

Functional/Functionality: Functionality is an attribute of SSCs that are not controlled by TSs. An SSC is functional or has functionality when it is

capable of performing its specified function, as set forth in the CLB. Functionality does not apply to specified safety functions, but does apply to the ability of non-TS SSCs to perform other specified functions that have a necessary support function.

OPERABLE / OPERABILITY: OPERABLE / OPERABILITY apply to specified safety functions of SSCs described in TS. SSCs described in TS are either OPERABLE or INOPERABLE. See TS for site-specific definitions.

- Table A.2-1, removed the discussion of Alternative Compensatory measures from each of the individual sections and placed the discussion once at the beginning of the table.
- In Table A.2-1, added a discussion of the purpose of the entry into the CAP.

Revision 48 (PCR 01165214)

- No fire protection program changes.

Revision 47 (PCR 01203332)

- Table A.2-2, changed the frequency of the sprinkler inspection/functional testing from 18 to 24 months. This change was missed when the plant changed to two year fuel cycles and aligns the testing with radiological conditions.

Revision 46 (PCR 01191463)

- A/R No.: 01166715 – Rewrote impairment section for ASDS equipment to use standard Ops terminology. No change to the requirements.