Xcel Energy®

Monticello Nuclear Generating Plant
2807 W County Rd 75
Monticello, MN 55362

August 30, 2011

L-MT-11-044
10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Monticello Nuclear Generating Plant
Docket 50-263
Renewed License No. DPR-22

Subject: Monticello Extended Power Uprate (EPU): Update on EPU Commitments (TAC MD9990)

References:
1) Letter from Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy to Document Control Desk, "License Amendment Request: Extended Power Uprate (TAC MD9990)," L-MT-08-052, dated November 5, 2008. (ADAMS Accession No. ML083230111)
2) Letter from T. J. O'Connor (NSPM), to Document Control Desk (NRC), "Monticello Extended Power Uprate: Updates to Docketed Information (TAC MD9990)," L-MT-10-072, dated December 21, 2010. (ADAMS Accession No. ML103570026)

Pursuant to 10 CFR 50.90, the Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy, requested in Reference 1 an amendment to the Monticello Nuclear Generating Plant (MNGP) Renewed Operating License (OL) and Technical Specifications (TS) to increase the maximum authorized power level from 1775 megawatts thermal (MWt) to 2004 MWt.

The purpose of this letter is to provide the NRC with the status of analyses and commitments previously provided to the NRC for the MNGP extended power uprate (EPU). Updates are provided in the following enclosures:

Enclosure 1 - Feedwater/Condensate Events and Feedwater/Condensate Pump Area Heat Load
Enclosure 2 – Modification of Pipe Support TWH-143
Enclosure 3 – Appendix R Modifications to Vent and Purge Valves
Enclosure 4 – Summary of Extended Power Uprate Commitments

A001
NRR

The changes made in herein do not revise the no significant hazards consideration (NSHC) provided in Reference 2.

In accordance with 10 CFR 50.91(b), a copy of this application supplement, without enclosures, is being provided to the designated Minnesota Official.

Summary of Commitments

This letter makes no new commitments. This letter closes commitments and revises commitments associated with the EPU project. See Enclosure 4 for details. The commitment summary includes whether the commitment is new, revised, or completed.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on: August 30, 2011

John [signature] for TJO

Timothy J. O'Connor
Site Vice-President
Monticello Nuclear Generating Plant
Northern States Power Company-Minnesota

Enclosures (4)

cc: Administrator, Region III, USNRC (w/o enclosures)
Resident Inspector, Monticello Nuclear Generating Plant, USNRC (w/o enclosures)
Project Manager, Monticello Nuclear Generating Plant, USNRC
Minnesota Department of Commerce (w/o enclosures)

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ENCLOSURE 1

FEEDWATER/CONDENSATE EVENTS AND FEEDWATER/CONDENSATE PUMP AREA HEAT LOAD

2 pages follow

L-MT-11-044
Enclosure 1

FEEDWATER/CONDENSATE EVENTS AND FEEDWATER/CONDENSATE PUMP AREA HEAT LOAD

Background

In Reference E1-1, Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy provided a license amendment request (LAR) for the Monticello Nuclear Generating Plant. The Reference E1-1 LAR requested approval to increase the maximum authorized power level from 1775 megawatts thermal (MWt) to 2004 MWt.

In Reference E1-2, NSPM provided a response to NRC requests for additional information (RAIs). As part of the response to RAI 2.12.2, NSPM made the following commitment:

> *NSPM will perform an analysis prior to RFO25 to predict combined Condensate and Feedwater system performance for normal operation and for transients including Single Feedwater pump trip, Feedwater Control System Failure and Single Condensate Pump Trip. Acceptance criteria will include adequate margin to preclude loss of both reactor feedwater pumps from low suction pressure or flow.*

In Reference E1-3, NSPM provided a response to NRC RAIs. As part of the response to RAI 35, NSPM made the following commitment:

> *NSPM commits to evaluating the changes in condensate and feed pump area heat load to confirm temperatures remain within design limits prior to RFO25. If necessary, modifications to the HVAC system for this area will be implemented to maintain these areas within the design limits.*

Both of these commitments have not been met as MNGP entered refueling outage 25 (RFO25) on March 5, 2011 and the subject analyses and evaluations have not been completed.

Discussion

Both commitments require calculations and analyses to complete the commitment requirements. Depending on the outcome of the evaluations further modifications may also be required.

Each commitment has been reviewed for change by the Regulatory Commitment Change process. The results of this review indicated that both commitments may be changed without prior consent of the NRC. NSPM has determined that both commitments are not required to be implemented until MNGP ascends to Extended Power Uprate (EPU) conditions. Since EPU is not yet approved for MNGP, there is no safety concern with modifying the due date for these commitments.

Conclusion

Based on the above, NSPM is modifying the commitments to change the commitment due date from "prior to RFO25" to "prior to EPU implementation." No change of substance of the commitment is proposed only the schedule for completion is changed. Based on this change each commitment will read as follows:

NSPM will perform an analysis prior to EPU implementation to predict combined Condensate and Feedwater system performance for normal operation and for transients including Single Feedwater pump trip, Feedwater Control System Failure and Single Condensate Pump Trip. Acceptance criteria will include adequate margin to preclude loss of both reactor feedwater pumps from low suction pressure or flow.

NSPM commits to evaluating the changes in condensate and feed pump area heat load to confirm temperatures remain within design limits prior to EPU implementation. If necessary, modifications to the HVAC system for this area will be implemented to maintain these areas within the design limits.

References:

E1-1 Letter from Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy to Document Control Desk, "License Amendment Request: Extended Power Uprate (TAC MD9990)," L-MT-08-052, dated November 5, 2008. (ADAMS Accession No. ML083230111)

E1-2 Letter from T. J. O'Connor (NSPM), to Document Control Desk (NRC), "Monticello Extended Power Uprate: Response to NRC Balance of Plant Review Branch (SBPB) Request for Additional Information (RAI) dated March 23, 2009 (TAC No. MD9990)," L-MT-09-046, dated June 12, 2009. (ADAMS Accession No. ML091670410)

E1-3 Letter from T. J. O'Connor (NSPM), to Document Control Desk (NRC), "Monticello Extended Power Uprate: Response to NRC Containment and Ventilation Review Branch (SCVB) Request for Additional Information (RAI) dated March 19, 2009, and March 26, 2009 (TAC No. MD9990)," L-MT-09-048, dated July 13, 2009. (ADAMS Accession No. ML092170404)

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ENCLOSURE 2

MODIFICATION OF PIPE SUPPORT TWH-143

1 page follows

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Enclosure 2

MODIFICATION OF PIPE SUPPORT TWH-143

Background

In Reference E2-1, Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy provided a license amendment request (LAR) for the Monticello Nuclear Generating Plant. The Reference E2-1 LAR requested to increase the maximum authorized power level from 1775 megawatts thermal (MWt) to 2004 MWt.

In Reference E2-2, NSPM provided a response to NRC requests for additional information (RAIs). As part of the response to RAI 12(b), NSPM made the following commitment:

> *Confirmation that modification of support TWH-143 is complete will be provided to the NRC prior to implementation of the EPU license amendment request.*

This commitment has been completed as indicated below.

Discussion

As indicated in reference E2-2, NSPM performed a series of calculations and analyses to determine the acceptability of stresses in piping systems, i.e. the piping system meets code requirements. As a result of the analyses for Torus attached piping, support TWH-143 was identified as requiring modification to meet acceptable stress levels. Based on this NSPM developed and implemented a modification to replace TWH-143 with an adequate support.

The modification to TWH-143 was recently installed and post-maintenance tested satisfactorily.

Conclusion

Based on the above, NSPM completed the commitment described above and is hereby notifying the NRC that the modification has been completed. Therefore, this commitment has been satisfied and is considered closed, with no further action required.

References:

E2-1 Letter from Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy to Document Control Desk, "License Amendment Request: Extended Power Uprate (TAC MD9990)," L-MT-08-052, dated November 5, 2008. (ADAMS Accession No. ML083230111)

E2-2 Letter from T. J. O'Connor (NSPM), to Document Control Desk (NRC), "Response to NRC Mechanical and Civil Engineering Review Branch (EMCB) Requests for Additional Information (RAIs) dated March 28, 2009 (TAC MD9990)," L-MT-09-044, dated August 21, 2009. (ADAMS Accession No. ML092390332)

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ENCLOSURE 3

APPENDIX R MODIFICATIONS TO VENT AND PURGE VALVES

2 Pages follow

L-MT-11-044
Enclosure 3

APPENDIX R MODIFICATIONS TO VENT AND PURGE VALVES

Background

In Reference E3-1 Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy provided a license amendment request (LAR) for the Monticello Nuclear Generating Plant. The Reference E3-1 LAR requested to increase the maximum authorized power level from 1775 megawatts thermal (MWt) to 2004 MWt.

In Reference E3-2, NSPM provided Licensee Event Report (LER) 2009-001, Revision 2. In this LER NSPM identified that depending on initial conditions, a fire in the cable spreading room or control room, with or without a fire induced loss of off site power, could cause two in-series valves (containment purge and vent valves) to spuriously open leading to venting of containment. For certain design basis accident scenarios and 10 CFR 50 Appendix R events under Extended Power Uprate (EPU) conditions, containment accident pressure is required in order to ensure adequate net positive suction head (NPSH) is available for vessel injection and suppression pool cooling pumps. Venting of containment during this scenario could result in the loss of required NPSH for the #12 Core Spray (CS) and the #12 Residual Heat Removal (RHR) pumps. With no operator action, inadequate NPSH could prevent vessel injection and/or suppression pool cooling. The station procedure for performing a shutdown from outside the control room did not contain any steps to require operators to ensure adequate NPSH was maintained.

Discussion

As indicated in reference E3-2, to correct the condition NSPM would either evaluate the non-compliant manual actions as acceptable or correct the non-compliant manual actions via physical changes to the plant. Based on this, NSPM developed and implemented a modification to reroute the cabling associated with the purge and vent valves to eliminate the potential spurious opening of both valves from a single event.

The modification to the purge and vent valve cables was installed and post-maintenance tested satisfactorily during refueling outage 25 (RFO25).

Conclusion

Based on the above, NSPM completed the corrective action and is hereby notifying the NRC that the modification has been completed. No further impacts regarding the availability of containment accident pressure have been identified. Therefore, this condition has been satisfied and is considered closed, with no further action required.

References:

E3-1 Letter from Northern States Power Company, a Minnesota corporation (NSPM), d/b/a Xcel Energy to Document Control Desk, "License Amendment Request: Extended Power Uprate (TAC MD9990)," L-MT-08-052, dated November 5, 2008. (ADAMS Accession No. ML083230111)

E3-2 Letter from T. J. O'Connor (NSPM), to Document Control Desk (NRC), "LER 2009-001, Revision 2, "Containment Overpressure Not Ensured in the Appendix R Analysis," L-MT-10-070, dated December 22, 2010. (ADAMS Accession No. ML103570034)

ENCLOSURE 4

SUMMARY OF EXTENDED POWER UPRATE COMMITMENTS

4 Pages follow

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Enclosure 4

Summary of Extended Power Uprate Commitments

Below is the complete list of NRC commitments for the Extended Power Uprate (EPU) project prior to issuance of this letter.

No.	Letter No. Date	Commitment text	Status
1	L-MT-08-052 11/5/2008	NSPM will inspect the steam dryer during the next refueling outage to confirm no unexpected changes in crack length on the steam dryer.	Complete – performed in RFO24. (L-MT-10-046)
2	L-MT-09-017 3/19/2009	The steady state bypass void fraction for the EPU core will be calculated using the method described by the NSPM response to NRC RAI SNPB-7 of L-MT-09-017.	Complete – provided in Cycle 25 Supplemental Reload Licensing Report (SRLR). (L-MT-10-046)
3	L-MT-09-043 8/12/2009	NSPM will provide the evaluation of steam dryer structural integrity to the NRC staff prior to further increases in reactor power when increasing to power levels above CLTP.	Deleted – Commitment no longer required. (L-MT-10-046)
4	L-MT-09-043 8/12/2009	NSPM will perform outage steam dryer inspections based on the guidance of BWRVIP [Boiling Water Reactor Vessel Internals Project].	Active
5	L-MT-09-044 8/21/2009	Confirmation that Feedwater and Condensate pump and heater replacement modifications are complete and meet the code allowables will be provided to the NRC prior to implementation of the EPU license amendment request.	Active
6	L-MT-09-044 8/21/2009	Confirmation that modification of support TWH-143 is complete will be provided to the NRC prior to implementation of the EPU license amendment request.	Active

7	L-MT-09-046 6/12/2009	NSPM will perform an analysis prior to RF025 to predict combined Condensate and Feedwater system performance for normal operation and for transients including Single Feedwater pump trip, Feedwater Control System Failure and Single Condensate Pump Trip. Acceptance criteria will include adequate margin to preclude loss of both reactor feedwater pumps from low suction pressure or flow.	Active
8	L-MT-10-072 12/21/2010 Revised from original in L-MT-09-046 6/12/2009	Prior to implementation of EPU, the USAR will be revised to indicate that the emergency heat load of 24.7 MBTU/hr occurs approximately 192 hours after shutdown.	Active
9	L-MT-09-048 7/13/2009	NSPM commits to evaluating the changes in condensate and feed pump area heat load to confirm temperatures remain within design limits prior to RFO25. If necessary, modifications to the HVAC system for this area will be implemented to maintain these areas within the design limits.	Active
10	L-MT-09-100 10/28/2009	If NRR agrees to review the MELLLA+ [Maximum Extended Load Line Limit Analysis Plus] LAR concurrent with the EPU LAR, NSPM will commit in the MELLLA+ LAR to resolve the CAP section in the same manner as the issue is resolved for the delayed EPU amendment.	Complete – NRC acceptance of MELLLA+ LAR. (L-MT-10-046)
11	L-MT-10-046 6/30/2010	As part of MNGP restart following installation of the replacement steam dryer, NSPM will implement the Power Ascension Test Plan found in Enclosure 1, Appendix 5 of L-MT-10-046.	Active

Revised or Completed Commitments

Commitment 6 is completed as described in Enclosure 2
Commitment 7 is revised as described in Enclosure 1
Commitment 9 is revised as described in Enclosure 1

Final List of EPU Commitments

Based on these changes and the revised commitments associated with this letter the revised EPU commitments table is as follows:

Extended Power Uprate Commitments			
No.	**Letter No. Date**	**Commitment text**	**Status**
1	L-MT-08-052 11/5/2008	NSPM will inspect the steam dryer during the next refueling outage to confirm no unexpected changes in crack length on the steam dryer.	Complete (L-MT-10-046)
2	L-MT-09-017 3/19/2009	The steady state bypass void fraction for the EPU core will be calculated using the method described by the NSPM response to NRC RAI SNPB-7 of L-MT-09-017.	Complete (L-MT-10-046)
3	L-MT-09-043 8/12/2009	NSPM will provide the evaluation of steam dryer structural integrity to the NRC staff prior to further increases in reactor power when increasing to power levels above CLTP.	Deleted (L-MT-10-046)
4	L-MT-09-043 8/12/2009	NSPM will perform outage steam dryer inspections based on the guidance of BWRVIP.	Active
5	L-MT-09-044 8/21/2009	Confirmation that Feedwater and Condensate pump and heater replacement modifications are complete and meet the code allowables will be provided to the NRC prior to implementation of the EPU license amendment request.	Active
6	L-MT-09-044 8/21/2009	Confirmation that modification of support TWH-143 is complete will be provided to the NRC prior to implementation of the EPU license amendment request.	Complete (L-MT-11-044)
7	L-MT-11-044 Enclosure 1 Revised from original in L-MT-09-046 6/12/2009	NSPM will perform an analysis prior to EPU implementation to predict combined Condensate and Feedwater system performance for normal operation and for transients including Single Feedwater pump trip, Feedwater Control System Failure and Single Condensate Pump Trip. Acceptance criteria will include adequate margin to preclude loss of both reactor feedwater pumps from low suction pressure or flow.	Active
8	L-MT-10-072 12/21/2010 Revised from original in L-MT-09-046 6/12/2009	Prior to implementation of EPU, the USAR will be revised to indicate that the emergency heat load of 24.7 MBTU/hr occurs approximately 192 hours after shutdown..	Active

9	L-MT-11-044 Enclosure 1 Revised from original in L-MT-09-048 7/13/2009	NSPM commits to evaluating the changes in condensate and feed pump area heat load to confirm temperatures remain within design limits prior to EPU implementation. If necessary, modifications to the HVAC system for this area will be implemented to maintain these areas within the design limits.	Active
10	L-MT-09-100 10/28/2009	If NRR agrees to review the MELLLA+ LAR concurrent with the EPU LAR, NSPM will commit in the MELLLA+ LAR to resolve the CAP section in the same manner as the issue is resolved for the delayed EPU amendment.	Complete (L-MT-10-046)
11	L-MT-10-046 6/30/2010	As part of MNGP restart following installation of the replacement steam dryer, NSPM will implement the Power Ascension Test Plan found in Enclosure 1, Appendix 5 of L-MT-10-046.	Active