



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

June 22, 2015

L-MT-15-031
10 CFR 2.202
EA-13-109

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

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

Monticello Nuclear Generating Plant: Second Six-Month Status Report in Response to June 6, 2013 Commission Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions (Order EA-13-109), Phase 1

- References:
- 1) NRC Order Number EA-13-109, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated June 6, 2013. (ADAMS Accession No. ML13143A334)
 - 2) NRC Interim Staff Guidance JLD-ISG-2013-02, "Compliance with Order EA-13-109, Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation under Severe Accident Conditions," Revision 0, dated November 14, 2013. (ADAMS Accession No. ML13304B836)
 - 3) Letter from D. Skeen (NRC) to J. Pollock (NEI), Endorsement of "Hardened Containment Venting System (HCVS) Phase 1 Overall Integrated Plan Template (EA-13-109) Rev 0," dated May 14, 2014. (ADAMS Accession No. ML14128A219)
 - 4) NEI 13-02, "Industry Guidance for Compliance with Order EA-13-109," Revision 0, dated November 2013. (ADAMS Accession No. ML13316A853)

- 5) Letter from K. Fili (NSPM) to Document Control Desk (NRC), "MNGP's Phase 1 Overall Integrated Plan in Response to June 6, 2013 Commission Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions (Order Number EA-13-109)," L-MT-14-052, dated June 30, 2014. (ADAMS Accession No. ML14183A412)
- 6) Letter from K. Fili (NSPM) to Document Control Desk (NRC), "Monticello Nuclear Generating Plant: First Six-Month Status Report in Response to June 6, 2013 Commission Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions (Order Number EA-13-109)," L-MT-14-092, dated December 16, 2014. (ADAMS Accession No. ML14353A215)

On June 6, 2013, the Nuclear Regulatory Commission (NRC) issued Order EA-13-109 (Reference 1) to Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy. Reference 1 was effective immediately and directs NSPM to install a reliable hardened venting capability for pre-core damage and under severe accident conditions, including those involving a breach of the reactor vessel by molten core debris for Monticello Nuclear Generating Plant (MNGP). Specific requirements are outlined in Attachment 2 of Reference 1.

Reference 1 required submission of a Phase 1 Overall Integrated Plan (OIP) pursuant to Section IV, Condition D. Reference 3 endorses industry guidance document, NEI 13-02, Revision 0 (Reference 4), with clarifications and exceptions identified in Reference 3. Reference 5 provided the MNGP Phase 1 OIP.

Reference 1 requires submission of a status report at six-month intervals following submittal of the Phase 1 OIP. References 2 and 4 provide direction regarding the content of the status reports. Reference 6 provided the first six-month status report for Phase 1 of the order.

The purpose of this letter is to provide the second six-month status report pursuant to Section IV, Condition D, of Reference 1, that delineates progress made in implementing the requirements of Reference 1. The enclosed report provides an update of milestone accomplishments, including any changes to the compliance method, schedule, or need for relief and the basis, if any.

Please contact John Fields, Fukushima Response Licensing, at 763-271-6707, if additional information or clarification is required.

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 June 22, 2015.

A handwritten signature in black ink, appearing to read "Peter A. Gardner". The signature is fluid and cursive, with a large initial "P" and "G".

Peter A. Gardner
Site Vice President, Monticello Nuclear Generating Plant
Northern States Power Company - Minnesota

Enclosure

cc: Administrator, Region III, USNRC
Director of Nuclear Reactor Regulation (NRR), USNRC
Project Manager, Monticello Nuclear Generating Plant, USNRC
Resident Inspector, Monticello Nuclear Generating Plant, USNRC

ENCLOSURE

MONTICELLO NUCLEAR GENERATING PLANT

SECOND SIX-MONTH STATUS REPORT FOR THE IMPLEMENTATION OF NRC ORDER EA-13-109, “ORDER MODIFYING LICENSES WITH REGARD TO RELIABLE HARDENED CONTAINMENT VENTS CAPABLE OF OPERATION UNDER SEVERE ACCIDENT CONDITIONS”

1.0 Introduction

Northern States Power Company, a Minnesota corporation (NSPM), doing business as Xcel Energy developed a Phase 1 Overall Integrated Plan (OIP) (Reference 1) in response to Phase 1 of NRC Order EA-13-109 (Reference 2). The OIP documents a plan to install a Hardened Containment Vent System (HCVS) that provides a reliable wetwell hardened venting capability for pre-core damage and under severe accident conditions, including those involving a breach of the reactor vessel by molten core debris for the Monticello Nuclear Generating Plant (MNGP). This enclosure provides an update of milestone accomplishments since submittal of the last status report, including any changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

2.0 Milestone Accomplishments

None.

3.0 Milestone Schedule Status

The following table provides an update to Part 5 of the MNGP HCVS Phase 1 OIP as modified by the first status report (Reference 6). The table provides the activity status of each item, and whether the expected completion date has changed. The dates are planning dates subject to change as design and implementation details are developed (i.e., not considered formal regulatory commitments).

There are no revised milestone target completion dates proposed in this status report. Therefore, the Order Implementation date has not been impacted.

| Milestone | Target Completion Date | Activity Status | Comments |
|---|-------------------------------|------------------------------|-----------------|
| Phase 1 HCVS Milestone Table | | | |
| Submit Overall Integrated Plan | June 2014 | Complete | |
| Submit 6 Month Updates: | | | |
| Update 1 | December 2014 | Complete | |
| Update 2 | June 2015 | Complete with this submittal | |
| Update 3 | December 2015 | Not Started | |
| Update 4 | June 2016 | Not Started | |
| Update 5 | December 2016 | Not Started | |
| Modifications: | | | |
| Hold preliminary/conceptual design meeting | June 2014 | Complete | |
| Design Engineering On-site/Complete | March 2016 | Started | |
| Implementation Outage | May 2017 | Not Started | |
| Walk Through Demonstration/Functional Test | May 2017 | Not Started | |
| Procedure Changes Active: | | | |
| Operations Procedure Changes Developed | September 2016 | Not Started | |
| Site Specific Maintenance Procedure Developed | September 2016 | Not Started | |
| Procedure Changes Active | May 2017 | Not Started | |
| Training: | | | |
| Training Complete | May 2017 | Not Started | |

| Milestone | Target Completion Date | Activity Status | Comments |
|-------------------------------------|-------------------------------|------------------------|-----------------|
| Phase 1 HCVS Milestone Table | | | |
| Completion: | | | |
| HCVS Implementation | May 2017 | Not Started | |
| Submit Completion Report | July 2017 | Not Started | |

4.0 Proposed Changes to Compliance Method

There are no changes to the compliance method as documented in the Phase 1 OIP (Reference 1).

5.0 Need and Basis for Relief from the Requirements of the Order

NSPM expects to comply with the Order implementation date and no relief/relaxation is required at this time.

6.0 Open Items from Overall Integrated Plan and Interim Staff Evaluation

The following tables provide a summary of the open items documented in the Phase 1 OIP (Reference 1) and the Interim Staff Evaluation (ISE) (Reference 7) and the status of each item.

| Overall Integrated Plan Phase 1 Open Item | Status |
|--|---------------|
| 1. Follow industry guidance on missile protection for HCVS. | Open |
| 2. Identify the 24 hour power supply for the HCVS. | Open |
| 3. Determine radiological conditions for the FLEX portable equipment staging areas. | Open |
| 4. Evaluate the Alternate Shutdown System Panel and Backup HCVS Operation Station locations for accessibility, habitability, staffing sufficiency, associated pathways from the control room and communication capability with vent-use decision makers. | Open |
| 5. Determine approach or combination of approaches to control hydrogen. | Open |

| | |
|--|------|
| 6. Determine the Qualification Method for HCVS instrumentation. | Open |
| 7. Evaluate the effects of radiological and temperature constraints on the deployment of nitrogen bottles after 24 hours. | Open |
| 8. Evaluate HCVS battery charger location for accessibility, habitability, staffing sufficiency, associated pathways from control room and communication capability with vent-use decision makers. | Open |

| Interim Staff Evaluation Open Item | Status |
|---|---------------|
| 1. Make available for NRC staff audit the final sizing evaluation for HCVS batteries/battery charger including incorporation into FLEX DG loading calculation. | Open |
| 2. Make available for NRC staff audit documentation of the HCVS nitrogen pneumatic system design including sizing and location. | Open |
| 3. Make available for NRC staff audit an evaluation of temperature and radiological conditions to ensure that operating personnel can safely access and operate controls and support equipment. | Open |
| 4. Make available for NRC staff audit analyses demonstrating that HCVS has the capacity to vent the steam/energy equivalent of one percent of licensed/rated thermal power (unless a lower value is justified), and that the suppression pool and the HCVS together are able to absorb and reject decay heat, such that following a reactor shutdown from full power containment pressure is restored and then maintained below the primary containment design pressure and the primary containment pressure limit. | Open |
| 5. Make available for NRC staff audit the seismic and tornado missile final design criteria for the HCVS stack. | Open |
| 6. Make available for NRC staff audit the descriptions of local conditions (temperature, radiation and humidity) anticipated during ELAP [<i>Extended Loss of AC Power</i>] and severe accident for the components (valves, instrumentation, sensors, transmitters, indicators, electronics, control devices, etc.) required for HCVS venting including confirmation that the components are capable of performing their functions during ELAP and severe accident conditions. | Open |
| 7. Make available for NRC staff audit documentation that demonstrates adequate communication between the remote HCVS operation locations and HCVS decision makers during ELAP and severe accident conditions. | Open |

| | |
|---|------|
| 8. Provide a description of the final design of the HCVS to address hydrogen detonation and deflagration. | Open |
| 9. Provide a description of the strategies for hydrogen control that minimizes the potential for hydrogen gas migration and ingress into the reactor building or other buildings. | Open |
| 10. Make available for NRC staff audit descriptions of all instrumentation and controls (existing and planned) necessary to implement this order including qualification methods. | Open |
| 11. Make available for NRC staff audit documentation of an evaluation verifying the existing containment isolation valves, relied upon for the HCVS, will open under the maximum expected differential pressure during BDBEE and severe accident wetwell venting. | Open |

7.0 Potential Interim Staff Evaluation Impacts

There are no potential impacts to the ISE identified at this time.

8.0 References

1. Letter from K. Fili (NSPM) to Document Control Desk (NRC), "MNGP's Phase 1 Overall Integrated Plan in Response to June 6, 2013 Commission Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions (Order Number EA-13-109)," L-MT-14-052, dated June 30, 2014. (ADAMS Accession No. ML14183A412)
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3. NEI 13-02, "Industry Guidance for Compliance with Order EA-13-109," Revision 0, dated November 2013. (ADAMS Accession No. ML13316A583)
4. NRC Interim Staff Guidance JLD-ISG-2013-02, "Compliance with Order EA-13-109, Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," Revision 0, dated November 14, 2013. (ADAMS Accession No. ML13304B836)

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7. Letter from M. Halter (NRC) to P. Gardner (NSPM), “Monticello Nuclear Generating Plant - Interim Staff Evaluation Relating To Overall Integrated Plan In Response To Phase One Of Order EA-13-109 (Severe Accident Capable Hardened Vents) (TAC No. MF4376),” dated April 2, 2015. (ADAMS Accession No. ML15082A167)