



Northern States Power Company

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

October 27, 1998

10CFR 50.71(e)
10CFR 50.59(b)(2)

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

MONTICELLO NUCLEAR GENERATING PLANT
Docket No. 50-263 License No. DPR-22

Submittal of Master Table of Contents to Revision No. 16
to the Updated Safety Analysis Report

On October 23, 1998, Revision No. 16 to the Updated Safety Analysis Report (USAR) for the Monticello Nuclear Generating Plant was submitted to the NRC. At that time, the Master Table of Contents (TOC) was inadvertently omitted. Therefore, attached to this letter are 10 copies of the TOC.

Please contact Sam Shirey, Sr. Licensing Engineer at (612) 295-1449 if you require additional information related to this submittal.

Michael F. Hammer
Plant Manager
Monticello Nuclear Generating Plant

cc: Regional Administrator - III, NRC
NRR Project Manager, NRC
Resident Inspector, NRC

Enclosures: TABLE OF CONTENTS

9811060149 981027
PDR ADOCK 05000263
K PDR

A/S 3

1/10

27-OCT-1998

Northern States Power Company
Monticello Nuclear Generating Plant
Document Control Distribution System

Page 1

Document Distribution Manifest
Controlled Documents - Current

OCT 27 1998

Name: . . . US NRC
Title: ATTN: DOCUMENT CONTROL DESK
Company: MONTI LICENSING
Location: ATTN: MARC VOTH
MNGP-SAB/2ND FLOOR
B ~~11~~ COPIES OF USAR

Manifest Number: 98-0416
Distribution Type: I
Manual Number:
ID Number: YYYY09

Date Mailed: _____

<u>Document Type</u>	<u>Document Number</u>	<u>Revision</u>	<u>Title</u>
----------------------	------------------------	-----------------	--------------

NOTE: The following issues are new or revised

9703	USAR-TOC	16	USAR TABLE OF CONTENTS
------	----------	----	------------------------

TABLE OF CONTENTS**VOLUME 1****SECTION 1 INTRODUCTION AND SUMMARY**

- 1.1 Purpose, Scope and Organization
- 1.2 Principal Design Criteria
- 1.3 Summary Design Description and Safety Analysis
- 1.4 Identification and Qualification of Contractors
- 1.5 References

1.FIGURES**SECTION 2 SITE AND ENVIRONS**

- 2.1 Introduction
- 2.2 Site Description
- 2.3 Meteorology
- 2.4 Hydrology
- 2.5 Geology and Soil Investigation
- 2.6 Seismology
- 2.7 Radiation Environmental Monitoring Program (REMP)
- 2.8 Ecological and Biological Studies
- 2.9 Consequences of Hypothetical Local Catastrophes
- 2.10 References

2.FIGURES**SECTION 3 REACTOR**

- 3.1 General Summary
- 3.2 Thermal and Hydraulic Characteristics

FOR ADMINISTRATIVE USE ONLY

Resp Supv: LIC	Assoc Ref: USAR-MAN	SR: N	Freq: 2 yrs
ARMS: USAR-TOC	Doc Type: 9703	Admin Initials: <i>[Signature]</i>	Date: 10/27/98

TABLE OF CONTENTS (CONT'D)

- 3.3 Nuclear Characteristics
- 3.4 Fuel Mechanical Characteristics
- 3.5 Reactivity Control Mechanical Characteristics
- 3.6 Other Reactor Vessel Internals
- 3.7 References

3.FIGURES

SECTION 4 REACTOR COOLANT SYSTEM

- 4.1 Summary Description
- 4.2 Reactor Vessel
- 4.3 Recirculation System
- 4.4 Reactor Pressure Relief System
- 4.5 Reactor Coolant System Vents
- 4.6 Hydrogen Water Chemistry
- 4.7 Zinc Water Chemistry (GEZIP)
- 4.8 References

4.FIGURES

VOLUME 2

SECTION 5 CONTAINMENT SYSTEM

- 5.1 Summary Description
- 5.2 Primary Containment System
- 5.3 Secondary Containment System
- 5.4 References

5.FIGURES

TABLE OF CONTENTS (CONT'D)

SECTION 6 PLANT ENGINEERED SAFEGUARDS

- 6.1 Summary Description
- 6.2 Emergency Core Cooling System (ECCS)
- 6.3 Main Steam Line Flow Restrictions
- 6.4 Control Rod Velocity Limiters
- 6.5 Control Rod Drive Housing Supports
- 6.6 Standby Liquid Control System
- 6.7 Main Control Room, Emergency Filtration Train Building and Technical Support Center Habitability
- 6.8 References

6.FIGURES

SECTION 7 PLANT INSTRUMENTATION AND CONTROL SYSTEMS

- 7.1 Summary Description
- 7.2 Reactor Control Systems
- 7.3 Nuclear Instrumentation System
- 7.4 Reactor Vessel Instrumentation
- 7.5 Plant Radiation Monitoring Systems
- 7.6 Plant Protection System
- 7.7 Turbine-Generator System Instrumentation and Control
- 7.8 NUMAC Rod Worth Minimizer and Plant Process On-Line Computer
- 7.9 Other Systems Control and Instrumentation
- 7.10 Seismic and Transient Performance Instrumentation Systems
- 7.11 Reactor Shutdown Capability
- 7.12 Detailed Control Room Design Review

TABLE OF CONTENTS (CONT'D)

7.13 Safety Parameter Display System

7.14 References

7.FIGURES

VOLUME 3

SECTION 8 PLANT ELECTRICAL SYSTEMS

8.1 Summary

8.2 Transmission System

8.3 Auxiliary Power System

8.4 Plant Standby Diesel Generator Systems

8.5 DC Power Supply Systems

8.6 Reactor Protection System Power Supplies

8.7 Instrumentation and Control AC Power Supply Systems

8.8 Electrical Design Considerations

8.9 Environmental Qualification of Safety-Related Electrical Equipment

8.10 Adequacy of Station Electrical Distribution System Voltages

8.11 Power Operated Valves

8.12 Station Blackout

8.13 References

8.FIGURES

SECTION 9 PLANT RADIOACTIVE WASTE CONTROL SYSTEMS

9.1 Summary Description

9.2 Liquid Radwaste System

9.3 Gaseous Radwaste System

TABLE OF CONTENTS (CONT'D)

9.4 Solid Radwaste System

9.5 References

9.FIGURES

SECTION 10 PLANT AUXILIARY SYSTEMS

10.1 Summary Description

10.2 Reactor Auxiliary Systems

10.3 Plant Service Systems

10.4 Plant Cooling System

10.5 References

10.FIGURES

SECTION 11 PLANT POWER CONVERSION SYSTEMS

11.1 Summary Description

11.2 Turbine-Generator System

11.3 Main Condenser System

11.4 Main Turbine Bypass System

11.5 Circulating Water System

11.6 Cooling Tower System

11.7 Condensate Demineralizer System

11.8 Condensate and Reactor Feedwater Systems

11.FIGURES

VOLUME 4

SECTION 12 PLANT STRUCTURES AND SHIELDING

12.1 Summary Description

12.2 Plant Principal Structures and Foundations

TABLE OF CONTENTS (CONT'D)

12.3 Shielding and Radiation Protection

12.4 Radioactive Materials Safety

12.5 References

12.FIGURES

SECTION 13 PLANT OPERATIONS

13.1 Summary Description

13.2 Organization, Responsibilities, and Qualifications

13.3 Personnel Experience and Training

13.4 Operational Procedures

13.5 Operational Records and Reporting Requirements

13.6 Operational Review and Audits

13.7 Emergency Procedures

13.8 References

13.FIGURES

SECTION 14 PLANT SAFETY ANALYSIS

14.1 Summary Description

14.2 Fuel Cladding Integrity Safety Limit

14.3 Operating Limits

14.4 Transient Events Analyzed for Core Reload

14.5 Special Events

14.6 Plant Stability Analysis

14.7 Accident Evaluation Methodology

14.8 Anticipated Transients Without Scram (ATWS)

14.9 Post-Accident Plant Systems Shielding Design Review

TABLE OF CONTENTS (CONT'D)

14.10 Other Analyses

14.11 References

14.FIGURES

14.A Current Cycle's Supplemental Reload Licensing Submittal

VOLUME 5

SECTION 15 USAR DRAWINGS

VOLUME 6

APPENDIX A Seismic Design Criteria

APPENDIX B Deleted

VOLUME 7

APPENDIX C Operational Quality Assurance Plan

APPENDIX D Pre-Operational and Startup Tests

APPENDIX E Plant Comparative Evaluation

APPENDIX F Containment Vessel Design Summary Report

VOLUME 8

APPENDIX G Probable Maximum Flood

APPENDIX H Reactor Pressure Vessel Design Summary Report

APPENDIX I Postulated Pipe Failures Outside Containment