



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 16, 2009

Mr. Timothy J. O'Connor
Site Vice President
Monticello Nuclear Generating Plant
Northern States Power Company - Minnesota
2807 West County Road 75
Monticello, MN 55362-9637

SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT (MNGP) – EXTENDED POWER
UPRATE AND LONG-TERM STABILITY SOLUTION AUDIT SUMMARY
(TAC NOS. MD9990 AND MD8064)

Dear Mr. O'Connor:

The Nuclear Regulatory Commission (NRC) staff is reviewing an application by Northern States Power Company (NSPM) for an extended power uprate (EPU) amendment at MNGP. As part of its review, the NRC staff performed an operational audit of the long-term stability solution that NSPM recently installed at MNGP. The NRC staff was supported by its consultant Oak Ridge National Laboratory. The audit took place at the MNGP Operator Training Center on May 21, 2009.

Enclosed please find the audit summary. No significant issues or open items were identified during the audit. The NRC staff's conclusions will be presented in detail in the safety evaluation associated with the MNGP EPU amendment. The audit summary is provided for your information only; no part of the audit summary may be construed as finding or conclusion on the proposed EPU amendment, whose review is still ongoing.

Sincerely,

A handwritten signature in black ink, appearing to read "Peter S. Tam". The signature is stylized and written in a cursive-like font.

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

Enclosure:
Audit summary

cc w/encls: Distribution via ListServ

REGULATORY AUDIT SUMMARY BY THE OFFICE OF NUCLEAR REACTOR REGULATION

MONTICELLO NUCLEAR GENERATING PLANT

NORTHERN STATES POWER COMPANY – MINNESOTA

LONG-TERM STABILITY SOLUTION AND EXTENDED POWER UPRAE

DOCKET NO. 50-263

1.0 BACKGROUND

Northern States Power Company – Minnesota (NSPM), as the licensee for Monticello Nuclear Generating Plant (MNGP), has recently received U.S. Nuclear Regulatory Commission (NRC) approval to implement a new long-term stability solution at MNGP (see Amendment No. 159, January 30, 2009; (Agencywide Documents Access and Management System (ADAMS) Accession No. ML083440681). NSPM is also requesting an extended power uprate (EPU) amendment at MNGP; this request is currently under review by the NRC staff.

The long-term (L/T) stability solution is a technical matter that receives a significant amount of attention during the NRC's review of an EPU amendment. Accordingly, the NRC staff routinely performs regulatory audits of licensees' stability solutions in concert with both the EPU review, and as an ongoing regulatory oversight activity with regard to the stability solution installed at domestic boiling-water reactors.

2.0 REGULATORY AUDIT BASES

This audit was conducted in accordance with the guidelines presented in the Office of Nuclear Reactor Regulation Office Instruction LIC-111, "Regulatory Audits."

The NRC staff evaluated the information gained during the audit using the General Design Criteria (GDC) presented in Appendix A to part 50, Title 10, of the U.S. *Code of Federal Regulations* (10 CFR Part 50). Specifically, the NRC staff considered GDC 10, "Reactor Design;" GDC 12, "Suppression of Power Oscillations;" and GDC 13, "Instrumentation and Control."

The NRC staff acknowledges that the GDC are not directly applicable to MNGP, as the plant was not licensed using the 10 CFR Part 50 GDCs. However, the NRC staff believes that the GDCs provide adequate technical guidance against which to evaluate the L/T stability solution installed at MNGP, and considers the GDCs as regulatory guidance only.

3.0 REGULATORY AUDIT SCOPE

This audit had two main goals: (1) to understand the implementation status of the Monticello L/T Stability Option implementations, and (2) review the implementation of the anticipated transient without scram (ATWS) emergency operating procedures, including the ATWS/Stability mitigation actions, as it relates to the EPU upgrade.

4.0 SUMMARY OF REGULATORY AUDIT

The NRC staff conducted its audit by observing presentations of technical material related to MNGP's experience and training for stability scenarios and their mitigating systems, and by observing exercises at the MNGP control room simulator. The simulator portion included observation of two ATWS scenarios: a main steamline isolation valve closure with an electrical failure in the control rod drive system, and a turbine trip with a failure of all rods to insert fully. Both exercises were observed with and without operator action.

No significant issues were identified during the NRC staff's audit. The NRC staff's conclusions will be presented in detail in the safety evaluation associated with the MNGP EPU amendment.

5.0 LOGISTICS

The audit was conducted on May 21, 2009, at the XCEL Training Center located on West River Street in Monticello, Minnesota.

Participants in the audit included:

<u>MNGP</u>	<u>NRC</u>	<u>General Electric-Hitachi</u>
Joel Beres	Tai Huang	Juswald Vedovi
Mike Cray	Benjamin Parks	
Steve Hammer	José March-Leuba	
Randy Nuelk	(consultant from Oak Ridge	
Harold Paustian	National Laboratory)	
John Shriver		

Principal Contributors: Benjamin Parks
Tai Huang

Date: July 16, 2009

July 16, 2009

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

**SUBJECT: MONTICELLO NUCLEAR GENERATING PLANT (MNGP) – EXTENDED POWER
UPRATE AND LONG-TERM STABILITY SOLUTION AUDIT SUMMARY
(TAC NOS. MD9990 AND MD8064)**

Dear Mr. O'Connor:

The Nuclear Regulatory Commission (NRC) staff is reviewing an application by Northern States Power Company (NSPM) for an extended power uprate (EPU) amendment at MNGP. As part of its review, the NRC staff performed an operational audit of the long-term stability solution that NSPM recently installed at MNGP. The NRC staff was supported by its consultant Oak Ridge National Laboratory. The audit took place at the MNGP Operator Training Center on May 21, 2009.

Enclosed please find the audit summary. No significant issues or open items were identified during the audit. The NRC staff's conclusions will be presented in detail in the safety evaluation associated with the MNGP EPU amendment. The audit summary is provided for your information only; no part of the audit summary may be construed as finding or conclusion on the proposed EPU amendment, whose review is still ongoing.

Sincerely,

/RA/

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

Enclosure:
Audit summary

cc w/encls: Distribution via ListServ

DISTRIBUTION:

PUBLIC
RidsNrrLATHarris Resource
RidsNrrDirsSbpb
RidsNrrDorlDpr

RidsNrrDorlLpl3-1 Resource
RidsOGCRp Resource
B. Parks, NRR
RidsRgn3MailCenter Resource

RidsNrrPMMonticello Resource
RidsAcrsAcnw_MailCTR Resource
T. Huang, NRR
LPL3-1 r/f

Accession No.: **ML091760769**

OFFICE	LPL3-1/PM	LPL3-1/LA	SRXB	SRXB	SRXB/BC	LPL3-1/BC
NAME	PTam	BTully /THarris for	BParks	THuang	GCranston	LJames
DATE	07/14/09	06/30/09	07/05/09	07/06/09	07/10/09	07/16/09

OFFICIAL RECORD COPY