

January 30, 2008

Timothy J. O'Connor
Site Vice President
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT – ISSUANCE OF
AMENDMENT RE: OUTPUT REQUIREMENT OF THE DIVISION 2 BATTERY
CHARGER (TAC NO. MD4438)

Dear Mr. O'Connor:

The Commission has issued the enclosed Amendment No. 153 to Renewed Facility Operating License No. DPR-22 for Monticello Nuclear Generating Plant (MNGP), in response to your application dated February 15, 2007, as supplemented by letter dated November 30, 2007.

The amendment revised the Technical Specifications Surveillance Requirement (SR) 3.8.4.2, "DC [Direct Current] Sources – Operating," to specify that the Division 1 battery chargers are verified to supply ≥ 150 amps and the Division 2 battery chargers are verified to supply ≥ 110 amps.

A copy of our related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA Chawla for/

Peter S. Tam, Senior Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-263

Enclosures:

1. Amendment No. 153 to DPR-22
2. Safety Evaluation

cc w/encls: See next page

January 30, 2008

Timothy J. O'Connor
Site Vice President
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT – ISSUANCE OF
AMENDMENT RE: OUTPUT REQUIREMENT OF THE DIVISION 2 BATTERY
CHARGER (TAC NO. MD4438)

Dear Mr. O'Connor:

The Commission has issued the enclosed Amendment No. 153 to Renewed Facility Operating License No. DPR-22 for Monticello Nuclear Generating Plant (MNGP), in response to your application dated February 15, 2007, as supplemented by letter dated November 30, 2007.

The amendment revised the Technical Specifications Surveillance Requirement (SR) 3.8.4.2, "DC [Direct Current] Sources – Operating," to specify that the Division 1 battery chargers are verified to supply ≥150 amps and the Division 2 battery chargers are verified to supply ≥110 amps.

A copy of our related safety evaluation is also enclosed. The Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA Chawla for/

Peter S. Tam, Senior Project Manager
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-263

Enclosures:

1. Amendment No. 153 to DPR-22
 2. Safety Evaluation
- cc w/encls: See next page

DISTRIBUTION:

PUBLIC	LPL3-1 r/f	RidsNrrDorLpl3-1	RidsNrrPMPTam
RidsNrrLATHarris	RidsOgcRp	RidsAcrsAcnwMailCenter	RidsNrrDirsltsb
G. Hill, OIS	K. Miller, NRR	RidsRgn3MailCenter	RidsNrrDorIDpr
RidsNrrLABTully			

Package Accession No. **ML080070014**

Amendment Accession Number: **ML073512034** TS Page Accession No. **ML080280601**

OFFICE	LPL3-1/PM	LPL3-1/LA	EEEE/BC	TSB/BC	OGC/NLO	LPL3-1/(A)BC
NAME	PTam	THarris	GWilson*	JMW for TKobetz	MLoftus	PMilano JC for
DATE	1/28/08	1/29/08	12/13/07*	1/30/08	1/24/08	1/30/08

*SE transmitted by memo of 12/13/07.

OFFICIAL RECORD COPY

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

AMENDMENT TO RENEWED FACILITY OPERATING LICENSE

Amendment No.153
License No. DPR-22

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Nuclear Management Company, LLC (the licensee), dated February 15, 2007, as supplemented by letter of November 30, 2007, 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:

Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 153 are hereby incorporated in the license. NMC shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/RA J Cushing for/

Patrick D. Milano, Acting Chief
Plant Licensing Branch III-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Facility Operating License
and Technical Specifications

Date of Issuance: January 30, 2008

ATTACHMENT TO OPERATING LICENSE AMENDMENT NO. 153

RENEWED FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Replace the following page of Renewed Facility Operating License DPR-22 with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

INSERT

Page 3

Page 3

Replace the following page of Appendix A (Technical Specifications) with the attached revised page. The revised page is identified by amendment number and contains a marginal line indicating the area of change.

REMOVE

INSERT

3.8.4-2

3.8.4-2

2. Pursuant to the Act and 10 CFR Part 70, NMC to receive, possess, and use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operations, as described in the Final Safety Analysis Report, as supplemented and amended, and the licensee's filings dated August 16, 1974 (those portions dealing with handling of reactor fuel) and August 17, 1977 (those portions dealing with fuel assembly storage capacity);
 3. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NMC to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
 4. Pursuant to the Act and 10 CFR Parts 30, 40 and 70, NMC to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
 5. Pursuant to the Act and 10 CFR Parts 30 and 70, NMC to possess, but not separate, such byproduct and special nuclear material as may be produced by operation of the facility.
- C. This renewed operating license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations, and orders of the Commission, now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:
1. Maximum Power Level

NMC is authorized to operate the facility at steady state reactor core power levels not in excess of 1775 megawatts (thermal).
 2. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 153, are hereby incorporated in the license. NMC shall operate the facility in accordance with the Technical Specifications.
 3. Physical Protection

NMC shall implement and maintain in effect all provisions of the Commission-approved physical security, guard training and qualification, and safeguards contingency plans including amendments made pursuant to provisions of the Miscellaneous Amendments and Search

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
AMENDMENT NO. 153 TO RENEWED FACILITY OPERATING LICENSE NO. DPR-22
NUCLEAR MANAGEMENT COMPANY, LLC
MONTICELLO NUCLEAR GENERATING PLANT
DOCKET NO. 50-263

1.0 INTRODUCTION

By letter dated February 15, 2007 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML070460545), Nuclear Management Company, LLC (NMC) (the licensee) submitted an application for amendment regarding Monticello Nuclear Generating Plant (MNGP) Technical Specifications (TS). The proposed amendment would revise Surveillance Requirement (SR) 3.8.4.2, "DC [Direct Current] Sources – Operating," to require that the Division 1 battery chargers are verified to supply ≥ 150 amps and the Division 2 battery chargers are verified to supply ≥ 110 amps. The Division 2 battery chargers output current limiter is field adjusted to supply 120 to 125 amps in order to stay within the electrical circuit breaker ratings in the associated distribution cabinet. The purpose of the proposed change is to correct an administrative error introduced during the conversion of the MNGP custom TS to the current Improved Standard Technical Specifications (ITS) format. The proposed changes are founded on the findings of deterministic perspectives.

The application was supplemented by a letter from the licensee dated November 30, 2007 (ADAMS Accession No. ML073450331). This supplement provided additional information that clarified the application, did not expand the scope of the application as originally noticed, and did not change the NRC staff's original proposed no significant hazards consideration determination as published in the *Federal Register* on April 24, 2007 (72 FR 20384).

The Nuclear Regulatory Commission (NRC) staff's evaluation of the licensee's application is set forth in the following sections.

2.0 REGULATORY EVALUATION

Title 10 of the *Code of Federal Regulations*, Part 50, Section 36 requires that each license authorizing operation of a production or utilization facility include TSs. In particular, one type of TS is a limiting condition for operation. The regulation at 10 CFR 50.36(d)(2), requires the establishment of limiting conditions for operation by a license of a utilization or production facility; limiting conditions for operation include completion times for equipment that is required for safe operation of the facility. In addition, surveillance requirements, as set forth in 10 CFR 50.36(d)(3), are a type of TS that relates to testing, calibration or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

The requirements at Appendix A of 10 CFR 50, General Design Criterion (GDC) 17, "Electric power systems," requires, in part, that nuclear power plants have onsite and offsite electric power systems to permit the functioning of structures, systems, and components that are important to safety. The onsite system is required to have sufficient independence, redundancy, and testability to perform its safety function, assuming a single failure. The offsite power system is required to be supplied by two physically independent circuits that are designed and located so as to minimize, to the extent practical, the likelihood of their simultaneous failure under operating and postulated accident and environmental conditions. In addition, this criterion requires provisions to minimize the probability of losing electric power from the remaining electric power supplies as a result of loss of power from the unit, the offsite transmission network, or the onsite power supplies.

GDC 18, "Inspection and testing of electric power systems," requires that electric power systems that are important to safety must be designed to permit appropriate periodic inspection and testing.

The regulation in 10 CFR 50.63, "Loss of all alternating current power," requires that each light-water cooled nuclear power plant licensed to operate must be able to withstand for a specified duration and recover from a station blackout (SBO).

3.0 TECHNICAL EVALUATION

The MNGP 250-volt (V) DC electrical power system consists of two independent safety-related Class 1E DC electrical power divisions. Each division consists of one dedicated 120-cell 250-V DC battery, two dedicated battery chargers and a swing charger (that can functionally replace either of the dedicated chargers), and all the associated switchgear, control equipment, and interconnecting cabling. The chargers are sized such that together they can re-charge a battery while supplying the normal continuous DC loads (in accordance with IEEE Standard 946-1985, "IEEE Recommended Practice for the Design of Safety-Related DC Auxiliary Power Systems for Nuclear Power Generating Stations"). For Division 1, with each charger providing ≥ 150 amps, the sizing requirements are met. For Division 2, the DC load profile is less severe such that with each charger providing ≥ 110 Amps, the sizing requirements are met. Also, the Division 2 chargers' current limiters are set to limit each charger's output to between 120 and 125 Amps to ensure that the current is within the ratings of the circuit breakers in the associated Division 2 distribution cabinet (Division 1 circuit breakers have a higher current limit, therefore, charger current limiting is not necessary). The current limit setting on the Division 2 chargers is a permanent adjustment. The setting is periodically verified in accordance with preventative maintenance procedures.

During normal operation, the 250-V DC load is powered from the battery chargers with the batteries floating on the system. In case of loss of normal power to the battery chargers, the DC load is automatically powered from the station batteries. Each MNGP battery is designed to have adequate storage capacity to carry the required load continuously for at least 4 hours with adequate voltage to mitigate an SBO event. The DC load profile during an SBO event is the most limiting case of all the design-basis events.

Both 250-V DC divisions are required to be operable to ensure the availability of the required power to shut down the reactor and maintain it in a safe condition after an anticipated operational occurrence or a postulated design-basis event. Loss of any one 250-V DC electrical power division does not prevent the minimum safety function from being performed.

An operable 250-V DC electrical power division requires the battery and its normal chargers, or with its backup charger in place of a normal charger, to be operating and connected to the associated 250-V DC bus.

3.1 Evaluation of Proposed Change to SR 3.8.4.2

In its application, the licensee proposed to revise TS SR 3.8.4.2. Currently this SR specifies that the chargers (i.e., both Division 1 and 2) are verified to supply "≥150 amps for 250 VDC subsystems." The proposed changes would revise SR 3.8.4.2 to specify that the Division 1 battery chargers are verified to supply ≥150 amps, and the Division 2 battery chargers are verified to supply ≥110 amps. Thus, the proposed requirement change applies to Division 2 chargers only. As such, the licensee stated that the "Division 2 battery chargers output current limiter is field adjusted to supply 120 to 125 amps in order to stay within the electrical circuit breaker ratings in the associated distribution cabinet." The licensee also stated that its calculation shows that with the Division 2 charger limit set at ≥110 amps, it will take each of the 250-V battery chargers less than 8 hours to recharge the Division 2 battery, which is well within the 24 hour limit specified in the TS.

The proposed changes to SR 3.8.4.2 address an error inadvertently introduced during the conversion of MNGPs custom TS to the current ITS format. The revised SR will ensure that the licensee properly verifies the design capacity of the chargers by specifying the Division 1 and 2 250-V DC chargers' design-required output current of ≥150 amps and ≥110 amps, respectively.

The NRC staff was concerned about how the battery chargers, under all conditions, including during charger current limit operation, satisfy the design voltage range. The licensee provided additional information in its November 30, 2007, letter, responding to Question (3), stating that the voltage of Division 2 250 V-DC system will continue to be properly maintained based on the sizing of the batteries, which determines the operating voltage depending on the batteries' state of discharge. In the same letter, as response to Question (4), the licensee stated that the Division 2 chargers provide sufficient current (at current limit value) to supply the necessary 250-V DC system loads while supplying the necessary charging current for the battery. The NRC staff accepts the licensee's explanation in the November 30, 2007, letter.

Based on the above evaluation, the NRC staff finds the proposed revision to SR 3.8.4.2 provide reasonable assurance of the continued availability of the Division 2 250-V DC battery chargers to maintain the operability of the 250-V DC system, and hence, the safety systems it supplies to shut down the reactor and to maintain the reactor in a safe condition after an anticipated operational occurrence or a postulated design-basis accident. In addition, the NRC staff concludes that there is reasonable assurance of the continued availability of the chargers to ensure that the 250-V DC system will be able to provide for the recovery from an SBO in accordance with 10 CFR 50.63. The NRC staff also concludes that the proposed TS changes are in accordance with 10 CFR 50.36 and the requirements of GDC 17 and 18. Therefore, the staff finds the proposed changes acceptable.

4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Minnesota State official was notified of the proposed issuance of the amendment. The State official had no comments.

5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes the requirements with respect to use of facility components located within the restricted area as defined in 10 CFR Part 20, and changes the associated surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding (72 FR 20384). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

6.0 CONCLUSION

The NRC 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public. Moreover, the proposed modification will allow TS SR 3.8.4.2 to maintain conformity with 10 CFR 50.36(d)(3).

Principal Contributor: K. Miller, NRR

Date: January 30, 2008

Monticello Nuclear Generating Plant
cc:

Jonathan Rogoff, Esquire
Vice President, Counsel & Secretary
Nuclear Management Company, LLC
700 First Street
Hudson, WI 54016

U.S. Nuclear Regulatory Commission
Resident Inspector's Office
2807 W. County Road 75
Monticello, MN 55362

Manager, Nuclear Safety Assessment
Monticello Nuclear Generating Plant
Nuclear Management Company, LLC
2807 West County Road 75
Monticello, MN 55362-9637

Commissioner
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155-4194

Commissioner
Minnesota Department of Health
717 Delaware Street, S. E.
Minneapolis, MN 55440

Douglas M. Gruber, Auditor/Treasurer
Wright County Government Center
10 NW Second Street
Buffalo, MN 55313

Commissioner
Minnesota Department of Commerce
85 7th Place East, Suite 500
St. Paul, MN 55101-2198

Manager - Environmental Protection
Division
Minnesota Attorney General's Office
445 Minnesota St., Suite 900
St. Paul, MN 55101-2127

Michael B. Sellman
President and Chief Executive Officer
Nuclear Management Company, LLC
700 First Street
Hudson, MI 54016

Nuclear Asset Manager
Xcel Energy, Inc.
414 Nicollet Mall, R.S. 8
Minneapolis, MN 55401

Dennis L. Koehl
Chief Nuclear Officer
Nuclear Management Company, LLC
700 First Street
Hudson, WI 54016