January 23, 1984

Docket No. 50-263

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

Dear Mr. Musolf:

The Commission has issued the enclosed Amendment No. 21 to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The amendment consists of changes to the Technical Specifications in response to your May 15, 1980 application.

The changes to the Technical Specifications (TS) incorporate a detailed definition of the term "operable" as requested in our April 10, 1980 letter to all power reactor licensees.

A copy of the Safety Evaluation is enclosed.

Sincerely,

Original signed by/

Helen Nicolaras, Project Manager
Operating Reactors Branch #2
Division of Licensing

Enclosures:
1. Amendment No. 21 to License No. DPR-22
2. Safety Evaluation

cc w/enclosures:
See next page

ORB#2:DL	ORB#2:DL	ORB#2:DL	OELD	AD:OR:DL	DL:ORB#4
SNorris:dk	HNicolaras	DVassallo		GLainas	SMiner
12/14/83	12/16/83	12/21/83	12/16/83	12/19/83	01/23/84

Mr. D. M. Musolf
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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. 21
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 May 15, 1980, 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:

   2 Technical Specifications

   The Technical Specifications contained in Appendix A as revised through Amendment No. 21 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

Domenic B. Vassallo, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 23, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 21

FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove	Insert
2	2
3	3

D. Immediate - Immediate means that the requ. action will be initiated as soon as practicabl 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 the proper instrument channel response, alarm, and/or initiating action.

F. Instrument Calibration - An instrument calibration means the adjustment of an instrument signal output so that it corresponds, within acceptable range, accuracy, and response time to a known value (s) of the parameter which the instrument monitors. Calibration shall encompass the entire instrument including actuation, alarm or trip. Response time is not part of the routine instrument calibration but will be checked once per cycle.

G. Limiting Conditions for Operation (LCO) - The limiting conditions for operation specify the minimum acceptable levels of system performance necessary to assure safe startup and operation of the facility. When these conditions are met, the plant can be operated safely and abnormal situations can be safety controlled.

H. Limiting Safety System Setting (LSSS) - The limiting safety system settings are settings on instrumentation which initiate the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represents margin with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation, the safety limits will never be exceeded.

I. Maximum Fraction of Limiting Power Density (MFLPD) - The maximum fraction of limiting power density is the highest value in the core of the ratio of the existing to the design linear heat generation rate.

J. Minimum Critical Power Ratio (MCPR) - The minimum critical power ratio is the value of critical power ratio associated with the most limiting assembly in the reactor core. Critical power ratio (CPR) is the ratio of that power in a fuel assembly which is calculated by the GEXL correlation to cause some point in the assembly to experience boiling transition to the actual assembly operating power.

K. Mode - The reactor mode is that which is established by the mode-selector switch.

L. Operable - A system, subsystem, train, component or device shall be Operable or have Operability when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).

When a system, subsystem, train, component or device is determined to be inoperable soley because its emergency power source is inoperable, or soley because its normal power source is inoperable, it may be considered operable for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation provided: (1) its corresponding normal or emergency power source is operable; and (2) all of its redundant system(s), subsystem(s), trains(s), component(s) and device(s) are Operable, or likewise satisfy the requirements of this paragraph.

M. Operating - Operating means that a system or component is performing its specified functions.

N. Operating Cycle - Interval between the end of one refueling outage and the end of the next subsequent refueling outage.

O. Power Operation - Power Operation is any operation with the mode switch in the "Start-Up" or "Run" position with the reactor critical and above 1% rated thermal power.

P. Primary Containment Integrity - Primary Containment Integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied.

1. All manual containment isolation valves on lines connecting to the reactor coolant system or containment which are not required to be open during accident conditions are closed.

2. At least one door in the airlock is closed and sealed.

3. All automatic containment isolation valves are operable or are deactivated in the closed position or at least one valve in each line having an inoperable valve is closed

4. All blind flanges and manways are closed.

Q Protective Instrumentation Logic Definitions

1. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system, a single trip signal related to the plant parameter monitored by that instrument channel.

2. Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate a protection action. A trip system may require one or more instrument channel trip signals related to one or more plant parameters to initiate trip system action. Initiation of the protective function may require tripping of a single trip system (e.g., HPCI system isolation, off-gas system isolation, reactor building isolation and standby gas treatment initiation, and rod block), or the coincident tripping of two trip systems (e.g., initiation of scram, reactor isolation, and primary containment isolation).

3. Protective Action - An action initiated by the protection system when a limit is exceeded. A protective action can be at channel or system level.

Amendment No. 21

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 21 TO FACILITY OPERATING

LICENSE NO. DPR-22

NORTHERN STATES POWER COMPANY

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

1.0 Introduction

By letter dated May 15, 1980, Northern States Power Company (the licensee) proposed changes to the Technical Specifications (TS) of Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The changes to the Technical Specifications incorporate a detailed definition of the term "operable" as requested in our April 10, 1980 letter to all power reactor licensees. This letter clarifies the term "operable" and requests licensees to take specific actions to assure that it is appropriately applied at their facilities.

2.0 Evaluation

The NRC's Standard Technical Specifications (STS) were formulated to preserve the single failure criterion for systems that are relied upon in the safety analysis report. By and large, the single failure criterion is preserved by specifying Limiting Conditions for Operation (LCOs) that require all redundant components of safety related systems to be OPERABLE. When the required redundancy is not maintained, either due to equipment failure or maintenance outage, action is required, within a specified time, to change the operating mode of the plant to place it in a safe condition. The specified time to take action, usually called the equipment out-of-service time, is a temporary relaxation of the single failure criterion, which, consistent with overall system reliability considerations, provides a limited time to fix equipment or otherwise make it OPERABLE. If equipment can be returned to OPERABLE status within the specified time, plant shutdown is not required.

LCOs are specified for each safety related system in the plant, and with few exceptions, the ACTION statements address single outages of components, trains or subsystems.

The licensee responded to the generic letter stating that the existing TS adequately implement the NRC criteria and only proposed a revised definition of the term "operable."

The proposed TS changes did not incorporate the general Action statement of the Standard Technical Specifications for Boiling Water Reactors (NUREG-0123, Rev. 3) concerning operation under circumstances in excess of those addressed in the specification. Our consultant, EG&G, reviewed the necessity of having such a statement in the Monticello TS and finds that the current TS were formulated to preserve the single failure criterion for systems that are relied upon in the Monticello Safety Analysis Report. The existing TS contain Limiting Conditions for Operation which (1) require that all redundant components of safety-related systems and their associated power supplies be "operable" and (2) specify appropriate actions to be taken in the event that the minimum operability requirements are not satisfied. Therefore, we agree that this change is not necessary for Monticello.

EG&G also reviewed the proposed changes to the TS for redefining the term "operable" and has determined that the licensee has incorporated the definition of the term "operable" from NUREG-0123, Rev. 3. A copy of the Technical Evaluation Report is enclosed. Since the current TS were formulated to preserve the single failure criterion for systems relied upon in the Monticello Safety Analysis Report and the proposed TS changes incorporate the applicable specification of NUREG-0123, Rev. 3, we conclude that these changes are acceptable.

3.0 Environmental Considerations

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and pursuant to 10 CFR 51.5(d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of the amendment.

4.0 Conclusions

We have 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 the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: H. Nicolaras

Enclosure: EG&G Report

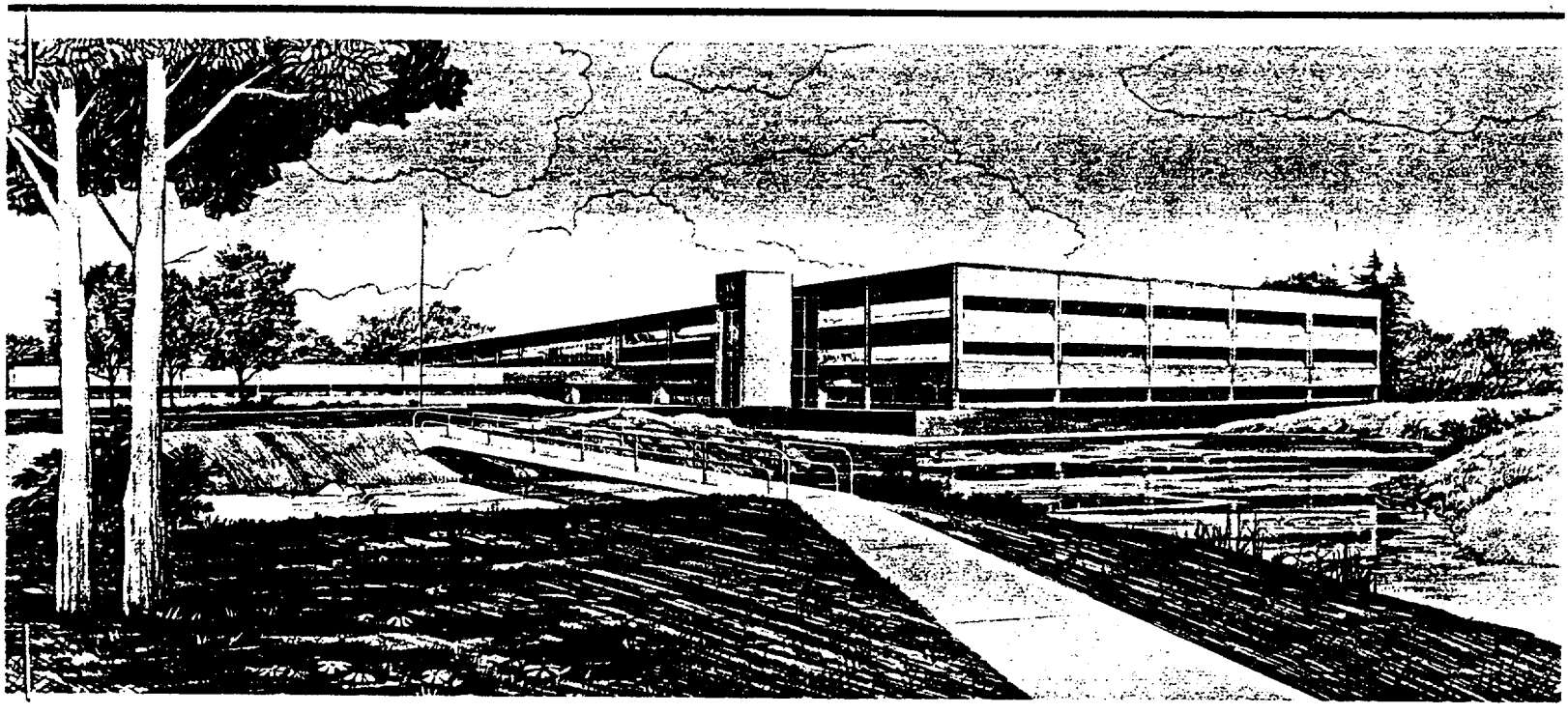
Dated: January 23, 1984

EGG-EA-6359
OCTOBER 1983

DEFINITION OF OPERABLE
MONTICELLO NUCLEAR GENERATING PLANT

F. G. Farmer
J. W. Stoffel

Idaho National Engineering Laboratory
Operated by the U.S. Department of Energy



This is an informal report intended for use as a preliminary or working document

Prepared for the
U. S. NUCLEAR REGULATORY COMMISSION
Under DOE Contract No. DE-AC07-76ID01570
FIN No. A6429

EG&G Idaho

EGG-EA-6359

DEFINITION OF OPERABLE MONTICELLO NUCLEAR GENERATING PLANT

Published October 1983

F. G. Farmer
J. W. Stoffel

EG&G Idaho, Inc.
Idaho Falls, Idaho 83415

Responsible NRC Individual and Division:
H. Nicaloras/Division of Licensing

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ABSTRACT

This report reviews the extent of compliance of proposed and existing Monticello Nuclear Generating Plant Technical Specifications with clarifications of the definition and application of the term OPERABLE which have been required by the U.S. Nuclear Regulatory Commission.

FORWARD

This report is supplied as part of the "Selected Operating Reactors Issues Program (III)" being conducted for the U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Division of Licensing, by EG&G Idaho, Inc., NRC Licensing Support Section.

The U.S. Nuclear Regulatory Commission funded the work under the authorization, B&R 20 19 10 11 1, FIN No. A6429.

NOTICE

CONTENTS

DEFINITION OF OPERABLE, MONTICELLO NUCLEAR GENERATING PLANT

1. INTRODUCTION

On April 10, 1980, the Nuclear Regulatory Commission (NRC) issued a generic letter to all Power Reactor Licensees which clarified the term OPERABLE and identified portions of the Model Technical Specifications (MTS) which are recommended to assure that safety systems remain OPERABLE within the limits of the single failure criterion (Reference 1). In that letter the NRC requested that Licensees review their Technical Specifications (TS) and submit such proposed changes as were necessary to incorporate the requirements of the MTS.

On May 14, 1980, and May 15, 1980, Northern States Power Company responded to the generic letter, proposing a revised definition of the term OPERABLE for the Monticello TS and stating that the existing TS adequately implement the NRC application criteria (References 3 and 4). EG&G Idaho, Inc., has reviewed the Monticello TS and the revised definition of OPERABLE. This report provides an evaluation of those TS and that definition for conformance to the criteria established by the NRC.

2. REVIEW CRITERIA

The review criteria for this task are contained in NRC's April 10, 1980, letter and in Reference 2 and are summarized below.

Definition of OPERABLE

A system, subsystem, train, component or device shall be OPERABLE or have OPERABILITY when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).

Limiting Condition for Operation

When a Limiting Condition for Operation is not met because of circumstances in excess of those addressed in the specification, except as provided in the associated ACTION requirements, within one hour action shall be initiated to place the unit in a MODE in which the Specification does not apply by placing it, as applicable, in:

1. At least STARTUP within the next 6 hours,

2. At least HOT SHUTDOWN within the following 6 hours, and

3. At least COLD SHUTDOWN within the subsequent 24 hours.

Where corrective measures are completed that permit operation under the ACTION requirements, the ACTION may be taken in accordance with the specified time limits as measured from the time of failure to meet the Limiting Condition for Operation. Exceptions to these requirements are stated in the individual Specifications.

When a system, subsystem, train, component or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided: (a) its corresponding normal or emergency power source is OPERABLE; and (b) all of its redundant system(s), subsystem(s), train(s), component(s) and device(s) are OPERABLE, or likewise satisfy the requirements of this specification. Unless both conditions (a) and (b) are satisfied, within two hours action shall be initiated to place the unit in at least STARTUP within 6 hours, in at least HOT SHUTDOWN within the next 6 hours, and in at least COLD SHUTDOWN within the following 24 hours. This specification is not applicable in MODES 5 or 6.

3. DISCUSSION

The proposed amendment (References 3 and 4) to the Monticello TS provides a definition of the term OPERABLE which is extracted verbatim from the MTS. This proposed definition complies with the review criteria.

The licensee has also taken the position that no revision of the Monticello TS is necessary to make the Limiting Conditions for Operation (LCOs) conform to those of the MTS. A review of the existing LCOs (Reference 5) for the Core Spray, Low Pressure Coolant Injection, Residual Heat Removal, High Pressure Coolant Injection, Automatic Pressure Relief, Reactor Core Isolation Cooling, and Emergency Diesel Generator Systems has been conducted to verify that proper redundancy is maintained and that proper action is taken if the required redundancy is not maintained. For these systems, the existing TS conform to the requirements of the MTS.

4. CONCLUSION

The licensee's proposed redefinition of the term OPERABLE and the existing Monticello TS LCOs meet the NRC requirements for providing adequate clarification of the term OPERABLE as it applies for Essential Safety Features systems to support system outages or multiple outages of redundant components.

5. REFERENCES

1. NRC letter, D. G. Eisenhut, to All Power Reactor Licensees, dated April 10, 1980.

2. NRC internal memorandum, S. Miner to S. Varga, et al., "Definition of Operability--Multi-Plant Item D-17", dated March 26, 1981.

3. Northern States Power Company letter, L. O. Mayer, to NRC, Director, NRR, dated May 14, 1980.

4. Northern States Power Company letter, L. O. Mayer, to NRC, Director, NRR, dated May 15, 1980.

5. Technical Specifications for Monticello Nuclear Generating Plant, revised through Amendment 10, dated May 20, 1982.

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U.S. NUCLEAR REGULATORY COMMISSION

BIBLIOGRAPHIC DATA SHEET

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16. ABSTRACT *(200 words or less)*

This report reviews the extent of compliance of proposed and existing Monticello Nuclear Generating Plant Technical Specifications with clarifications of the definition and application of the term OPERABLE which have been required by the U. S. Nuclear Regulatory Commission.

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17b. IDENTIFIERS/OPEN-ENDED TERMS

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