

July 25, 2001

Mr. James R. Morris  
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: MAIN CONDENSER OFFGAS (TAC NO. MB0834)

Dear Mr. Morris:

The Commission has issued the enclosed Amendment No. 121 to Facility Operating License No. DPR-22 for the Monticello Nuclear Generating Plant. The amendment consists of changes to the Technical Specifications (TSs) in response to your application dated December 13, 2000, as supplemented July 3, 2001.

The amendment revises TS 3.8/4.8 to clarify the air ejector offgas activity sample point and operability requirements.

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/*

Carl F. Lyon, Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket No. 50-263

Enclosures: 1. Amendment No. 121 to DPR-22  
2. Safety Evaluation

cc w/encls: See next page

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DISTRIBUTION

PUBLIC	OGC	CYLi
PDIII-1 Reading	ACRS	GHubbard
CCraig	WBeckner	
FLyon	GHill(2)	**Previously concurred
RBouling	BBurgess, RGN-III	*No significant changes to SE

OFFICE	PDIII-1/PM	PDIII-1/LA	SPLB/SC	OGC	PDIII-1/SC
NAME	FLyon	RBouling	GHubbard*	SUttal**	CCraig
DATE	7/5/01	7/10/01	5/22/01	6/12/01	7/18/01

ACCESSION NO. ML011550407

OFFICIAL RECORD COPY

Monticello Nuclear Generating Plant

cc:

J. E. Silberg, Esquire  
Shaw, Pittman, Potts and Trowbridge  
2300 N Street, N. W.  
Washington, DC 20037

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

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

Robert Nelson, President  
Minnesota Environmental Control  
Citizens Association (MECCA)  
1051 South McKnight Road  
St. Paul, MN 55119

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

Regional Administrator, Region III  
U.S. Nuclear Regulatory Commission  
801 Warrenville Road  
Lisle, IL 60532-4351

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  
121 Seventh Place East  
Suite 200  
St. Paul, MN 55101-2145

Adonis A. Neblett  
Assistant Attorney General  
Office of the Attorney General  
445 Minnesota Street  
Suite 900  
St. Paul, MN 55101-2127

Mr. Roy A. Anderson  
Executive Vice President and  
Chief Nuclear Officer  
Nuclear Management Company, LLC  
700 First Street  
Hudson, WI 54016

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

NUCLEAR MANAGEMENT COMPANY, LLC

DOCKET NO. 50-263

MONTICELLO NUCLEAR GENERATING PLANT

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 121

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 December 13, 2000, as supplemented July 3, 2001, 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. 121, 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 its date of issuance and shall be implemented within 45 days.

FOR THE NUCLEAR REGULATORY COMMISSION

*/RA/*

Claudia M. Craig, Chief, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: July 25, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 121

FACILITY OPERATING LICENSE NO. DPR-22

DOCKET NO. 50-263

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

REMOVE

vi  
124  
192  
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INSERT

vi  
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198

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 121 TO FACILITY OPERATING LICENSE NO. DPR-22

NUCLEAR MANAGEMENT COMPANY, LLC

MONTICELLO NUCLEAR GENERATING PLANT

DOCKET NO. 50-263

## 1.0 INTRODUCTION

By application dated December 13, 2000, as supplemented July 3, 2001, the Nuclear Management Company, LLC (the licensee), requested changes to the Technical Specifications (TSs) for Monticello Nuclear Generating Plant. The proposed amendment would revise TS 3.8/4.8 to clarify the air ejector offgas activity sample point and operability requirements.

The July 3, 2001, supplement corrected an administrative oversight and an editorial error in the application. The supplemental information did not change the initial no significant hazards consideration determination and did not expand the scope of the original *Federal Register* notice.

## 2.0 BACKGROUND

During plant operation, steam from the low pressure turbine is exhausted into the main condenser. Air and noncondensable gases are collected in the main condenser, then exhausted through the steam jet air ejectors (SJAEs) to the main condenser offgas system. The offgas from the main condenser normally includes radioactive gases. The main condenser offgas system has been incorporated into the plant design to reduce the radioactive gases in the main condenser offgas to negligible levels prior to release. Main condenser offgas activity is measured at the outlet of the SJAE after condensers. The licensee intends to convert the offgas system to a full steam dilution system to eliminate the potential for explosive mixtures in the line to the offgas condensers. Following the conversion, the process stream temperature and humidity will not allow sampling at the outlet of the SJAEs. As a result, the main condenser offgas radiation monitors will be relocated to downstream of the recombiners prior to entering the holdup line. TS 3.8/4.8 includes operability and surveillance requirements for monitoring main condenser offgas activity to limit the doses received at the site boundary in the unlikely event that effluent is discharged with less than full treatment. The licensee stated that the proposed TS changes would align TS 3.8/4.8 more closely with NUREG-1433, "Standard Technical Specifications, General Electric Plants, BWR/4" (STS), requirements for the offgas activity monitoring requirements and allow changing the offgas sample point.

### 3.0 EVALUATION

#### 3.1 Specify the operating conditions during which monitoring condenser offgas activity is required

Radiation monitoring instrumentation is currently required to be operable whenever the SJAEs are in operation in accordance with TS Table 3.8.1. The licensee proposes to revise TS 3.8.A.1 to specify that, "Whenever the Steam Jet Air Ejectors (SJAEs) are in operation, the gross gamma activity rate of the noble gases . . . shall be  $\leq 2.6 \times 10^5 \mu\text{Ci/second}$  [microcuries per second] after a decay of 30 minutes." The proposed change does not change the gross gamma activity release rate limit, requires the limit to be met under the same conditions as currently required, and is consistent with the STS. Therefore, the proposed change is acceptable.

#### 3.2 Revise the description of the sample point

Currently, main condenser offgas activity is measured at the outlet of the SJAEs downstream of the main condensers. A modification is planned to convert the offgas system to a full steam dilution system to eliminate the potential for explosive mixtures in the line to the offgas recombiners. Following the modification, the process stream temperature and humidity will not allow sampling at the outlet of the SJAEs. As a result, the main condenser offgas radiation monitors will be relocated to downstream of the recombiners prior to entering the holdup line. The recombiners and holdup line are part of the main condenser offgas system.

The licensee stated that the intent of TS 3.8.A.1 is to monitor effluent from the main condenser SJAEs. The specified gross gamma activity limit ( $\leq 2.6 \times 10^5 \mu\text{Ci/second}$  after a decay of 30 minutes) remains unchanged. The setpoint and calculations will be revised as necessary to account for sample concentration and location changes. Detector sensitivity, accuracy, range, and other attributes, as well as delay time, will be considered to ensure that the revised setpoints and calculations maintain releases of main condenser offgas radionuclides within the release rate limit of TS 3.8.A.1. Changing the description of the sample point will allow installation of the modification without a future TS change.

The NRC staff reviewed the figures provided by the licensee showing the locations of the monitor in the current and future configurations. Both points are on the same flow path of the effluent from the main condenser SJAEs. There is no bypass flow between these two points. Both points satisfy the intent of TS 3.8.A.1. Therefore, the staff finds that changing the location of the sample point is acceptable. The proposed wording for the revised specification, ". . . measured at the main condenser offgas system pretreatment monitor station . . .," will allow installation of the modification without a future TS change to specify a new sample point. The proposed wording is also consistent with that in the STS. Therefore, the proposed change is acceptable.

The licensee proposes to change the nomenclature in TS 4.6.C.1.(c) from, "Where steam jet air ejector monitors indicate . . ." to "When the main condenser offgas system pretreatment monitors indicate . . ." The change is editorial in nature, is consistent with the proposed change to TS 3.8.A.1, and is acceptable.

3.3 Revise the actions to be taken if the release rate limits are exceeded to be consistent with STS requirements

Current TS 3.8.A.2 provides actions to be taken if the limit of TS 3.8.A.1 is exceeded, and allows 72 hours to restore the gross gamma activity rate to within the limit or place the unit in at least a hot shutdown condition within the next 12 hours. If the limit of TS 3.8.A.1 is exceeded, proposed TS 3.8.A.2 would allow 72 hours to restore the gross gamma activity rate to within the limit. The 72-hour completion time is consistent with the existing specification. Proposed TS 3.8.A.3 would require that, if the gross gamma activity rate is not restored to within the limits in 72 hours, all main steam lines must be isolated within 12 hours, or the SJAEs must be isolated within 12 hours, or the unit must be placed in hot shutdown within 12 hours and cold shutdown within the following 24 hours. Isolating the main steam lines or the SJAEs within 12 hours would allow a reasonable time to isolate the main condenser offgas system from the source of radioactive steam in an orderly manner. The alternative of placing the unit in hot shutdown within 12 hours is consistent with the existing TS requirement, and the additional requirement to place the unit in cold shutdown within the following 24 hours is consistent with other Monticello TSs. The requirements and completion times of proposed TS 3.8.A.2 and TS 3.8.A.3 are reasonable and consistent with STS. Therefore, the proposed changes are acceptable.

3.4 Remove the condenser offgas radiation instrumentation operability and surveillance requirements, including the automatic flow termination requirement, from current TS Tables 3.8.1 and 4.8.1 to the Offsite Dose Calculation Manual (ODCM)

Section 182a of the Atomic Energy Act (the "Act") requires applicants for nuclear power plant operating licenses to state TSs to be included as part of the license. The Commission's regulatory requirements related to the content of TSs are set forth in Title 10, *Code of Federal Regulations* (CFR), Section 50.36. The regulation at 10 CFR 50.36 requires that the TSs include items in the following five specific categories: (1) safety limits, limiting safety system settings and limiting control settings; (2) limiting conditions for operation (LCOs); (3) surveillance requirements (SRs); (4) design features; and (5) administrative controls. However, the regulation does not specify the particular requirements to be included in a plant's TSs.

The regulation at 10 CFR 50.36(c)(2)(ii) specifies four criteria to be used in determining whether a particular matter is required to be included in an LCO, as follows: (1) Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary; (2) a process variable, design feature, or operating restriction that is an initial condition of a design-basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; (3) a structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design-basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier; or (4) a structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety. LCOs and related requirements that fall within or satisfy any of the criteria in the regulation must be retained in the TSs, while those requirements that do not fall within or satisfy these criteria may be relocated to licensee-controlled documents. Monticello's ODCM is such a licensee-controlled document.

The licensee proposes to relocate to the ODCM the operability and surveillance requirements for the main condenser offgas radiation (pretreatment) monitoring instruments, including the automatic offgas isolation feature, consistent with other similar instruments and the STS. The offgas treatment system is not a safety system and is not connected to the primary coolant piping. The monitors serve as advance warning of any abnormal offgas release. Since these monitoring instruments, including the automatic isolation feature, are not required to ensure that a small fraction of the 10 CFR 100 guidelines are exceeded, to ensure the initial conditions for postulated accidents are met, or to mitigate any accidents, it is appropriate to relocate them to the licensee-controlled program. Changes to operability requirements will be evaluated in accordance with the requirements for revising the ODCM. The staff has reviewed the proposed change and concluded that the relocated requirements do not warrant inclusion in the TSs. The relocated information is not required in the TSs under the criteria of 10 CFR 50.36 and is not required to obviate the possibility of an abnormal situation or event giving rise to an immediate threat to the public health and safety. The proposed change is also consistent with STS, and therefore, acceptable.

### 3.5 Revise the requirements for performing an isotopic analysis to be consistent with STS

The licensee proposes to revise SR 4.8.A.1, associated with isotopic analysis of gross gamma radioactivity of noble gases, to be consistent with the STS. This surveillance is performed on a monthly basis, requiring an isotopic analysis of an offgas sample to ensure that the required limits are satisfied. The noble gases to be sampled are Xe-133, Xe-135, Xe-138, Kr-85m, Kr-87, and Kr-88. The monthly frequency is consistent with the current TS requirement and with the STS.

If the measured rate of radioactivity increases by  $\geq 50$  percent after correcting for expected increases due to change in thermal power, an isotopic analysis within 4 hours is also performed to ensure that the increase is not indicative of a sustained increase in the radioactivity rate. The proposed change would reduce the time in which the analysis must be performed from 24 hours to 4 hours, which is consistent with the STS. The SR would also be modified by an added note indicating that the surveillance is not required to be performed until 31 days after the SJAEs are in operation. Only in this condition can the radioactive fission gases be in the main condenser offgas system at significant rates. This note is consistent with the STS. The proposed changes are consistent with the STS and are either consistent or more restrictive than current TS requirements. Therefore, the proposed changes are 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 a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The amendment also relates to changes in recordkeeping, reporting, or administrative procedures or requirements. The 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 (66 *FR* 7685). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (c)(10). 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 Commission 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.

Principal Contributor: C.Y. Li

Date: July 25, 2001