



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

October 1, 2014

L-MT-14-083  
Order EA-12-049

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

Request for Relaxation from NRC Order EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events" - Monticello Nuclear Generating Plant

- References:
- 1) NRC Order EA-12-049, "Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012. (ADAMS Accession No. ML12054A735)
  - 2) Letter From M Schimmel (NSPM) to Document Control Desk (NRC), "Monticello Nuclear Generating Plant's Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)," L-MT-13-017, dated February 28, 2013. (ADAMS Accession No. ML13066A066)
  - 3) NRC Order EA-12-050, "Issuance of Order to Modify Licenses with Regard to Reliable Hardened Containment Vents," dated March 12, 2012. (ADAMS Accession No. ML12054A694)
  - 4) NRC Order EA-13-109, "Issuance of Order to Modify Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated June 6, 2013. (ADAMS Accession No. ML13143A334)

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA-12-049 (Reference 1) to Northern States Power Minnesota (NSPM), doing business as Xcel Energy. NRC Order EA-12-049 requires NSPM to develop, implement, and maintain guidance and strategies to maintain or restore core cooling, containment, and spent fuel pool cooling capabilities in the event of a beyond-design-basis external event for the Monticello Nuclear Generating Plant (MNGP).

As described in the MNGP Overall Integrated Plan (OIP) (Reference 2) for compliance with NRC Order EA-12-049, the mitigation strategies depend on reliable hardened containment venting capability consistent with implementation of NRC Order EA-12-050 (Reference 3). NRC Order EA-13-109 (Reference 4) rescinded the requirements of NRC Order EA-12-050, established new requirements and revised the implementation schedule for reliable hardened containment vents capable of operation under severe accident conditions. The revised requirements in NRC Order EA-13-109 affect the ability of NSPM to fully implement the requirements of NRC Order EA-12-049 within the required time frame for MNGP.

The enclosure to this letter transmits a request for relaxation from the requirements of NRC Order EA-12-049 for MNGP. In accordance with Section IV of NRC Order EA-12-049, NSPM requests the Director, Office of Nuclear Reactor Regulation to relax the schedule requirement for full implementation prescribed by Condition IV.A.2 of the Order for the reasons provided in Enclosure 1 to this letter.

NSPM considers that the requested relaxation would constitute a change in the implementation schedule requirements of NRC Order EA-12-049 for MNGP.

If you have any questions or require additional information, please do not hesitate to contact Mr. John Fields at 763-271-6707.

#### Summary of Commitments

This letter makes no new commitments and no revisions to existing commitments.

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

Executed on: October 1, 2014



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Karen D. Fili  
Site Vice-President  
Monticello Nuclear Generating Plant  
Northern States Power Company-Minnesota

Enclosure

cc: Director of Office of Nuclear Reactor Regulation, USNRC  
Administrator, Region III, USNRC  
Project Manager, Monticello Nuclear Generating Plant, USNRC  
Resident Inspector, Monticello Nuclear Generating Plant, USNRC  
Minnesota Department of Commerce

**ENCLOSURE**

**MONTICELLO NUCLEAR GENERATING PLANT**

**REQUEST FOR RELAXATION FROM NRC ORDER EA-12-049,  
"ORDER MODIFYING LICENSES WITH REGARD TO REQUIREMENTS FOR  
MITIGATION STRATEGIES FOR BEYOND-DESIGN-BASIS EXTERNAL EVENTS"**

**Relaxation Request**

In accordance with Section IV of NRC Order EA-12-049 (Reference 1), Northern States Power Minnesota (NSPM), doing business as Xcel Energy, hereby requests relaxation of the Order requirement for the Monticello Nuclear Generating Plant (MNGP) to complete full implementation by no later than two refueling cycles after submittal of the overall integrated plan required by Condition C.1.a of the Order, or December 31, 2016, whichever comes first.

**Order Requirement Relaxation Request**

Condition IV.A.2 of NRC Order EA-12-049 requires full implementation of the Order requirements by, *"no later than two (2) refueling cycles after submittal of the overall integrated plan required by Condition C.1.a, or December 31, 2016, whichever comes first."* For MNGP, the current requirement for full implementation of NRC Order EA-12-049 is prior to restart from MNGP Refueling Outage in the Spring of 2015.

As described in the MNGP OIP (Reference 2), for compliance with NRC Order EA-12-049, the mitigation strategies depend on reliable hardened containment venting capability (wetwell venting only) consistent with implementation of NRC Order EA-12-050 (Reference 3). NRC Order EA-13-109 (Reference 4) rescinded the requirements of NRC Order EA-12-050, established additional requirements, and revised the implementation schedules for reliable hardened containment vents capable of operation under severe accident conditions. The revised requirements in NRC Order EA-13-109 affect the ability of NSPM to fully implement the requirements of NRC Order EA-12-049 prior to restart from the MNGP Spring 2015 refueling outage. MNGP is required to comply with the NRC Order EA-13-109, Phase 1 - containment wetwell venting requirements by, *"no later than startup from the second refueling outage that begins after June 30, 2014, or June 30, 2018, whichever comes first."* For MNGP this compliance date would coincide with restart from the Spring 2017 refueling outage.

The proposed date for full implementation of the wetwell venting requirements in NRC Order EA-12-049 will be consistent with the Phase 1 compliance date stated in EA-13-109, Condition IV.B, which for MNGP is restart from the Spring 2017 refueling outage.

Therefore, in accordance with Section IV of NRC Order EA-12-049, NSPM requests relaxation of the schedule requirement described in Condition IV.A.2 of NRC Order EA-12-049, to allow full compliance with NRC Order EA-12-049 to be completed prior to restart from the MNGP Spring 2017 refueling outage.

### **Justification for Relaxation Request**

MNGP has a General Electric Mark I containment design and has installed a direct wetwell (torus) vent system in response to NRC Generic Letter 89-16 (Reference 5) in order to improve the plant's capability to prevent and mitigate a severe accident. Implementation of mitigation strategies pursuant to NRC Order EA-12-049 is required prior to restart from the MNGP refueling outage in the Spring of 2015. The mitigation strategies described in the MNGP OIP rely on containment venting in order to maintain containment within design limits and mitigate torus water temperature rise, thereby allowing the Reactor Core Isolation Cooling (RCIC) system to continue to take suction from the torus and provide core cooling. Further, these mitigation strategies depend on a reliable hardened containment venting capability (wetwell venting only) consistent with implementation of NRC Order EA-12-050.

NRC Order EA-13-109 contains additional requirements for severe accident capable containment venting in response to lessons learned from the Fukushima Dai-ichi accident. MNGP is required to comply with the wetwell venting (Phase 1) requirements of NRC Order EA-13-109 no later than startup from the second refueling outage that begins after June 30, 2014, or June 30, 2018, whichever comes first. For MNGP this compliance date would coincide with restart from the Spring 2017 refueling outage.

NSPM originally intended to establish primary containment venting capability in full compliance with NRC Order EA-12-049 mitigation strategies concurrent with implementation of the containment venting requirements in NRC Order EA-12-050. The NRC subsequently issued NRC Order EA-13-109, which rescinded NRC Order EA-12-050, added new requirements for containment venting, and extended the schedule for full compliance with wetwell venting requirements by one refueling outage for MNGP.

NSPM therefore, requests deferral of full compliance with NRC Order EA-12-049 until restart from the Spring 2017 refueling outage, in order to enable coordination of plant modifications and related evaluations as needed to achieve compliance with the wetwell venting (Phase 1) requirements of NRC Order EA-13-109.

NSPM will implement the other requirements of NRC Order EA-12-049 mitigation strategies, and will rely on the use of the existing torus (wetwell) venting capabilities, in accordance with the original schedule prescribed by NRC Order EA-12-049 (prior to restart from the Spring 2015 outage). This schedule relaxation request only applies to the hardened containment vent portion of the mitigation strategies of NRC Order EA-12-049.

Based on current regulatory requirements and plant capabilities, a sequence of events similar to those encountered at the Fukushima Dai-ichi station is considered to be unlikely to occur in the United States and specifically in Minnesota. NSPM will use its existing torus (wetwell) venting capabilities in support of NRC Order EA-12-049 mitigation strategies, in accordance with the schedule requirements of NRC Order EA-12-049, Condition IV.A.2. Therefore, the proposed schedule relaxation for full compliance with NRC Order EA-12-049 does not adversely affect nuclear safety or involve any significant increase in risk.

In addition, language in the NRC Order EA-13-109 and Nuclear Energy Institute (NEI) 12-06 (implementing document for NRC Order EA-12-049) appears to be inconsistent regarding the design requirements for the hardened containment vent systems (HCVS). For example, NRC Order EA-13-109 describes that HCVS components shall be designed for reliable and rugged performance that is capable of ensuring HCVS functionality following a seismic event. Whereas, NEI 12-06 describes a baseline assumption that installed equipment (including HCVS equipment) be robust with respect to design basis external events to be considered fully available. Robust is defined in NEI 12-06 as *"the design of an SSC either meets the current plant design basis for the applicable external hazards or has been shown by analysis or test to meet or exceed the current design basis."* In the case of the HCVS, since portions of the system are necessarily located outside of robust structures (e.g. containment, reactor building or other design bases structures), these components could be viewed as being required to adhere to tornado/high wind design bases requirements in addition to seismic design requirements to be considered available. Tornado/high wind design requirements are not factored into the currently installed wetwell vent at MNGP as these design requirements were not required by GL 89-16.

Changes to containment wetwell venting requirements consistent with NRC Order EA-13-109 Phase 1 implementation by the Spring 2017 refueling outage will provide additional defense-in-depth to mitigate beyond-design-basis events. Based on the capabilities of the currently installed wetwell vent, and a change in containment venting requirements and schedule milestones imposed by NRC Order EA-13-109, and the potentially conflicting design requirements for the HCVS, NSPM considers that full implementation of the NRC Order EA-12-049 requirements (including factoring in NRC Order EA-13-109 requirements) at MNGP according to the prescribed schedule would involve undue hardship or unusual difficulty with no appreciable increase in safety.

Accordingly, NSPM requests that the NRC Order EA-12-049, Condition IV.A.2, full implementation milestone for MNGP be relaxed to prior to restart from the Spring 2017 refueling outage.

### **Conclusion**

Full compliance with the mitigation strategy implementation schedule requirements of NRC Order EA-12-049 at MNGP would result in hardship or unusual difficulty without a

compensating increase in the level of safety. Therefore, in accordance with Section IV of NRC Order EA-12-049, NSPM requests relaxation of the schedule requirement described in Condition IV.A.2 of NRC Order EA-12-049, to allow full compliance with NRC Order EA-12-049 to be completed prior to restart from the MNGP Spring 2017 refueling outage.

### **References**

1. NRC Order EA-12-049, "Issuance of Order to Modify Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012 (ADAMS Accession No. ML12054A735).
2. Letter From M Schimmel (NSPM) to Document Control Desk (NRC), "Monticello Nuclear Generating Plant's Overall Integrated Plan in Response to March 12, 2012 Commission Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events (Order Number EA-12-049)," dated February 28, 2013. (ADAMS Accession No. ML13066A066)
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5. NRC Letter, "Installation of a Hardened Wetwell Vent (Generic Letter 89-16)," dated September 1, 1989.