

July 1, 1986

Docket No. 50-263

Mr. D. M. Musolf
Nuclear Support Services Department
Northern States Power Company
414 Nicollet Mall - 8th Floor
Minneapolis, Minnesota 55401

Dear Mr. Musolf:

SUBJECT: LER REPORTING AND OTHER MISCELLANEOUS CHANGES
(TAC 55724 AND 55930)

Re: Monticello Nuclear Generating Plant

The Commission has issued the enclosed Amendment No. 46 to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. This amendment is in response to your application dated September 14, 1984, and clarified on January 10 and May 7, 1986.

The amendment reflects the changes in the revised Section of 10 CFR 50.72, and a new Section 10 CFR 50.73, both of which became effective on January 1, 1984. The revised subsection 50.72 modifies the immediate notification requirements for operating nuclear power reactors and subsection 50.73 provides for a revised Licensee Event Report System. The amendment also includes changes to Table 6.1-1, "Minimum Shift Crew Composition" to comply with the requirements of 10 CFR 50.54(m)(2). In addition, organizational changes include two position title changes and a new position of Assistant Plant Manager

A copy of our related Safety Evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly Federal Register notices.

Sincerely,

/s/RAuluck

Rajender Auluck, Project Manager
BWR Project Directorate #1
Division of BWR Licensing

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P PDR

Enclosures:

1. Amendment No. 46 to License No. DPR-22
2. Safety Evaluation

cc w/enclosures:
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5/19/86

OELD
5/27/86

DBL:PD#1
JZwolinski
5/ /86

Mr. D. M. Musolf
Northern States Power Company

Monticello Nuclear Generating Plant

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

NORTHERN STATES POWER COMPANY

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 46
License No. DPR-22

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Northern States Power Company (the licensee) dated September 14, 1984, and clarified on January 10, 1986 and May 7, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.2 of Facility Operating License No. DPR-22 is hereby amended to read as follows:

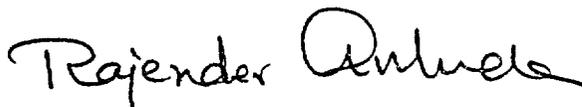
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2 Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 46 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Rajender Auluck, Project Manager
BWR Project Directorate #1
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 1, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 46

FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Revise Appendix "A" Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change.

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- AH. Source Check - A Source Check is the qualitative assessment of channel response when the channel sensor is exposed to a radioactive source.
- AI. Purging - Purging is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration, or other operating condition, in such a manner that replacement air or gas is required to purify the confinement.
- AJ. Venting - Venting is the controlled process of discharging air or gas from a confinement to maintain temperature, pressure, humidity, concentration, or other operating condition, in such a manner that replacement air or gas is not provided or required.
- AK. Dose Equivalent I-131 - Dose Equivalent I-131 is the concentration of I-131 (microcuries/gram) which alone would produce the same thyroid dose as the quantity and isotopic mixture of I-131, I-132, I-133, I-134 and I-135 actually present. The thyroid dose conversion factors used for this calculation shall be those listed in Table III of TID-14844, "Calculation of Distance Factors for Power and Test Reactor Sites" or in NRC Regulatory Guide 1.109, Rev. 1, October, 1977.
- AL. Offgas Treatment System - The Offgas Treatment System is the system designed and installed to reduce radioactive gaseous effluents by collecting primary coolant system offgases from the primary system and providing for delay or holdup for the purpose of reducing the total radioactivity prior to release to the environment.
- AM. Members of the Public - Means all persons who are not occupationally associated with the plant. This category does not include employees of the utility, its contractors, or its vendors. Also excluded from this category are persons who enter the site to service equipment or to make deliveries. This category does include persons who use portions of the site for recreational, occupational, or other purposes not associated with the plant.
- AN. Site Boundary - Means a line within which the land is owned, leased, or otherwise controlled by the licensee. The site boundary for liquid releases of radioactive material is defined in Figure 3.8.1. The site boundary for gaseous releases of radioactive material is defined in Figure 3.8.2.
- AO. Unrestricted Areas - Means any area at or beyond the site boundary to which access is not controlled by the licensee for purposes of protection of individuals from exposure to radiation and radioactive materials or any area within the site boundary used for residential quarters or industrial, commercial, institutional and/or recreational purposes.
- AP. Reportable Event - A Reportable Event shall be any plant occurrence or event which must be reported, per 10 CFR 50.73, requiring written reports to the Commission.

3.0 LIMITING CONDITIONS FOR OPERATION

2. Dose

- a. The dose or dose commitment to an individual from radioactive materials in liquid effluents released from the site (Figure 3.8.1) shall be limited:
 1. During any calendar quarter to ≤ 1.5 mrem to the total body and to ≤ 5 mrem to any organ, and
 2. During any calendar year to ≤ 3 mrem to the total body and to ≤ 10 mrem to any organ.
- b. With the calculated dose from the release of radioactive materials in liquid effluents exceeding any of the above limits, within 30 days submit to the Commission a special report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions taken to reduce the releases and the proposed corrective actions to be taken to assure the subsequent releases will be within the above limits. This special report shall also include (1) the results of radiological analyses of the drinking water source, and (2) the radiological impact on finished drinking water supplies with regard to the requirements of 40CFR141, Safe Drinking Water Act.

3.8/4.8

4.0 SURVEILLANCE REQUIREMENTS

2. Dose

- a. Cumulative dose contributions for the current calendar quarter and year from liquid effluents shall be determined in accordance with the ODCM monthly.

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3.0 LIMITING CONDITIONS FOR OPERATION

3. Liquid Radwaste System

- a. The liquid radwaste treatment system shall be used to reduce the radioactive materials in liquid wastes prior to their discharge when the projected doses due to the liquid effluent from the site (Figure 3.8.1) when averaged over one month would exceed 0.06 mrem to the total body or 0.2 mrem to any organ.
- b. With radioactive liquid waste being discharged without treatment in excess of the limit in (a) above, within 30 days submit to the Commission a special report which includes the following information:
 1. Identification of the inoperable equipment or subsystems and the reason for inoperability,
 2. Action(s) to be taken to restore equipment to operable status, and
 3. Summary description of action(s) taken to prevent a recurrence.

4.0 SURVEILLANCE REQUIREMENTS

3. Liquid Radwaste System

- a. Doses due to liquid releases shall be projected at least once each month in accordance with the ODCM.

3.8/4.8

195

3.0 LIMITING CONDITIONS FOR OPERATION

2. Dose from Noble Gases

a. The air dose due to noble gases released in gaseous effluents from the site (Figure 3.8.2) shall be limited to the following values:

1. During any calendar quarter, to ≤ 5 mrad for gamma radiation and ≤ 10 mrad for beta radiation, and
2. During any calendar year, to ≤ 10 mrad for gamma radiation and ≤ 20 mrad for beta radiation.

b. With the calculated air dose from radioactive noble gases in gaseous effluent exceeding any of the above limits, within 30 days submit to the Commission a special report which identifies the cause(s) for exceeding the limits(s) and defines the corrective actions taken to reduce the releases and the proposed corrective actions to be taken to assure the subsequent releases will be within the above limits.

4.0 SURVEILLANCE REQUIREMENTS

2. Dose from Nobel Gases

a. Cumulative dose contributions for the current calendar quarter and year from noble gases in gaseous effluents shall be determined in accordance with the ODCM monthly.

3.0 LIMITING CONDITIONS FOR OPERATION

3. Dose from I-131, tritium, and radioactive particulates with half-lives greater than eight days.

a. The dose to any organ of an individual due to I-131, tritium, and radioactive particulates with half-lives greater than eight days released from the site (Figure 3.8.2) in gaseous effluent shall be limited to the following:

1. During any calendar quarter to ≤ 7.5 mrem, and
2. During any calendar year to ≤ 15 mrem.

b. With the calculated dose from the release of I-131, tritium, and radioactive particulates with half-lives greater than eight days exceeding any of the above limits, within 30 days submit to the Commission a special report which identifies the cause(s) for exceeding the limit(s) and defines the corrective actions taken to reduce the releases and the proposed corrective actions to be taken to assure the subsequent releases will be within the above limits.

4.0 SURVEILLANCE REQUIREMENTS

3. Dose from I-131, tritium, and radioactive particulates with half-lives greater than eight days.

a. Cumulative dose contributions for the current calendar quarter and year from I-131, tritium, and radioactive particulates with half-lives greater than eight days in gaseous effluents shall be determined in accordance with the ODCM monthly.

3.0 LIMITING CONDITIONS FOR OPERATION

4. Offgas Treatment System

- a. The offgas treatment system shall be in operation whenever the main condenser air ejector system is in operation. Components of the system shall be operated to provide the maximum holdup time obtainable except during periods of equipment maintenance.
- b. With gaseous waste being discharged for more than 7 days with a holdup time of less than 50 hours, within 30 days submit to the Commission a special report which includes the following information:
 1. Identification of equipment or sub-systems not functional and the reason.
 2. Action(s) taken to restore equipment to functional status.
 3. Summary description of action(s) taken to prevent a recurrence.

4.0 SURVEILLANCE REQUIREMENTS

4. Offgas Treatment System

- a. Following each isotopic analysis of a sample of gases from the steam jet air ejector required by 4.8.B.5.c, verify that the maximum storage tank activity limit specified in 3.8.B.4.e cannot be exceeded using the method in the ODCM.

3.8/4.8

198b

3.0 LIMITING CONDITIONS FOR OPERATION

D. Dose from All Uranium Fuel Cycle Sources

1. The dose or dose commitment to any member of the general public from all uranium fuel cycle sources is limited to ≤ 25 mrem to the total body or any organ (except for the thyroid, which is limited to ≤ 75 mrem) over a period of 12 consecutive months.
2. With the calculated dose from the release of radioactive materials in liquid or gaseous effluents exceeding twice the limits of Specifications 3.8.A.2.a.1, 3.8.A.2.a.2, 3.8.B.2.a.1, 3.8.B.2.a.2, 3.8.B.3.a.1, or 3.8.B.3.a.2, prepare and submit within 30 days a special report to the Commission which defines corrective actions and calculates the highest radiation exposure to any member of the general public from all uranium fuel cycle sources (including all effluent pathways and direct radiation). Unless this report shows that exposures are less than the 40 CFR Part 190 standard, either apply to the Commission for a variance to continue releases which exceed the 40 CFR Part 190 standard or reduce subsequent releases to permit the standard to be met.

4.0 SURVEILLANCE REQUIREMENTS

D. Dose from All Uranium Fuel Cycle Sources

1. Cumulative dose contributions from all liquid and gaseous effluents shall be determined in accordance with Specifications 4.8.A.2.a, 4.8.B.2.a, and 4.8.B.3.a and in accordance with the ODCM.

3.0 LIMITING CONDITIONS FOR OPERATION

4.0 SURVEILLANCE REQUIREMENTS

3.13 FIRE DETECTION AND PROTECTION SYSTEMS

Applicability:

Applies to 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 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 at least once per hour. 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.

4.13 FIRE DETECTION AND PROTECTION SYSTEMS

Applicability:

applies to the periodic testing of 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 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

2. With one of the pumps required by Specification 3.13.B.1.a inoperable, perform the Surveillance required by Specification 4.13.B.2 and 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-D270-65, is within the acceptable limits specified in Table 1 of ASTM.D975-74 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

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. Administration Building
2. If Specification 3.13.D.1 cannot be met, within one hour have sufficient additional lengths of 2- $\frac{1}{2}$ 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.

4.0 SURVEILLANCE REQUIREMENTS

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

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
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.

4.0 SURVEILLANCE REQUIREMENTS

E. Sprinkler Systems

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 protecting safe shutdown equipment shall 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. 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.

3.13/4.13

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 obstruction of any Halon system nozzle.

G. Penetration Fire Barriers

1. A visual inspection of penetration fire barriers in the 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.

227b

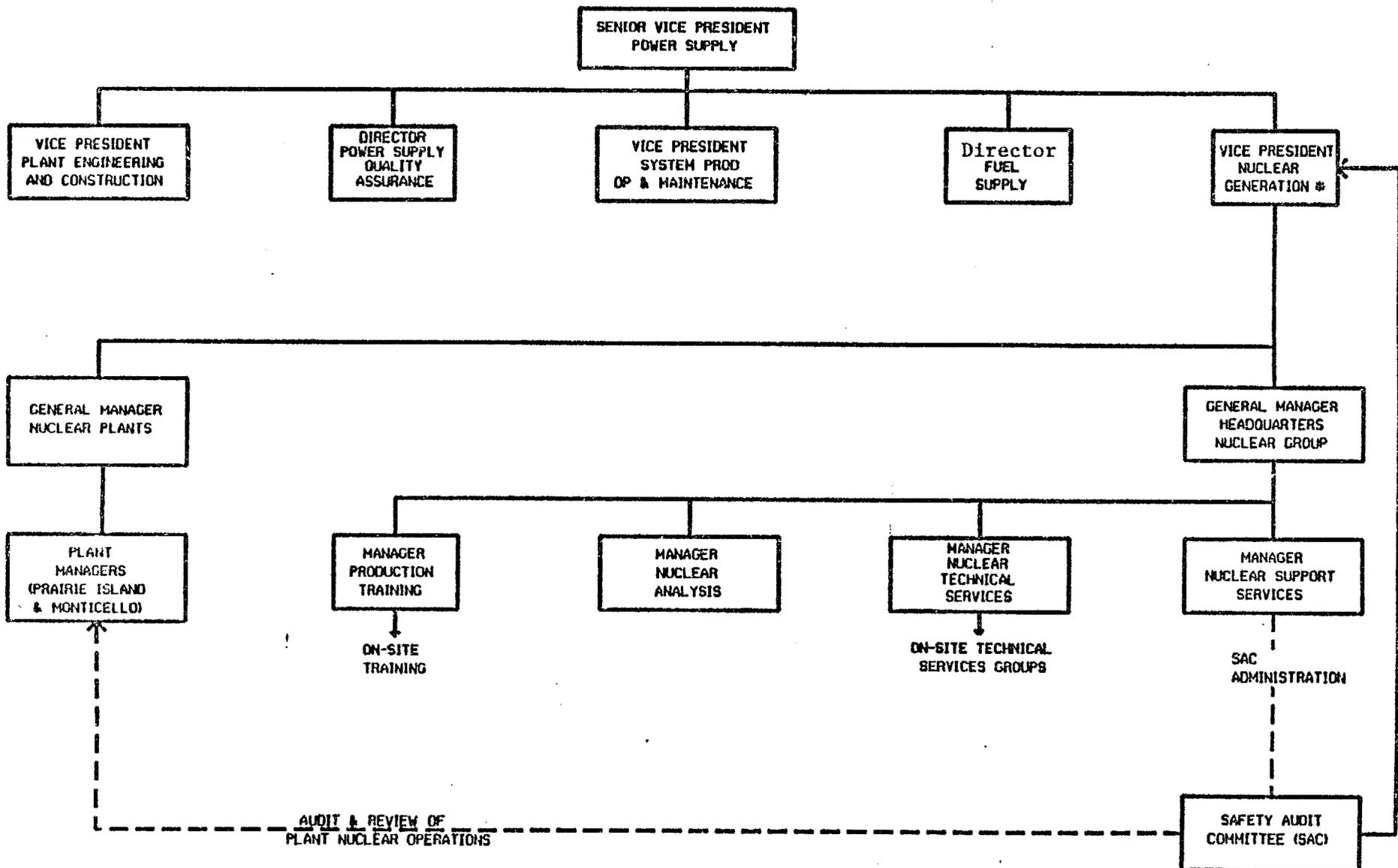
3.0 LIMITING CONDITIONS FOR OPERATION

4.0 SURVEILLANCE REQUIREMENTS

3. Deviations are permitted from the required sampling schedule if samples are unobtainable due to hazardous conditions, seasonable unavailability, or to malfunction of automatic sampling equipment. If the latter occurs, every effort shall be made to complete corrective action prior to the end of the next sampling period.
4. With the level of radioactivity in an environmental sampling medium exceeding the reporting levels of Table 4.16.3 when averaged over any calendar quarter, submit a special report to the Commission within 30 days from the end of the affected calendar quarter pursuant to Specification 6.7.C.3. When more than one of the radionuclides in Table 4.16.3 are detected in the sampling medium, this report shall be submitted if:

$$\frac{\text{concentration (1)}}{\text{limit level (1)}} + \frac{\text{concentration (2)}}{\text{limit level (2)}} + \dots > 1.0$$

When radionuclides other than those in Table 4.16.3 are detected and are the result of plant effluents, this report shall be submitted if the potential annual dose to an individual is equal to or greater than the calendar year limits of Specifications 3.8.A.2, 3.8.B.2, or 3.8.B.3. This report is not required if the measured level of radioactivity was not the result of plant effluents; however, in such an event, the condition shall be reported and described in the Annual Radiation Environmental Monitoring Report.



* HAS THE RESPONSIBILITY FOR THE FIRE PROTECTION PROGRAM

NSP CORPORATION ORGANIZATION
RELATIONSHIP TO ON-SITE
OPERATING ORGANIZATIONS

Amendment No. 2, 16, 46

6.1
CAD ORTS611

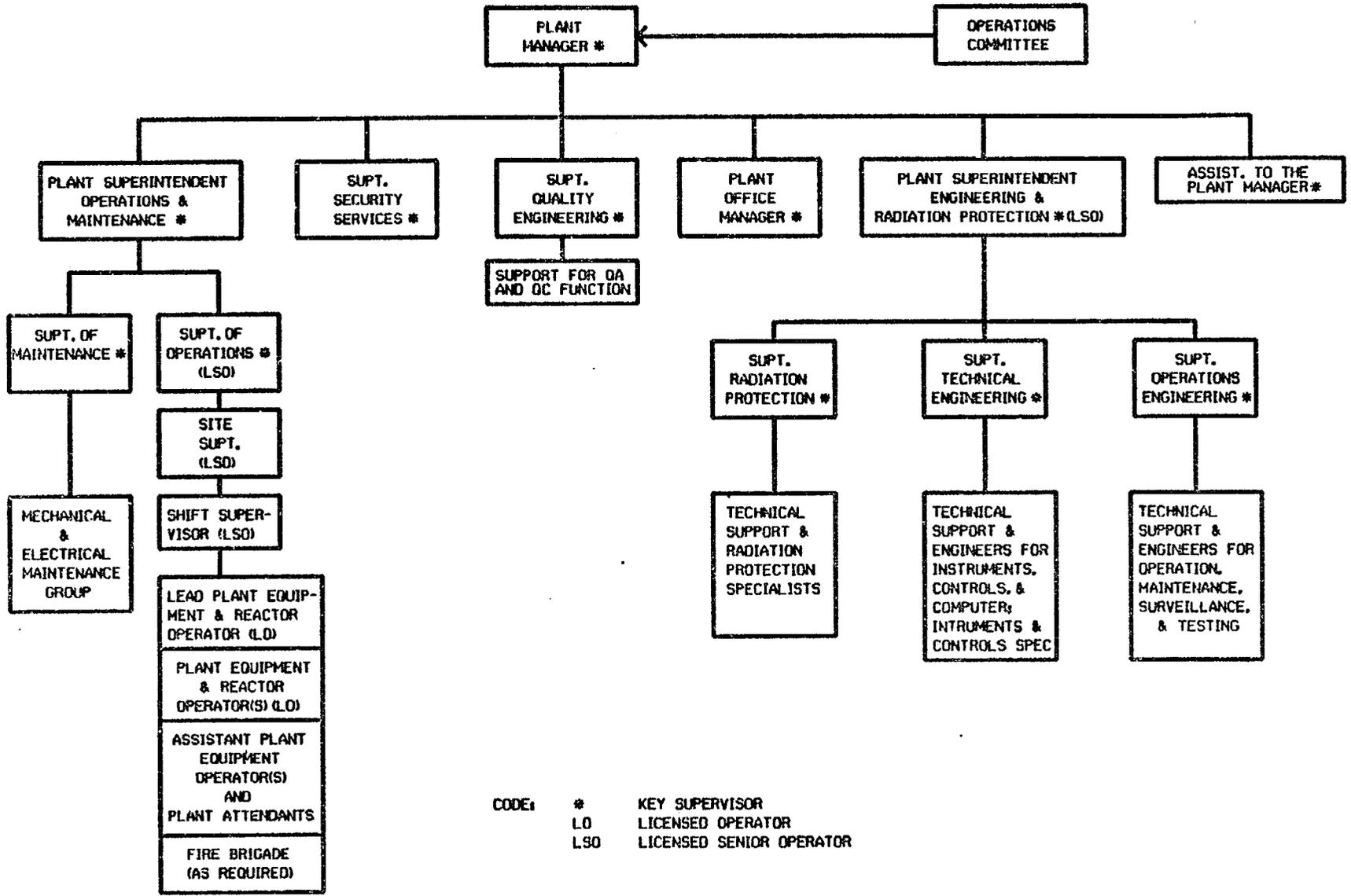


FIGURE TS.6.1-2 MONTICELLO NUCLEAR GENERATING PLANT FUNCTIONAL ORGANIZATION FOR ON-SITE OPERATING GROUP

CODE: * KEY SUPERVISOR
 LO LICENSED OPERATOR
 LSO LICENSED SENIOR OPERATOR

Amendment No. 3, 1B, 4B

TABLE 6.1.1

MINIMUM SHIFT CREW COMPOSITION (Note 1)

CATEGORY	APPLICABLE PLANT CONDITIONS	
	SHUTDOWN OR REFUELING MODE AND <212°F	STARTUP OR RUN MODE (Note 4) OR ≥212°F
No. Licensed Senior Operators (LSO)	1 (Note 2)	2 (Note 3)
Total No. Licensed Operators (LSO& LO)	2	4
Total No. Licensed and Unlicensed Operators	3	6
Shift Technical Advisor	0	1

Notes:

- Shift crew composition may be one less than the minimum requirements for a period of time not to exceed two hours in order to accommodate an unexpected absence of one duty shift crew member provided immediate action is taken to restore the shift crew composition to within the minimum requirements specified.
- Does not include the licensed Senior Reactor Operator, or Senior Reactor Operator Limited to Fuel Handling, supervising alterations of the reactor core.
- One LSO shall be in the control room or the shift supervisor's office at all times when the reactor is in the Startup or Run Mode or reactor coolant temperature is greater than or equal to 212°F. At least 50% of the time, an LSO shall actually be in the control room proper when the reactor is in the Startup or Run Mode or reactor coolant temperature is greater than or equal to 212°F.
- Except for momentary switching to Startup Mode for testing.

6.2 Review and Audit

Organizational units for the review and audit of facility operations shall be constituted and have the responsibilities and authorities outlined below:

A. Safety Audit Committee (SAC)

The Safety Audit Committee provides the independent review of plant operations from a nuclear safety standpoint. Audits of plant operation are conducted under the cognizance of the SAC.

1. Membership

- a. The SAC shall consist of at least five (5) persons.
- b. The SAC Chairman shall be an NSP representative, not having line responsibility for operation of the plant, appointed by the Vice President, Nuclear Generation. Other members shall be appointed by the Vice President, Nuclear Generation or by such other person as he may designate. The Chairman shall appoint a Vice Chairman from the SAC membership to act in his absence.
- c. No more than two members of the SAC shall be from groups holding line responsibility for operation of the plant.
- d. A SAC member may appoint an alternate to serve in his absence, with concurrence of the Chairman. No more than one alternate shall serve on the SAC at any one time. The alternate member shall have voting rights.

2. Qualifications

- a. The SAC members should collectively have the capability required to review activities in the following areas: nuclear power plant operations, nuclear engineering, chemistry and radiochemistry, metallurgy, instrumentation and control, radiological safety, mechanical and electrical engineering, quality assurance practices, and other appropriate fields associated with the unique characteristics of the nuclear power plant.

- f. Investigation of all Reportable Events and Events requiring Special Reports to the Commission.
 - g. Revisions to the Facility Emergency Plan, the Facility Security Plan, and the Fire Protection Program.
 - h. Operations Committee minutes to determine if matters considered by that Committee involve unreviewed or unresolved safety questions.
 - i. Other nuclear safety matters referred to the SAC by the Operations Committee, plant management or company management.
 - j. All recognized indications of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components.
 - k. Reports of special inspections and audits conducted in accordance with specification 6.3.
 - l. Changes to the Offsite Dose Calculation Manual (ODCM).
 - m. Review of investigative reports of unplanned releases of radioactive material to the environs.
6. Audit - The operation of the nuclear power plant shall be audited formally under the cognizance of the SAC to assure safe facility operation.
- a. Audits of selected aspects of plant operation, as delineated in Paragraph 4.4 of ANSI N18.7-1972, shall be performed with a frequency commensurate with their nuclear safety significance and in a manner to assure that an audit of all nuclear safety-related activities is completed within a period of two years. The audits shall be performed in accordance with appropriate written instructions and procedures.
 - b. Audits of aspects of plant radioactive effluent treatment and radiological environmental monitoring shall be performed as follows:
 - 1. Implementation of the Offsite Dose Calculation Manual and quality controls for effluent monitoring at least once every two years.
 - 2. Implementation of the Process Control Program for solidification of radioactive waste at least once every two years.
 - 3. The Radiological Environmental Monitoring Program and the results thereof, including quality controls, least once every year.
 - c. Periodic review of the audit program should be performed by the SAC at least twice a year to assure its adequacy.
 - d. Written reports of the audits shall be reviewed by the Vice President Nuclear Generation, by the SAC at a scheduled meeting, and by members of Management having responsibility in the areas audited.

7. Authority

The SAC shall be advisory to the Vice President, Nuclear Generation.

8. Records

Minutes shall be prepared and retained for all scheduled meetings of the Safety Audit Committee. The minutes shall be distributed within one month of the meeting to the Vice President, Nuclear Generation, the General Manager Nuclear Plants, each member of the SAC, and others designated by the Chairman or Vice Chairman. There shall be a formal approval of the minutes.

9. Procedures

A written charter for the SAC shall be prepared that contains:

- a. Subjects within the purview of the group.
- b. Responsibility and authority of the group.
- c. Mechanisms for convening meetings.
- d. Provisions of use of specialists or subgroups.
- e. Authority to obtain access to the nuclear power plant operating record files and operating personnel when assigned audit functions.
- f. Requirements for distribution of reports and minutes prepared by the group to others in the NSP Organization.

- f. Investigation of all Reportable Events and Events requiring Special Reports to the Commission.
- g. Drills on emergency procedures (including plant evacuation) and adequacy of communication with off-site support groups.
- h. All procedures required by these Technical Specifications, including implementing procedures of the Emergency Plan and the Security Plan (except as exempted in Section 6.5.F), shall be reviewed with a frequency commensurate with their safety significance but at an interval of not more than two years.
- i. Perform special reviews and investigations, as requested by the Safety Audit Committee.
- j. Review of investigative reports of unplanned releases of radioactive material to the environs.
- k. All changes to the Process Control Program (PCP) and the Offsite Dose Calculation Manual (ODCM).

5. Authority

The OC Shall be advisory to the Plant Manager. In the event of disagreement between the recommendations of the OC and the Plant Manager, the course determined by the Plant Manager to be the more conservative will be followed. A written summary of the disagreement will be sent to the Vice President, Nuclear Generation and the Chairman of the SAC for review.

6. Records

Minutes shall be recorded for all meetings of the OC and shall identify all documentary material reviewed. The minutes shall be distributed to each member of the OC, the Chairman and each member of the Safety Audit Committee, the Vice President, Nuclear Generation and others designated by OC Chairman or Vice Chairman.

7. Procedures

A written charter for the OC shall be prepared that contains:

- a. Responsibility and authority of the group.
- b. Content and method of submission of presentations to the Operations Committee.

B. Reportable Events

The following actions shall be taken for Reportable Events:

- a. The Commission shall be notified by a report submitted pursuant to the requirements of Section 50.73 to 10 CFR Part 50 and,
- b. Each Reportable Event shall be reviewed by the Operations Committee and the results of this review shall be submitted to the Safety Audit Committee and the Vice President Nuclear Generation.

C. Environmental Reports

The reports listed below shall be submitted to the Administrator of the appropriate Regional Office or designate:

1. Annual Radiation Environmental Monitoring Report

- a. Annual Radiation Environmental Monitoring Reports covering the operation of the program during the previous calendar year shall be submitted prior to May 1 of each year.
- b. The Annual Radiation Environmental Monitoring Reports shall include summaries, interpretations, and an analysis of trends of the results of the radiological environmental surveillance activities for the report period, including a comparison with preoperational studies, operational controls (as appropriate), and previous environmental surveillance reports and an assessment of the observed impacts of the plant operation on the environment. The reports shall also include the results of land use consensus required by Specification 4.16.B.1. If harmful effects or evidence of irreversible damage are detected by the monitoring, the report shall provide an analysis of the problem and a planned course of action to alleviate the problem.
- c. The Annual Radiation Environmental Monitoring Reports shall include summarized and tabulated results in the format of Regulatory Guide 4.8, December 1975 of all radiological environmental samples taken during the report period. In the event that some results are not available for inclusion with the report, the report shall be submitted noting and explaining the reasons for the missing results. The missing data shall be submitted as soon as possible in a supplementary report.
- d. The reports shall also include the following: a summary description of the radiological environmental monitoring program; a map of all sampling locations keyed to a table giving distances and directions from the reactor; and the results of licensee participation in the Interlaboratory Comparison Program, required by Specification 4.16.C.1.

2. Environmental Special Reports

When radioactivity levels in samples exceed limits specified in Table 4.16.3 an Environmental Special Report shall be submitted within 30 days from the end of the affected calendar quarter. For certain cases involving long analysis time, determination of quarterly averages may extend beyond the 30 day period. In these cases the potential for exceeding the quarterly limits will be reported within the 30 day period to be followed by the Environmental Special Report as soon as practicable.

3. Other Environmental Reports (non-radiological, non-aquatic)

Written reports for the following items shall be submitted to the appropriate NRC Regional Administrator:

- a. Environmental events that indicate or could result in a significant environmental impact causally related to plant operation. The following are examples: excessive bird impact; onsite plant or animal disease outbreaks; unusual mortality of any species protected by Endangered Species Act of 1973; increase in nuisance organisms or conditions; or excessive environmental impact caused by herbicide application to transmission corridors associated with the plant. This report shall be submitted within 30 days of the event and shall (a) describe, analyze, and evaluate the event, including extent and magnitude of the impact and plant operating characteristics, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.
- b. Proposed changes, tests or experiments which may result in a significant increase in any adverse environmental impact which was not previously reviewed or evaluated in the Final Environmental Statement or supplements thereto. This report shall include an evaluation to the environmental impact of the proposed activity and shall be submitted 30 days prior to implementing the proposed change, test or experiment.

D. Special Reports

Unless otherwise indicated, special reports required by the Technical Specification shall be submitted to the appropriate NRC Regional Administrator within the time period specified for each report.

6.8 ENVIRONMENTAL QUALIFICATION

- A. By no later than June 30, 1982 all safety-related electrical equipment in the facility shall be qualified in accordance with the provisions of Division of Operating Reactors "Guidelines for Evaluating Environmental Qualification of Class IE Electrical Equipment in Operating Reactors" (DOR Guidelines); or, NUREG-0588 "Interim Staff Position on Environmental Qualification of Safety-Related Electrical Equipment", December 1979. Copies of these documents are attached to Order for Modification of License DPR-22 dated October 24, 1980.
- B. By no later than December 1, 1980, complete and auditable records must be available and maintained at a central location which describe the environmental qualification method used for all safety-related electrical equipment in sufficient detail to document the degree of compliance with the DOR Guidelines or NUREG-0588. Thereafter, such records should be updated and maintained current as equipment is replaced, further tested, or otherwise further qualified.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
SUPPORTING AMENDMENT NO. 46 TO FACILITY OPERATING LICENSE NO. DPR-22
NORTHERN STATES POWER COMPANY
MONTICELLO NUCLEAR GENERATING PLANT
DOCKET NO. 50-263

1.0 INTRODUCTION

The Nuclear Regulatory Commission, on August 19, 1983, in Federal Register, Volume 48, No. 168, amended its regulations, 10 CFR 50.72 and 50.73, to revise immediate reporting requirements and to establish a new reporting system for significant events at nuclear power plants. On December 19, 1983, the Division of Licensing issued Generic Letter No. 83-43, Reporting Requirements of 10 CFR 50, Sections 50.72 and 50.73, and Standard Technical Specifications (STS), informing all licensees of the revision to Section 50.72, Immediate Notification Requirements, and the addition of a new Section 50.73, Licensee Event Report System. The licensees were requested to update their Technical Specifications (TS) to include the new requirements and model STS were provided showing the revisions that should be made in the "Administrative Control" and "Definition" sections. The letter also requested the licensees to review and update other areas of the TS concerning reportability, as required.

On September 14, 1984, Northern States Power Company (the licensee) submitted a proposed amendment to the Technical Specifications (TS) of Facility License No. DPR-22 for the Monticello Nuclear Generating Plant. The proposed amendment incorporates the recommendations of Generic Letter 83-43, by changing or deleting reporting requirements and terminology to agree with the generic letter.

The application also includes changes to Table 6.1.1, Minimum Shift Crew Composition, to bring the TS into agreement with the exemption to 10 CFR 50.54(m)(2)(iii), which allowed modifications to the shift supervisor's office to be considered part of the control room, granted by the staff on November 14, 1984. This part of the application was later revised by a submittal dated January 10, 1986.

Other changes proposed in the September 14, 1984, submittal included position title changes and the addition of a new organization position.

2.0 EVALUATION

The proposed changes to the TS submitted by the licensee in response to Generic Letter 83-43 were similar to the model STS provided in the

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letter. In addition, the licensee had reviewed TS sections other than the Administrative and Definition Sections to update other reporting requirements and references to bring them into agreement with the new regulations.

The immediate reporting requirements of 10 CFR 50.72 are not cited in the TS since these regulations stand by themselves and inclusion in TS would be redundant. The new Licensee Event Report System of 10 CFR 50.73 has been included by providing the definition of the new term "Reportable Event," referring to the new reporting regulations in Section 6.7.B; and by deleting Section 6.7.B, Reportable Occurrences, including Subsections 6.7.B.1, Prompt Notification with Written Followup and 6.7.B.2, Thirty-day Written Reports and all references to these deleted sections. The Special Report in the Environmental Reports Section was changed to Environmental Special Reports and a new section, 6.7.D concerning nonenvironmental Special Reports, was added.

The above changes, including page number changes required by the deletions, were made by modifying the following TS pages: iv, 5a, 194, 195, 198, 198a, 198b, 198f, 223, 225, 227, 227a, 227b, 229h, 239, 242, 250, 251, and 252; and deleting pages 253, 253a, and 254. The staff has reviewed these changes and finds that they conform to the Model TS provided with Generic Letter 83-43 and are therefore acceptable.

In the above submittal, the licensee also included three organization changes. The titles of Director of Nuclear Generation has been changed to Vice-President, Nuclear Generation, and the General Superintendent, Nuclear Analysis to Manager, Nuclear Analysis. A new position, Assistant Plant Manager, has been added to the organization. These changes required modification to the organization chart, Figure 6.1.1, page 234 and title changes on pages 235, 237, 240, and 242.

The staff has reviewed these changes and additions and finds them acceptable.

On September 29, 1983, the licensee requested an extension for the implementation of the new regulation, 10 CFR 50.54(m)(2), the requirement for a Senior Operator (SO) to be in the control room during operations. As a part of the request, the licensee described plans for modifying the shift supervisor's office such that it would be considered as part of the control room. The staff granted the time extension on December 30, 1983.

On March 23, 1984, the licensee further described its plans for modifying the shift supervisor's office and stated that it was served by the Emergency Filtration Treatment System in the event of a radioactive release and could also be isolated upon sensing a toxic gas. The proposed modifications included the installation of critical instrumentation and annunciators, communications with the control room, videos of the control room panels, and the security of the office doors. The licensee also committed to having an SO in the control room or shift office at all times in startup and run modes or at 212°F or greater and further, the SO would physically be in the control room more than 50% of the time.

On November 14, 1984, the staff granted the exception providing that a key to the security door between the shift supervisor's office and the control room be immediately available in case the security card reader failed to unlock the door and that after one year of experience a report should be submitted providing data regarding operations under the provisions of the exemption. Another condition of the exemption required the licensee's administrative procedures to include requirements that:

- a. The SO spends at least some minimum time each hour in the control panel area so as to maintain a continuing awareness of plant status.
- b. The SO must be present in the control panel area during initial startup and approach to power, recovery from an unplanned or unscheduled shutdown, or significant reduction in power, and immediately following notification of an unplanned plant transient.
- c. The SO must be present in the control panel area at all times during a declared plant emergency.

On January 28, 1985, the licensee submitted the requested report with all of the required data as follows:

- a. The response time of the SO from the office area to the panel area was approximately 10 seconds.
- b. SO assistance in the panel area was requested by a control operator 478 times during the 1-year period.
- c. The SO proceeded to the panel area on his own initiative in response to alarms received in the shift supervisor's office 429 times during the 1-year period.
- d. The data provided the location of both the SO and Shift Supervisor at the onset of the 12 emergency or significant off-normal events that occurred during the 12-month period. It indicated that the SO was in the control room for ten of the events, in the shift supervisor's office for one, and in the plant for one event. The Shift Supervisor was in the control room for two events and for the other ten events he was in his office.
- e. The percentage of time actually spent in the panel area by an SO is approximately 81%. This figure did not take into account the time spent in the control room by the Superintendent of Operations or other licensed staff personnel or Plant Equipment and Reactor Operators who have an SO license. It did take into account time spent in the panel area by Lead Plant Equipment and Reactor Operators who have a senior operator's license.

Note that the total number of times an SO was requested in the control room or proceeded to the control room in response to alarms was 907 during the period. This is less than once per shift (1095 eight-hour shifts during the period).

In its submittal of September 14, 1984, the licensee also requested a change to TS Table 6.1.1., Minimum Shift Crew Composition, to bring the TS into agreement with the provisions of the granted exemption to 10 CFR 50.54(m)(2). The proposed changes added a note to the table which requires an SO to be in the control room or the shift supervisor's office when the reactor is in the startup or run mode or greater than or equal to 212°F and for the SO to be in the control room proper 50% of the time. A revision to this submittal dated January 10, 1986, changed Table 6.1.1 to agree with the regulations and the Standard Review Plan (SRP), NUREG-0800 to provide a minimum total number of four licensed operators and the note was also clarified to indicate the 212°F temperature applied to the reactor coolant.

In a telephone conversation on April 25, 1986, the staff pointed out that proposed Table 6.1.1 did not agree with the SRP in the total number of operators both licensed and unlicensed. By letter dated May 7, 1986, the licensee corrected the total number of operators from five to six and also clarified the table for applicable plant conditions.

The staff has reviewed the 12 months of data provided by the special report and finds that the intent of 10 CFR 50.54(m)(2)(iii) is being implemented. If the SO is in the shift supervisor's office, he is cognizant of critical plant safety parameters and can respond within seconds by intercom and be in the control room in 10 seconds if needed. In the event that the SO is in the control room or the shift supervisor's office with the Shift Supervisor, who is also an SO, the instrumentation and communications improvements gives immediate cognizance to both licensed SOs. This is evident in the supplied data, as at the onset of the events that have occurred, both SOs were instantly aware in 11 out of 12 of the events.

The resident inspector has reviewed the requirements for administrative procedures as requested in the exemption and found that temporary instructions were issued at the time of the exemption and these have since been incorporated into administrative procedures.

Our review of the 12-month history of operations under the exemption leads us to believe the benefits of the instrumentation and communication improvements in the shift supervisor's office exceed any deleterious effects of not having the SO physically in the control room at all times and that the SO's response time from the office is adequate.

We therefore find that, since the required administrative procedures are in place and performance during the 12-month period has shown no weaknesses, the exemption is sound and the above proposed TS adequately reflect these changes and are acceptable.

The staff has further reviewed the minimum staffing proposed in Table 6.1.1 and finds that it meets the minimum staffing requirements of Table 1 of Section 13.1.2 of the SRP. Therefore, the staff finds these changes to be acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

This amendment relates to changes in recordkeeping, reporting, or administrative procedures or requirements. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b) no environmental impact statement nor environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor: K. R. Ridgway

Dated: July 1, 1986