



**Nebraska Public Power District**

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NLS2015079

June 30, 2015

U.S. Nuclear Regulatory Commission

ATTN: Document Control Desk

Washington, DC 20555-0001

**Subject:** Nebraska Public Power District's 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 Number EA-13-109)  
Cooper Nuclear Station, Docket No. 50-298, DPR-46

- 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
  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 (Accession No. ML13304B836)
  3. NEI 13-02, "Industry Guidance for Compliance with Order EA-13-109 BWR Mark I & II Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," Revision 0, dated November 2013
  4. NPPD letter to NRC, "Nebraska Public Power District'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)," dated June 30, 2014 (NLS2014057)
  5. NPPD letter to NRC, "Nebraska Public Power District's 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)," dated December 19, 2014 (NLS2014101)

**COOPER NUCLEAR STATION**

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NLR

Dear Sir or Madam:

On June 6, 2013, the Nuclear Regulatory Commission issued an Order (Reference 1) to Nebraska Public Power District (NPPD). Reference 1 was immediately effective and directs NPPD to install a reliable hardened venting capability at Cooper Nuclear Station (CNS) for pre-core damage and under severe accident conditions, including those involving a breach of the reactor vessel by molten core debris. 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 2 endorses industry guidance document NEI 13-02, Revision 0 (Reference 3) with clarifications and exceptions identified in Reference 2. Reference 4 provided NPPD's initial OIP and Reference 5 provided a revised OIP for CNS.

Reference 1 requires submission of a status report at six-month intervals following submittal of the OIP. Reference 3 provides direction regarding the content of the status reports. 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 attachment provides an update of milestone accomplishments including any changes to the compliance method, schedule, or need for relief and the basis, if any.

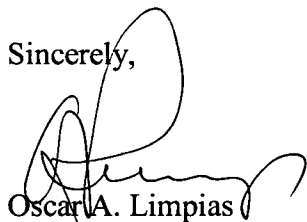
This letter contains no new regulatory commitments.

If you have any questions regarding this report, please contact Jim Shaw, Licensing Manager, at (402) 825-2788.

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

Executed on: 4/30/15

Sincerely,



Oscar A. Limpas  
Vice President - Nuclear and  
Chief Nuclear Officer

/bk

Attachment: Nebraska Public Power District's 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 Number EA-13-109)

cc: Regional Administrator, w/attachment  
USNRC - Region IV

Director, w/attachment  
USNRC - Office of Nuclear Reactor Regulation

Cooper Project Manager, w/attachment  
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector, w/attachment  
USNRC - CNS

NPG Distribution, w/o attachment

CNS Records, w/attachment

## Attachment

### **Nebraska Public Power District's 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 Number EA-13-109)**

#### **Introduction**

Nebraska Public Power District (NPPD) developed an Overall Integrated Plan (OIP) (Reference 1) in accordance with the guidance contained in References 3 and 4. This OIP documents the installation of a Hardened Containment Vent System (HCVS) at Cooper Nuclear Station (CNS) that provides 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, in response to Reference 2.

As part of the first six-month status report, NPPD reported a change in the method of compliance with regard to the design of the wetwell vent due to increasing complexity of the design needed to support using existing underground piping. NPPD submitted a revised OIP with that status report (Reference 5).

This attachment provides an update of milestone accomplishments including changes to the compliance method, schedule, or need for relief/relaxation and the basis, if any.

#### **Milestone Accomplishments**

The following milestone(s) have been completed since last status update and are current as of June 15, 2015:

- None.

#### **Milestone Schedule Status**

The following table provides an update to the milestones contained in the OIP. It 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.

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date/ Comments
Hold preliminary/conceptual design meeting	June 2014	Complete	
Submit Overall Integrated Implementation Plan	June 2014	Complete	
Submit 6 Month Status Report	December 2014	Complete	

Milestone	Target Completion Date	Activity Status	Revised Target Completion Date/ Comments
Submit 6 Month Status Report	June 2015	Complete	
Design Engineering On-site/Complete	September 2015	Started	
Submit 6 Month Status Report	December 2015	Not Started	Simultaneous with Phase 2 OIP
Submit 6 Month Status Report	June 2016	Not Started	
Operations Procedure Changes Developed	August 2016	Not Started	
Site Specific Maintenance Procedure Developed	August 2016	Not Started	
Training Complete	September 2016	Not Started	
Implementation Outage	October 2016	Not Started	
Procedure Changes Active	November 2016	Not Started	
Walk Through Demonstration/Functional Test	November 2016	Not Started	
Submit Completion Report	November 2016	Not Started	January 2017 (60 days after full compliance)

### **Changes to Compliance Method**

None to report since the December 2014 update.

### **Need for Relief/Relaxation and Basis for the Relief/Relaxation**

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

### **Open Items from Interim Staff Evaluation**

In Reference 6, the Nuclear Regulatory Commission (NRC) issued an interim staff evaluation (ISE) for CNS. The following table provides a status of the open items documented in ISE.

Open Item	Action	Status
1	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	In progress

	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.	
2	Make available for NRC staff audit the seismic and tornado missile final design criteria for the HCVS stack.	In progress
3	Make available for NRC staff audit descriptions of all instrumentation and controls (existing and planned) necessary to implement this order including qualification methods.	In progress
4	Make available for NRC staff audit a determination of the number of required valve cycles during the first 24 hours.	In progress
5	Make available for NRC audit the control document for HCVS out of service time criteria	In progress
6	Make available for NRC staff to audit, an evaluation verifying the existing containment isolation valves, relied upon for the HCVS, will open under the maximum expected differential pressure during severe accident wetwell venting.	In progress
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.	In progress
8	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.	In progress
9	Make available for NRC staff audit the final sizing evaluation for HCVS batteries/battery charger and incorporate into FLEX DG loading calculation.	In progress
10	Make available for NRC staff audit documentation of the HCVS nitrogen pneumatic system design including sizing and location.	In progress
11	Make available for NRC staff audit the descriptions of local conditions (temperature, radiation and humidity) anticipated during ELAP and severe accident for the components (valves, instrumentation, sensors, transmitters, indicators, electronics, control devices, and etc.) required for HCVS venting including confirmation that the components are capable of performing their functions during ELAP and severe accident conditions.	In progress

### **Interim Staff Evaluation Impacts**

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

### **References**

The following references support the updates to the Phase 1 OIP described in this attachment.

1. NPPD letter to NRC, "Nebraska Public Power District'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)," dated June 30, 2014 (NLS2014057)
2. 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
3. NEI 13-02, "Industry Guidance for Compliance with Order EA-13-109 BWR Mark I & II Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," Revision 0, dated November 2013
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 (Accession No. ML13304B836)
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6. NRC letter to NPPD, "Cooper Nuclear Station - Interim Staff Evaluation Relating to Overall Integrated Plan in Response to Phase 1 of Order EA-13-109 (Severe Accident Capable Hardened Vents) (TAC NO. MF4384)," dated February 11, 2015