



Monticello Nuclear Generating Plant
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Company LLC

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

10 CFR Part 50
Section 50.90

MONTICELLO NUCLEAR GENERATING PLANT

Docket No. 50-263 License No. DPR-22

License Amendment Request

Fire Protection Technical Specification Changes, Conformance to NRC GL 86-10

Reference 1: NSP letter to NRC, "License Amendment Request, Revision to Technical Specification Administrative Controls and Other Miscellaneous Changes," dated May 4, 2000.

Reference 2: NMC letter to NRC, "License Amendment Request, Radiological Effluent Technical Specifications Conformance To Standard Technical Specifications and Generic Letter 89-01," dated December 5, 2000.

Attached is a request for change to the Facility Operating License and Technical Specifications (TS) of the Operating License for the Monticello Nuclear Generating Plant. This request is submitted in accordance with the provisions of 10 CFR 50.90. The proposed amendment changes License Condition 2.C.4 to conform to the standard license condition as stated in NRC Generic Letter (GL) 86-10, "Implementation of Fire Protection Requirements." In addition, the amendment deletes the Fire Protection Program (FPP) elements from the TS in accordance with GL 86-10 and GL 88-12, "Removal of Fire Protection Requirements from Technical Specifications."

Upon NRC approval of the requested changes, the fire protection requirements currently defined in the TS would be embodied within the Monticello FPP. The proposed license condition would provide adequate administrative control of FPP elements to ensure that station capabilities to achieve and maintain safe shutdown in the event of a fire remain at an equivalent level of fire protection as currently provided within the TS.

The changes proposed herein reflect changes previously proposed in Reference 1 (and supplements) and Reference 2, and assume approval of the previously proposed changes as submitted. If such is not the case, Nuclear Management Company will submit revised pages to reflect any changes.

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Exhibit A

License Amendment Request Fire Protection Technical Specification Changes, Conformance to NRC GL 86-10 Evaluation of Proposed Change to the Monticello Technical Specifications

Pursuant to 10 CFR Part 50, Section 50.90, Nuclear Management Company hereby proposes the following change to Appendix A to Facility Operating License DPR-22, "Technical Specifications" for Monticello Nuclear Generating Plant.

Background

NRC Generic Letter (GL) 86-10 (Reference 1) requested licensees to incorporate the NRC approved fire protection program (FPP) in their Safety Analysis Report (SAR). The SAR update would include incorporation of the FPP, including the fire hazards analysis and major commitments that form the basis of the FPP. GL 86-10 also encouraged licensees to apply for an amendment to their operating license to (1) replace the current license conditions regarding fire protection with a new standard license condition, and (2) remove unnecessary fire protection technical specifications (TS). Subsequently, NRC GL 88-12 (Reference 2) provided additional guidance for the preparation of a license amendment request to implement NRC GL 86-10.

In accordance with the guidance of NRC GL 86-10, the NRC approved Monticello FPP is described in the Updated Safety Analysis Report (USAR), Section 10.3 (Reference 3). The Monticello USAR will also be updated to reflect the action of this license amendment.

Pursuant to the guidance of NRC GL 86-10, the amendment proposed below replaces current License Condition 2.C.4 of the Monticello Facility Operating License with the standard license condition, citing the applicable program approval letters from NRC.

The proposed amendment also relocates the fire detection and protection limiting conditions for operation (LCO), surveillance requirements, and corresponding bases, administrative controls that address fire brigade staffing and training from the Monticello TS in accordance with NRC GL 88-12. Operational conditions, remedial actions and test requirements presently in the TS for the fire detection and protection systems, as well as the fire brigade requirements, would be controlled through the FPP and associated procedures. Safety Audit Committee oversight of the FPP is currently required by the Monticello Operational Quality Assurance Plan.

Proposed Changes and Reasons for Changes

The proposed changes to Monticello Operating License and Appendix A, Technical Specifications are described below, and the specific wording changes are shown in Exhibits B and C. The changes proposed herein reflect changes to Monticello TS as proposed in References 3 and 4.

Generic Letters 86-10 and 88-12 provide guidance to utilities seeking license amendments that recognize approved Fire Protection Programs and that remove Surveillance/Limiting Conditions for Operation from the TS. The purpose of this

Exhibit A

amendment request is to remove the Fire Protection Program from the Monticello TS which satisfies the criteria of References 1 and 2, as well as the criteria of 10 CFR 50.36.

1. License Condition 2.C.4 of DPR 22: Revise License Condition 2.C.4 in accordance with the guidance of Section F of NRC GL 86-10.

Justification: This will bring the Monticello Facility Operating License into conformance with the standard fire protection license condition as requested in NRC GL 86-10. The proposed license condition references the NRC safety evaluations which approved the Monticello FPP.

The correspondence referenced in the proposed license condition consists of the NRC safety evaluation (Reference 5) and supplement (Reference 6) for the Monticello fire protection program and the safety evaluation (Reference 7) which closed out open items identified in the supplement.

2. Table of Contents: Revise the Table of Contents to reflect revision of the title of Specifications 3.13 and 4.13 to "Alternate Shutdown System" and to reflect that Table 3.13.1 has been deleted

Justification: As discussed below, all but the Alternate Shutdown System are proposed to be deleted from the TS and the Table of Contents are appropriately revised to reflect the requested fire protection TS changes.

3. Specification 1.0, "Definitions": Revise Section 1.0 to delete the definition of Fire Suppression Water System.

Justification: This definition is no longer needed since the term will not appear anywhere in the TS.

4. Specification 3.13 and 4.13, Fire Detection and Protection Systems: Revise Specification titles, Applicability, and Objectives to be specific to the Alternate Shutdown System. Delete Specifications 3.13.A through G (LCO) and 4.13 A through G (Surveillance Requirements) inclusive. Revise Section 3.13.H to indicate it as 3.13.A. Revise Section 4.13.H to indicate it as 4.13.A. Delete Table 3.13.1.

Justification: The requirements which are to be removed from the TS will be incorporated into the FPP and implementing procedures. Provisions for future changes to these requirements are addressed by the proposed standard license condition identified in item 1 above. Deletion of these specifications and the table implements the NRC guidance provided in NRC GL 86-10 and NRC GL 88-12 (References 1 and 2, respectively).

The reporting requirements of Specifications 3.13.A through 3.13.G will be incorporated in site instructions and revised to require that the special reports be made to the Monticello Operations Committee within the time frames specified in current TS. The NRC will be notified of the conditions and actions taken in the summary of program changes to be provided in accordance with NRC GL 86-10.

Exhibit A

Current Specification 3.13.H, "Alternate Shutdown System," is renumbered and retained, consistent with the guidance of Reference 2.

Technical Specification Bases Sections 3.13 and 4.13 are appropriately revised to reflect the changes above by deleting all paragraphs except the last paragraph of each subsection related to the Alternate Shutdown System.

5. Section 6.1.B, "Offsite and Onsite Organizations": Delete the sentence specifically indicating responsibility for the fire protection program from 6.1.B.2.

Justification: Responsibility for the fire protection program is enveloped by the previous sentence indicating responsibility for overall plant safety. The Monticello Fire Protection Program documents further delineate responsibilities for the FPP.

6. Specification 6.1.C, Plant Staff: Delete Specification 6.1.C.6 and the associated footnote concerning fire brigade manning; re-number Specifications 6.1.C.7 and 8 accordingly.

Justification: The requirements of this specification concerning fire brigade manning has been incorporated into the FPP and implementing procedures. Provision for future changes to these requirements are addressed by the proposed standard license condition. Deletion of these items implements the NRC guidance in NRC GL 86-10 and NRC GL 88-12.

7. Section 6.1.E: Delete this specification concerning fire brigade training.

Justification: The requirement of this specification has been incorporated into the FPP and its' implementing procedures. Provisions for future changes to these requirements associated are addressed by the proposed standard license condition. Deletion of this item implements the guidance in NRC GL 86-10 and NRC GL 88-12.

Safety Evaluation

The changes proposed above are in accordance with NRC guidance provided in References 1 and 2 to implement a standard fire protection license condition, eliminate unnecessary requirements from technical specifications, and transfer requirements and information to licensee controlled programs and the USAR. No changes in program requirements for system operability and testing are proposed as a result of this license amendment request.

Determination of Significant Hazards Considerations

Changes are proposed to the Monticello Operating License and associated Technical Specifications (TS) for Fire Protection and Detection. The proposed changes implement the standard license condition for fire protection and transfer current technical specifications to the licensee controlled Fire Protection Program (FPP). The proposed license condition ensures that NRC approval of adverse changes to the fire protection program will be obtained. The proposed changes have been evaluated to determine whether they constitute a significant hazards consideration as required by 10

Exhibit A

CFR Part 50, Section 50.91 using the standards provided in Section 50.92. This analysis is provided below:

1. The proposed amendment will not involve a significant increase in the probability or consequences of an accident previously evaluated.

The requested changes are administrative in nature in that they move fire protection requirements from the TS to the FPP and associated implementing procedures following the guidance of NRC Generic Letter (GL) 86-10 and GL 88-12. The requested changes will not revise the requirements for fire protection equipment operability, testing or inspections.

The proposed changes do not involve any change to the configuration or method of operation of any plant equipment that is used to mitigate the consequences of an accident, nor do they affect any assumptions or conditions in any of the accident analyses. Since the accident analyses remain bounding, their radiological consequences are not adversely affected.

Therefore, the probability or consequences of an accident previously evaluated are not affected.

2. The proposed amendment will not create the possibility of a new or different kind of accident from any accident previously analyzed.

The requested changes are administrative in nature in that they move fire protection requirements from the TS to the FPP and associated implementing procedures following the guidance of GL 86-10 and 88-12. The requested changes will not revise the requirements for fire protection equipment operability, testing or inspections.

The proposed changes do not involve any change to the configuration or method of operation of any plant equipment that is used to mitigate the consequences of an accident, nor do they affect any assumptions or conditions in any of the accident analyses. Accordingly, no new failure modes have been defined for any plant system or component important to safety nor has any new limiting single failure been identified as a result of the proposed changes.

Therefore the possibility of a new or different kind of accident from any accident previously evaluated is not created.

3. The proposed amendment will not involve a significant reduction in the margin of safety.

The requested changes are administrative in nature in that they move fire protection requirements from the TSs to the FPP and associated implementing procedures following the guidance of GL 86-10 and 88-12. The requested changes will not revise the requirements for fire protection equipment operability, testing or inspections. Future changes to the program will be reviewed in accordance with the fire protection license condition to ensure that the ability to achieve and maintain safe shutdown in the event of a fire are not adversely affected.

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Therefore, a significant reduction in the margin of safety is not involved.

Based on the above evaluation, and pursuant to 10CFR50.91, NMC has determined that the operation of Monticello in accordance with the proposed license amendment request does not involve any significant hazards considerations as defined by NRC regulations in 10CFR50.92.

Environmental Assessment

Nuclear Management Company has evaluated the proposed changes and determined that:

1. The changes do not involve a significant hazards consideration, or
2. The changes do not involve a significant change in the types or significant increase in the amounts of any effluents that may be released offsite, or
3. The changes do not involve a significant increase in individual or cumulative occupational radiation exposure.

Accordingly, the proposed changes meet the eligibility criterion for categorical exclusion set forth in 10 CFR Part 51 Section 51.22(c)(9). Therefore, pursuant to 10 CFR Part 51 Section 51.22(b), an environmental assessment of the proposed changes is not required.

Exhibit A

REFERENCES

1. NRC Generic Letter 86-10, "Implementation of Fire Protection Requirements," dated April 24, 1986.
2. NRC Generic Letter 88-12, "Removal of Fire Protection Requirements from Technical Specifications," dated August 2, 1988.
3. NSP letter to NRC, "License Amendment Request, Revision to Technical Specification Administrative Controls and Other Miscellaneous Changes," dated May 4, 2000.
4. NMC letter to NRC, "License Amendment Request, Radiological Effluent Technical Specifications Conformance To Standard Technical Specifications and Generic Letter 89-01," dated December 5, 2000.
5. NRC letter to NSP, "Amendment No. 41 to Provisional Operating License No. DRP-22," dated August 29, 1979.
6. NRC letter to NSP, "Supplement 1, Fire Protection Safety Evaluation Report," dated February 12, 1981.
7. NRC letter to NSP, "Fire Protection Safety Evaluation Open Items," dated October 2, 1985.

Exhibit B

License Amendment Request Fire Protection Technical Specification Changes, Conformance to NRC GL 86-10

Current Monticello Operating License and Monticello Technical Specification Pages Marked Up With Proposed Change

This exhibit consists of current Monticello Operating License and Technical Specification pages marked up with the proposed change. The marked up pages reflect changes previously proposed References 3 and 4 of Exhibit A to this amendment request. The pages included in this exhibit are listed below:

Pages

Monticello Operating License page

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4. Fire Protection

NMC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Safety Analysis Report for the facility and as approved in the SER dated August 29, 1979, and supplements dated February 12, 1981 and October 2, 1985, subject to the following provision: Northern States Power Company may proceed with and is required to complete the modifications identified in the NRC's Fire Protection Safety Evaluation (SE) of the facility dated August 29, 1979 and Supplement 1 to this SE dated February 12, 1981. The modifications identified in this SE and its Supplement shall be completed on the following schedule:

NMC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

- ~~a) Approved modifications in section 3.1 of the SE or Supplement 1 thereto, other than those pertaining to requirements set forth in Sections III-G, III-J, and III-O of 10 CFR 50 Appendix R, are to be completed by February 17, 1981, unless the Director of Nuclear Reactor Regulation determines that there is good cause for extending this date in accordance with 10 CFR 50.48(d).~~
- ~~b) Approved modifications in section 3.2 of the SE or Supplement 1 thereto, other than those pertaining to requirements set forth in Section III-G, III-J, and III-O of 10 CFR 50 Appendix R, are to be completed by the dates established by 10 CFR 50.48(d).~~

5. Emergency Preparedness Plan

NMC shall follow and maintain in effect emergency plans which meet the standards of 10 CFR 50.47(b) and the requirements in 10 CFR Part 50, Appendix E, including amendments and changes made pursuant to the authority of 10 CFR 50.54(q). The licensee shall meet the requirements of 10 CFR 50.54(s), 50.54(t), and 50.54(u).

6. TMI Action Plan

Northern States Power Company has satisfactorily met all TMI-2 Lessons Learned Category "A" requirements applicable to the facility. Northern States Power Company shall make a timely submittal in response to the letter dated October 31, 1980 regarding post-TMI requirements from Darrell G. Eisenhut, Director, Division of Licensing, Office of Nuclear Reactor Regulation to All Licensees of Operating Plants and Applicants for Operating Licenses and Holders of Construction Permits (NUREG-0737).

7. Repairs to the Recirculation System Piping

The repairs to the recirculation system piping are approved and the unit is hereby authorized to return to power operation, subject to the following condition:

Prior to the startup of Cycle 11, Northern States Power Company shall submit by August 1, 1983 for the Commission's review and approval, a program for inspection and/or modification of the recirculation system piping.

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INTRODUCTION

These Technical Specifications are prepared in accordance with the requirements of 10 CFR 50.36 and apply to the Monticello Nuclear Generating Plant, Unit No. 1. The bases for these Specifications are included for information and understandability purposes.

1.0 DEFINITIONS

The succeeding frequently used terms are explicitly defined so that a uniform interpretation of the Specifications may be achieved.

- A. Alteration of the Reactor Core - The act of moving any component in the region above the core support plate, below the upper grid and within the shroud with the vessel head removed and fuel in the reactor vessel. (Normal operating functions such as control rod movement using the normal drive mechanism, tip scans, SRM and IRM detector movements, etc., are not to be considered core alterations.)
- B. Hot Standby - Hot Standby means operation with the reactor critical in the startup mode at a power level just sufficient to maintain reactor pressure and temperature.
- C. ~~(Deleted) Fire Suppression Water System - The fire suppression water system consists of: water sources; pumps; and distribution piping with associated sectionalizing isolation valves. Such valves include yard hydrant valves, and the first valve ahead of the water flow alarm device on each sprinkler, hose standpipe, or spray system riser.~~
- D. Immediate - Immediate means that the required action will be initiated as soon as practicable considering the safe operation of the unit and the importance of the required action.
- E. Instrument Functional Test - An instrument functional test means the injection of a simulated signal into the primary sensor to verify proper instrument channel response, alarm, and/or initiating action.

3.0 LIMITING CONDITIONS FOR OPERATION

3.13 FIRE DETECTION AND PROTECTION ALTERNATE SHUTDOWN SYSTEMS

Applicability:

Applies to system controls on the alternate shutdown panel instrumentation and plant systems used for fire detection and protection of the nuclear safety-related structures, systems, and components of the plant.

Objective:

To insure the integrity of the alternate shutdown system that the structures, systems, and components of the plant important to nuclear safety are protected from fire damage.

Specification:

A. Fire Detection Instrumentation

1. Except as specified below, the minimum fire detection instrumentation for each fire detection zone shown in Table 3.13.1 shall be operable whenever equipment in that fire detection zone is required to be operable.
2. If specification 3.13.A.1 cannot be met, within one hour establish a fire watch patrol to inspect the zone(s) with inoperable instruments once per hour (+ 25%). Restore the minimum number of instruments to operable status within 14 days or submit a special report to the Commission within 30 days outlining the cause of the inoperability and the plans and schedule for restoring the instruments to operable status.

3.13/4.13

4.0 SURVEILLANCE REQUIREMENTS

4.13 FIRE DETECTION AND PROTECTION ALTERNATE SHUTDOWN SYSTEMS

Applicability:

Applies to the periodic testing of controls on the alternate shutdown system panel instrumentation and plant systems used for fire detection and protection of the nuclear safety related structures, systems, and components.

Objective:

To verify the operability of controls on the alternate shutdown panel instrumentation and plant systems used for fire detection and protection of nuclear safety related structures, systems, and components.

Specification:

A. Fire Detection Instrumentation

1. Fire detection instrumentation in each of the zones in Table 3.13.1 shall be demonstrated operable every six months by performance of functional tests.
2. Alarm circuitry associated with the fire detector instruments in each of the zones in Table 3.13.1 shall be demonstrated operable every six months.

3.0 LIMITING CONDITIONS FOR OPERATION

B. Fire Suppression Water System

1. Except as specified in 3.13.B.2 or 3.13.B.3 below, the system shall be operable at all times with:
 - a. The following pumps, including automatic initiation logic, operable and capable of delivering at least 1500 gpm at a discharge pressure of 90 psig:
 1. Diesel-driven fire pump
 2. Motor-driven fire pump
 3. Screen wash/fire pump
 - b. An operable flow path capable of taking suction from the river and transferring the water through distribution piping with operable sectionalizing control or isolation valves to the yard hydrant valves and the first valve ahead of each hose station or sprinkler system required to be operable.

4.0 SURVEILLANCE REQUIREMENTS

B. Fire Suppression Water System

1. The system shall be verified operable as follows:
 - a. Operability of the diesel-driven fire pump starting battery shall be demonstrated by:
 1. Once each week verify electrolyte level and voltage is within specifications.
 2. Once every three months verify the specific gravity of each cell is within specifications.
 3. Once every 18 months inspect the batteries, battery racks and electrical connections for damage or abnormal deterioration.
 - b.
 1. The motor-driven fire pump shall be started every month and run for at least 15 minutes on recirculation flow.
 2. The screen wash/fire pump shall be run for at least 15 minutes per month.
 - c. The diesel-driven fire pump shall be started every month from ambient conditions and run for at least 20 minutes on recirculation flow.
 - d. The level in the diesel-driven fire pump day tank shall be checked every month and verified to contain at least 65 gallons of fuel.

3.0 LIMITING CONDITIONS FOR OPERATION

- 2. It is permissible to have one of the pumps required by Specification 3.13.B.1.a inoperable provided that the redundant pumps are operable. Restore the inoperable pump to operable status within seven days or provide a special report to the Commission within 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in the Fire Suppression Water system.
- 3. With the fire suppression water system otherwise inoperable.
 - a. Establish a backup fire Suppression Water System within 24 hours.
 - b. Provide a special report to the Commission within 14 days outlining the actions taken and the plans and schedule for restoring the system to operable status.

4.0 SURVEILLANCE REQUIREMENTS

- e. Every three months verify that a sample of fuel from the diesel oil storage tank, obtained in accordance with ASTM D4057-88, is within the acceptable limits specified in Table 1 of ASTM D975-91 when checked for viscosity, water, and sediment.
- f. Every 18 months subject the diesel-driven fire pump engine to an inspection in accordance with procedures prepared in conjunction with the manufacturer's recommendations for this class of standby service.
- g. A simulated automatic actuation of each fire pump and the screen wash/fire pump, including verification of pump capability, shall be conducted every 18 months.
- h. The yard main and the reactor building and turbine building headers shall be flushed every 12 months.
- i. System flow tests shall be performed every three years.
- j. Valves in flow paths supplying fire suppression water to safety related structures, systems, and component shall be cycled every 12 months.

3.0 LIMITING CONDITIONS FOR OPERATION

4.0 SURVEILLANCE REQUIREMENTS

C. Hose Stations

1. Whenever equipment protected by hose stations in the following areas is required to be operable, the hose station(s) protecting equipment required to be operable in those areas shall be operable:
 - a. Diesel generator rooms
 - b. Safety related areas of the turbine building
 - c. Safety related areas of the screenhouse
 - d. Reactor building
 - e. Reactor building addition
 - f. Safety related areas of the Administration building

- k. Each valve (manual, power operated, or automatic) in the flow path that is not electrically supervised, locked, sealed or otherwise secured in position, shall be verified to be in its correct position every month.

C. Hose Stations

1. The hose stations specified in 3.13.C.1 shall be demonstrated operable as follows:
 - a. Each month a visual inspection shall be conducted to assure all equipment is available.
 - b. Every 18 months the hose shall be removed for inspection and re-racking and all gaskets in the couplings shall be inspected and replaced if necessary.
 - c. Every 3 years each hose station valve shall be partially opened to verify valve operability and no flow blockage.
 - d. Every 3 years each hose shall be hydrostatically tested at a pressure at least 50 psig greater than the maximum pressure available at any hose station.

3.0 LIMITING CONDITIONS FOR OPERATION

4.0 SURVEILLANCE REQUIREMENTS

- 2. If Specification 3.13.C.1 cannot be met, within one hour hoses supplied from operable hose stations shall be made available for routing to each area with an inoperable hose station. Restore the inoperable hose station(s) to Operable status within 14 days or submit a special report to the Commission within 30 days outlining the cause of the inoperability and the plans and schedule for restoring the system to Operable status.

D. Yard Hydrant Hose Houses

- 1. Whenever equipment in the following buildings is required to be operable, the yard hydrant hose houses in the main yard loop adjacent to those building shall be operable:
 - a. Diesel Generator Building
 - b. Turbine Building
 - c. Screenhouse
 - d. Reactor Building
 - e. Reactor Building Addition
 - f. Administration Building
- 2. If Specification 3.13.D.1 cannot be met, within one hour have sufficient additional lengths of 2-1/2 inch diameter hose located adjacent operable yard hydrant hose house(s) to provide service to the unprotected area(s). Restore the yard hydrant hose house(s) to Operable status within 14 days or submit a special report to the Commission within 30 days outlining the cause of the inoperability and the plans and schedule for restoring the system to Operable status.

D. Yard Hydrant Hose Houses

- 1. The yard hydrant hose houses listed in Specification 3.13.D.1 shall be demonstrated operable as follows:
 - a. Each month a visual inspection shall be conducted of the yard hydrant hose houses to assure all required equipment is available.
 - b. Every six months (in the spring and fall) visually inspect each yard fire hydrant and verify that the hydrant barrel is dry and that the hydrant is not damaged.
 - c. Every year conduct a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at any yard hydrant hose house and conduct an inspection of all gaskets in the couplings. All degraded gaskets shall be replaced.

3.0 LIMITING CONDITIONS FOR OPERATION

4.0 SURVEILLANCE REQUIREMENTS

E. Sprinkler Systems

E. Sprinkler Systems

1. The following spray or sprinkler systems shall be operable whenever equipment in the protected area(s) is required to be operable:
 - a. Diesel Generator and Day Tank Rooms
 - b. Lube Oil Drum Storage
 - c. Lube Oil Storage Tank Sprinkler
 - d. Hydrogen Seal Oil Unit Sprinkler
 - e. Lube Oil Piping System Sprinkler
 - f. Lube Oil Reservoir
 - g. Recirc MG Set Sprinklers
 - h. Intake Structure
 - i. Feedwater Pump Hatch Sprinkler Curtain
2. If Specification 3.13.E.1 cannot be met, within one hour establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s). Restore the system to operable status within 14 days or submit a special report to the Commission within 30 days outlining the cause of the inoperability and the plans and schedule for restoring the system to operable status.

1. Each of the spray or sprinkler systems listed in specification 3.13.E.1 shall be demonstrated operable as follows:
 - a. Each valve (manual, power operated, or automatic) in the flow path that is not electrically supervised, locked, sealed or otherwise secured in position, shall be verified to be in its correct position every month.
 - b. Cycle each testable valve in the flow path through at least one complete cycle of full travel once each year.
 - c. Perform a system functional test every 18 months which includes, where applicable, simulated automatic actuation of the system and verification that the automatic valves in the flow path actuate to their correct positions on a test signal.
 - d. At least once per 5 years by performing an air flow test through each open head sprinkler header and verifying each open head sprinkler is unobstructed.
 - e. At least once per 18 months by a visual examination of system piping and sprinkler heads. An air flow test shall be performed upon evidence of obstruction of any open head sprinkler.

3.0 LIMITING CONDITIONS FOR OPERATION

F. Halon Systems

1. The cable spreading room Halon system shall be operable with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure.
2. If specification 3.13.F.1 cannot be met, within one hour establish a continuous fire watch with backup fire suppression equipment in the cable spreading room. Restore the system to operable status within 14 days or submit a special report to the Commission within 30 days outlining the cause of the inoperability and the plans and schedule for restoring the system to operable status.

G. Penetration Fire Barriers

1. All penetration fire barriers in fire area boundaries shall be operable whenever safe shutdown equipment in that fire area is required to be operable.
2. If Specification 3.13.G.1 cannot be met, a continuous fire watch shall be established on at least one side of the affected penetration(s) within one hour or verify the operability of fire detectors on at least one side of the non-functional fire barrier and establish an hourly (+ 25%) fire watch patrol. Restore the inoperable penetration fire barriers to Operable status within 14 days or submit a special report to the Commission within 30 days outlining the cause of the inoperability and the plans and schedule for restoring the barriers to Operable status.

4.0 SURVEILLANCE REQUIREMENTS

F. Halon Systems

1. The cable spreading room Halon system shall be demonstrated operable as follows:
 - a. Each valve (manual, power operated, or automatic) in the flow path that is not electrically supervised, locked, sealed or otherwise secured in position, shall be verified to be in its correct position every month.
 - b. Verify Halon storage tank weight and pressure every six months.
 - c. Perform a system functional test every 18 months which includes verifying the system, including associated ventilation dampers, actuates manually and automatically, upon receipt of a test signal.
 - d. Perform an air flow test every 3 years through headers and nozzles to assure no blockage.
 - e. Visually examine headers and nozzles every 18 months. An air flow test shall be performed upon evidence of obstructions of any Halon system nozzle.

G. Penetration Fire Barriers

1. A visual inspection of penetration fire barriers in fire area boundaries protecting safe shutdown equipment shall be conducted every 18 months.
2. Following repair or maintenance of a penetration fire barrier a visual inspection of the seal shall be conducted.

3.0 LIMITING CONDITIONS FOR OPERATION

AH. Alternate Shutdown System

1. The system controls on the ASDS panel shall be operable whenever that system/component is required to be operable. 12 RHR Service Water Pump shall be operable from the ASDS panel whenever there is irradiated fuel in the vessel and reactor water temperature is greater than 212°F.
2. If system controls or 12 RHR Service Water Pump required to be operable by Specification 3.13.H.1 are made or found inoperable, restore operability within 7 days, or perform one of the following;
 - a. Provide equivalent shutdown capability and within 60 days restore the inoperable system controls to operable; or
 - b. Establish a continuous fire watch in the cable spreading room and the back-panel area of the control room and within 60 days restore the inoperable system controls to operable; or
 - c. Verify the operability of the fire detectors in the cable spreading room and the back-panel area of the control room and establish a hourly fire watch patrol and within 60 days restore the inoperable system controls to operable; or
 - d. Place the reactor in a condition where the systems for which the system controls at the ASDS are inoperable are not required to be operable within 24 hours.
3. The alternate shutdown system panel master transfer switch shall be locked in the normal position except when in use, being tested or being maintained.

4.0 SURVEILLANCE REQUIREMENTS

AH. Alternate Shutdown System

1. Switches on the alternate shutdown system panel shall be functionally tested once per operating cycle.
2. The alternate shutdown system panel master transfer switch shall be verified to alarm in the control room when unlocked once per operating cycle.

TABLE 3.13.1

SAFETY RELATED FIRE DETECTION INSTRUMENTS

<u>Fire Detection Zone</u>	<u>Location</u>	<u>Minimum Heat</u>	<u>Instruments Flame</u>	<u>Operable Smoke</u>
1A	"B" RHR Room			3
1B	"A" RHR Room			3
1C	RCIC Room			3
1E	HPCI Room			2
1F	Reactor Building-Torus Compartment			11
2A	Reactor Bldg. 935' elev - TIP Drive Area			1
2B	Reactor Bldg. 935' elev - CRD HCU Area East			10
2C	Reactor Bldg. 935' elev - CRD HCU Area West			11
2G/2H	Reactor Bldg. 935' - LPCI Injection Valve Area			1
3B	Reactor Bldg. 962' elev - SBLC Area			2
3C	Reactor Bldg. 962' elev - South			5
3D	Reactor Bldg. 962' elev - RBCCW Pump Area			4
4A	Reactor Bldg. 985' elev - South			4
4B	Reactor Bldg. 985' elev - RBCCW Hx Area			5
4D	SBGT System Room			2
5A	Reactor Bldg. 1001' elev - South			7
5B	Reactor Bldg. 1001' elev - North			3
5C	Reactor Bldg. - Fuel Pool Cooling Pump Area			1
6	Reactor Building 1027' elev			5
7A	Battery Room			1
7B	Battery Room			1
7C	Battery Room			1
8	Cable Spreading Room			7

TABLE 3.13.1 (Continued)

SAFETY RELATED FIRE DETECTION INSTRUMENTS

<u>Fire Detection Zone</u>	<u>Location</u>	<u>Minimum Heat</u>	<u>Instruments Flame</u>	<u>Operable Smoke</u>
12A	Turbine Bldg. - 911' - 4.16 KV Switchgear			3
13C	Turbine Bldg. - 911' elev - MCC 133 Area			1
14A	Turbine Bldg. - 931' - 4.16 KV Switchgear			2
15A/15C	#12 DG Room & Day Tank Room		3	
15B/15D	#11 DG Room & Day Tank Room		3	
16	Turbine Bldg. 931' elev - Cable Corridor			3
17	Turbine Bldg. 941' elev - Cable Corridor			3
19A	Turbine Bldg. 931' elev - Water Treatment Area			5
19B	Turbine Bldg. 931' elev - MCC 142-143 Area			1
19C	Turbine Bldg. 931' elev - FW Pipe Chase			1
20	Heating Boiler Room	1		
23A	Intake Structure Pump Room			3
31A	1st Floor - Reactor Building Addition - Division I			3
31B	1st Floor - Reactor Building Addition - Division II			15
32A	2nd Floor - Reactor Building Addition - Division I			6
32B	2nd Floor - Reactor Building Addition - Division II			4
33	3rd Floor - Reactor Building Addition			5

Bases 3.13:

Elements of the fire detection and protection system are required to be operable to protect safety related structures, systems, and components whenever those structures, systems, or components are required to be operable. Fire detection and protection systems will normally be maintained operable at all times except for periods of maintenance and testing.

Fire detection instrumentation is installed throughout the plant to protect safety related structures, systems, and components. The detectors in each area initiate a local alarm and an alarm in the control room. All circuits are supervised and the installation meets the requirements of NFPA-72D. The Specifications require all detectors to be operable in those zones having only one detector (battery rooms). In other plant areas, Table 3.13.1 permits one detector in each zone to be inoperable. If more detectors are inoperable, a patrolling fire watch is established in the affected area until the required number of detectors are restored to operable status. The loss of one detector does not significantly degrade the ability to detect fires in areas of the plant having multiple detectors.

The fire suppression water system is supplied by three identical vertical centrifugal pumps rated at 1500 gpm at 100 psig each. Two of these pumps are motor driven and one is diesel driven. One of the motor driven pumps normally supplies the needs of the screen wash system and is designated the screen wash/fire pump. Transfer from screen wash duty to fire duty occurs automatically. All pumps are started automatically by instrumentation sensing header pressure. Any two pumps are capable of supplying all fire fighting water requirements in safety related areas of the plant. If a pump is inoperable, it must be repaired within seven days or a report is submitted to the Commission. If two pumps are inoperable, or if other circumstances interrupt the supply of water to any safety related area, a backup source of water must be provided within 24 hours and the Commission notified.

Automatic sprinkler systems are installed in both diesel-generator rooms and both day tank rooms. Other sprinkler and deluge systems are installed in turbine lube oil piping and storage areas and other non-safety related portions of the plant. An automatic Halon suppression system is installed in the cable spreading room. Inoperability of any of the automatic suppression systems in safety related areas of the plant requires the stationing of a continuous fire watch in the area equipped with backup manual fire suppression equipment. Hose stations and yard hydrant hose houses are provided in all safety related areas of the plant and surrounding all principal plant buildings. These stations are supplied from the fire suppression water system. If the water supply to these areas is interrupted, a hose supplied from an operable source is made available to protect the area having the inoperable station.

Piping and electrical penetrations are provided with seals where required by the fire severity. If a seal is made or found to be inoperable for any reason and equipment protected by that fire barrier is required to be operable, the penetration area is continuously attended until an effective fire seal is restored or the detection system on one side of the barrier is determined to be operable and an hourly fire patrol is established. Seals have been qualified for the maximum fire severity present on either side of the barrier.

| Bases 3.13 (Continued):

The alternate shutdown system panel is provided to assure the capability of achieving cold shutdown, external to the control room, in the unlikely event the control room becomes uninhabitable or safe shutdown equipment in the control room or cable spreading room is damaged by fire. Control of those systems on the alternate shutdown system panel is taken when the locking master transfer switch is moved from the normal to the transfer position and each system's individual transfer switch is put in the transfer mode. When control is established at the alternate shutdown system panel no control of those systems is available from the control room and all automatic initiation signals have been disabled. The master transfer switch shall remain in the locked position at all times when not in use, being tested or being maintained. If the master transfer switch is moved to the transfer position there is an alarm in the control room.

Bases 4.13:

Fire detectors are tested in accordance with the manufacturer's recommendations. All tests and inspections are performed by the plant staff. Every six months each detector is functionally tested. Combustion generated smoke is not used in these tests. Alarm circuits are functionally checked every six months. In addition, all circuitry is automatically supervised for open wiring and ground faults.

Fire pumps are tested each month to verify operability. Test starting of the screen wash/fire pump is not required since it is normally in service. Each fire pump is manually started and operated for at least 15 minutes with pump flow directed through the recirculation test line. Every 18 months the operability of the automatic actuation logic for the fire pumps and the screen wash/fire pump is verified and the performance of each pump is verified to meet system requirements. The specified flush and valve checks provide assurance that the piping system is capable of supplying fire suppression water to all safety related areas.

A system flow test is specified every three years. This test verifies the hydraulic performance of the fire suppression fire water header system. The testing will be performed using Section II, Chapter 5 of the Fire Protection Handbook, 14th Edition, as a procedural guide. This test is generally performed in conjunction with a visit from insurance company inspectors.

Hose stations and yard hydrant hose houses are inspected monthly to verify that all required equipment is in place. Gaskets in hose couplings are inspected periodically and the hose is pressure tested. Pressure testing of outdoor hose is conducted more frequently than indoor hose because of the less favorable storage conditions. Operability of hose station isolation valves is verified every three years by partially opening each valve to verify flow. All of these tests provide a high degree of assurance that each hose station and yard hydrant hose house will perform satisfactorily after periods of standby service.

Simulated automatic actuation tests are conducted each 18 months to confirm the operability of the sprinkler and Halon systems. These tests consist of verification that all valves, dampers (Halon system only), alarms, and flow paths are functional.

Plant fire barrier walls are provided with seals for pipes and cables where necessary. Where such seals are installed, they must be maintained intact to perform their function. Visual inspection of each installed seal is required every 18 months and after seal repair. A visual inspection following repair of a seal is sufficient to assure that seal integrity will be within acceptable limits.

| Bases 4.13 (Continued):

Once per operating cycle the master transfer switch is moved to the transfer mode and it is verified that an alarm in the control room is received, notifying operators that control has been transferred. In addition, once per cycle, each switch is functionally tested to assure that the alternate shutdown system panel is operable and can control those systems contained to perform their design function. A frequency of more than once per operating cycle could adversely impact safety as control is taken from the normal position in the control room and the automatic initiation signals are disabled.

6.0 ADMINISTRATIVE CONTROLS

6.1 Organization

- A. The plant manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for the safe operation and maintenance of the plant. During periods when the plant manager is unavailable, this responsibility may be delegated to other qualified supervisory personnel.

The Shift Supervisor (or, a designated individual during periods of absence from the control room and shift supervisor's office) shall be responsible for the control room command function.

B. Offsite and Onsite Organizations

Onsite and offsite organizations shall be established for plant operation and corporate management, respectively. The onsite and offsite organizations shall include positions for activities affecting plant safety.

1. Lines of authority, responsibility and communication shall be established and defined for the highest management levels through intermediate levels to and including all operating organization positions. These relationships shall be documented and updated, as appropriate, in the form of organization charts, function descriptions of department responsibilities and relationships, and job descriptions for key personnel positions, or in equivalent forms of documentation. These requirements including the plant-specific titles of those personnel fulfilling the responsibilities of the positions delineated in these Technical Specifications are documented in corporate and plant procedures, or the Updated Safety Analysis Report or the Operational Quality Assurance Plan.
2. A corporate officer with direct responsibility for the plant shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support to the plant to ensure nuclear safety. ~~This position has the responsibility for the Fire Protection Program.~~
3. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

C. Plant Staff

1. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.1.1.
2. At least one licensed operator shall be in the control room when fuel is in the reactor.
3. At least two licensed operators shall be present in the control room during cold startup, scheduled reactor shutdown, and during recovery from reactor trips.
4. An individual qualified in radiation protection procedures shall be onsite when fuel is in the reactor.
5. All alterations of the reactor core shall be directly supervised by a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
- ~~6. A fire brigade of at least five members shall be maintained onsite at all times.* The fire brigade shall not include the three members of the shift organization required for safe shutdown of the reactor from outside the control room.~~
67. The operations manager shall be formerly licensed as a Senior Reactor Operator or hold a current Senior Reactor Operator License.
78. At least one member of plant management holding a current Senior Reactor Operator License shall be assigned to the plant operations group on a long term basis (approximately two years). This individual will not be assigned to a rotating shift.

- D. Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for (1) the radiation protection manager or designated health physicist who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, (2) the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant for transients and accidents, and (3) the operations manager who shall meet the requirement of ANSI N18.1-1971 except that NRC license requirements are as specified in Specification 6.1.C.7. The training program shall be under the direction of a designated member of Nuclear Management Company, LLC management.

* ~~Fire Brigade composition may be less than the minimum requirements for a period of time not to exceed 2 hours in order to accommodate unexpected absence of Fire Brigade members provided immediate action is taken to restore the Fire Brigade to within the minimum requirements.~~

- E. ~~(Deleted) A training program for individuals serving in the fire brigade shall be maintained under the direction of a designated member of Northern States Power management. This program shall meet the requirement of Section 27 of the NFPA Code – 1976 with the exception of training scheduling. Fire brigade training shall be scheduled as set forth in the training program.~~
- F. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel. Procedures shall include the following provisions:
1. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a normal 8 or 12-hour day, nominal 40-hour week while the plant is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance or major plant modifications, on a temporary basis, the following guidelines shall be followed:
 - a. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - b. Overtime should be limited for all nuclear plant staff personnel so that total work time does not exceed 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, not more than 84 hours in any seven day period, all excluding shift turnover time. Individuals should not be required to work more than 15 consecutive days without two consecutive days off.
 - c. A break of at least eight hours including shift turnover time should be allowed between work periods.
 - d. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.

Exhibit C

License Amendment Request Fire Protection Technical Specification Changes, Conformance to NRC GL 86-10

Revised Monticello Operating License and Technical Specification Pages

This exhibit consists of revised Monticello Operating License Technical Specification pages that incorporate the proposed change. The pages reflect changes previously proposed References 3 and 4 of Exhibit A to this amendment request. The pages included in this exhibit are as listed below:

Pages

Monticello Operating License page

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Monticello Technical Specifications pages

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4. Fire Protection

NMC shall implement and maintain in effect all provisions of the approved fire protection program as described in the Updated Safety Analysis Report for the facility and as approved in the SER dated August 29, 1979, and supplements dated February 12, 1981 and October 2, 1985, subject to the following provision:

NMC may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.

5. Emergency Preparedness Plan

NMC shall follow and maintain in effect emergency plans which meet the standards of 10 CFR 50.47(b) and the requirements in 10 CFR Part 50, Appendix E, including amendments and changes made pursuant to the authority of 10 CFR 50.54(q). The licensee shall meet the requirements of 10 CFR 50.54(s), 50.54(t), and 50.54(u).

6. TMI Action Plan

Northern States Power Company has satisfactorily met all TMI-2 Lessons Learned Category "A" requirements applicable to the facility. Northern States Power Company shall make a timely submittal in response to the letter dated October 31, 1980 regarding post-TMI requirements from Darrell G. Eisenhut, Director, Division of Licensing, Office of Nuclear Reactor Regulation to All Licensees of Operating Plants and Applicants for Operating Licenses and Holders of Construction Permits (NUREG-0737).

7. Repairs to the Recirculation System Piping

The repairs to the recirculation system piping are approved and the unit is hereby authorized to return to power operation, subject to the following condition:

Prior to the startup of Cycle 11, Northern States Power Company shall submit by August 1, 1983 for the Commission's review and approval, a program for inspection and/or modification of the recirculation system piping.

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INTRODUCTION

These Technical Specifications are prepared in accordance with the requirements of 10 CFR 50.36 and apply to the Monticello Nuclear Generating Plant, Unit No. 1. The bases for these Specifications are included for information and understandability purposes.

1.0 DEFINITIONS

The succeeding frequently used terms are explicitly defined so that a uniform interpretation of the Specifications may be achieved.

- A. Alteration of the Reactor Core - The act of moving any component in the region above the core support plate, below the upper grid and within the shroud with the vessel head removed and fuel in the reactor vessel. (Normal operating functions such as control rod movement using the normal drive mechanism, tip scans, SRM and IRM detector movements, etc., are not to be considered core alterations.)
- B. Hot Standby - Hot Standby means operation with the reactor critical in the startup mode at a power level just sufficient to maintain reactor pressure and temperature.
- C. (Deleted)
- D. Immediate - Immediate means that the required action will be initiated as soon as practicable considering the safe operation of the unit and the importance of the required action.
- E. Instrument Functional Test - An instrument functional test means the injection of a simulated signal into the primary sensor to verify proper instrument channel response, alarm, and/or initiating action.

3.0 LIMITING CONDITIONS FOR OPERATION

3.13 ALTERNATE SHUTDOWN SYSTEM

Applicability:

Applies to system controls on the alternate shutdown panel.

Objective:

To insure the integrity of the alternate shutdown system.

Specification:

A. Alternate Shutdown System

1. The system controls on the ASDS panel shall be operable whenever that system/component is required to be operable. 12 RHR Service Water Pump shall be operable from the ASDS panel whenever there is irradiated fuel in the vessel and reactor water temperature is greater than 212°F.
2. If system controls or 12 RHR Service Water Pump required to be operable by Specification 3.13.H.1 are made or found inoperable, restore operability within 7 days, or perform one of the following;
 - a. Provide equivalent shutdown capability and within 60 days restore the inoperable system controls to operable; or
 - b. Establish a continuous fire watch in the cable spreading room and the back-panel area of the control room and within 60 days restore the inoperable system controls to operable; or

3.13/4.13

4.0 SURVEILLANCE REQUIREMENTS

4.13 ALTERNATE SHUTDOWN SYSTEM

Applicability:

Applies to the periodic testing of controls on the alternate shutdown system panel.

Objective:

To verify the operability of controls on the alternate shutdown panel.

Specification:

A. Alternate Shutdown System

1. Switches on the alternate shutdown system panel shall be functionally tested once per operating cycle.
2. The alternate shutdown system panel master transfer switch shall be verified to alarm in the control room when unlocked once per operating cycle.

3.0 LIMITING CONDITIONS FOR OPERATION

- c. Verify the operability of the fire detectors in the cable spreading room and the back-panel area of the control room and establish a hourly fire watch patrol and within 60 days restore the inoperable system controls to operable; or
 - d. Place the reactor in a condition where the systems for which the system controls at the ASDS are inoperable are not required to be operable within 24 hours.
3. The alternate shutdown system panel master transfer switch shall be locked in the normal position except when in use, being tested or being maintained.

4.0 SURVEILLANCE REQUIREMENTS

Bases 3.13:

The alternate shutdown system panel is provided to assure the capability of achieving cold shutdown, external to the control room, in the unlikely event the control room becomes uninhabitable or safe shutdown equipment in the control room or cable spreading room is damaged by fire. Control of those systems on the alternate shutdown system panel is taken when the locking master transfer switch is moved from the normal to the transfer position and each system's individual transfer switch is put in the transfer mode. When control is established at the alternate shutdown system panel no control of those systems is available from the control room and all automatic initiation signals have been disabled. The master transfer switch shall remain in the locked position at all times when not in use, being tested or being maintained. If the master transfer switch is moved to the transfer position there is an alarm in the control room.

Bases 4.13:

Once per operating cycle the master transfer switch is moved to the transfer mode and it is verified that an alarm in the control room is received, notifying operators that control has been transferred. In addition, once per cycle, each switch is functionally tested to assure that the alternate shutdown system panel is operable and can control those systems contained to perform their design function. A frequency of more than once per operating cycle could adversely impact safety as control is taken from the normal position in the control room and the automatic initiation signals are disabled.

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6.1 Organization

- A. The plant manager shall be responsible for overall unit safe operation and shall have control over those onsite activities necessary for the safe operation and maintenance of the plant. During periods when the plant manager is unavailable, this responsibility may be delegated to other qualified supervisory personnel.

The Shift Supervisor (or, a designated individual during periods of absence from the control room and shift supervisor's office) shall be responsible for the control room command function.

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2. A corporate officer with direct responsibility for the plant shall have corporate responsibility for overall plant nuclear safety and shall take any measures needed to ensure acceptable performance of the staff in operating, maintaining and providing technical support to the plant to ensure nuclear safety.
3. The individuals who train the operating staff and those who carry out health physics and quality assurance functions may report to the appropriate onsite manager; however, they shall have sufficient organizational freedom to ensure their independence from operating pressures.

C. Plant Staff

1. Each on duty shift shall be composed of at least the minimum shift crew composition shown in Table 6.1.1.
2. At least one licensed operator shall be in the control room when fuel is in the reactor.
3. At least two licensed operators shall be present in the control room during cold startup, scheduled reactor shutdown, and during recovery from reactor trips.
4. An individual qualified in radiation protection procedures shall be onsite when fuel is in the reactor.
5. All alterations of the reactor core shall be directly supervised by a licensed Senior Reactor Operator or Senior Reactor Operator Limited to Fuel Handling who has no other concurrent responsibilities during this operation.
6. The operations manager shall be formerly licensed as a Senior Reactor Operator or hold a current Senior Reactor Operator License.
7. At least one member of plant management holding a current Senior Reactor Operator License shall be assigned to the plant operations group on a long term basis (approximately two years). This individual will not be assigned to a rotating shift.

- D. Each member of the unit staff shall meet or exceed the minimum qualifications of ANSI N18.1-1971 for comparable positions, except for (1) the radiation protection manager or designated health physicist who shall meet or exceed the qualifications of Regulatory Guide 1.8, September 1975, (2) the Shift Technical Advisor who shall have a bachelor's degree or equivalent in a scientific or engineering discipline with specific training in plant design, and response and analysis of the plant for transients and accidents, and (3) the operations manager who shall meet the requirement of ANSI N18.1-1971 except that NRC license requirements are as specified in Specification 6.1.C.7. The training program shall be under the direction of a designated member of Nuclear Management Company, LLC management.

E. (Deleted)

F. Administrative procedures shall be developed and implemented to limit the working hours of unit staff who perform safety-related functions; e.g., senior reactor operators, reactor operators, health physicists, auxiliary operators, and key maintenance personnel. Procedures shall include the following provisions:

1. Adequate shift coverage shall be maintained without routine heavy use of overtime. The objective shall be to have operating personnel work a normal 8 or 12-hour day, nominal 40-hour week while the plant is operating. However, in the event that unforeseen problems require substantial amounts of overtime to be used, or during extended periods of shutdown for refueling, major maintenance or major plant modifications, on a temporary basis, the following guidelines shall be followed:
 - a. An individual should not be permitted to work more than 16 hours straight, excluding shift turnover time.
 - b. Overtime should be limited for all nuclear plant staff personnel so that total work time does not exceed 16 hours in any 24-hour period, nor more than 24 hours in any 48-hour period, not more than 84 hours in any seven day period, all excluding shift turnover time. Individuals should not be required to work more than 15 consecutive days without two consecutive days off.
 - c. A break of at least eight hours including shift turnover time should be allowed between work periods.
 - d. Except during extended shutdown periods, the use of overtime should be considered on an individual basis and not for the entire staff on a shift.