

PSEG Nuclear LLC  
P.O. Box 236, Hancocks Bridge, NJ 08038-0236



Order EA-12-049

LR-N14-0093

**APR 16** 2014

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

Hope Creek Generating Station  
Renewed Facility Operating License No. NPF-57  
NRC Docket No. 50-354

Subject: PSEG Nuclear LLC's 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" – Hope Creek Generating Station

References:

1. NRC Order Number EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events," dated March 12, 2012
2. PSEG Letter LR-N13-0031, "PSEG Nuclear LLC's Overall Integrated Plan for the Hope Creek Generating Station 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 27, 2013
3. NRC Order EA-12-050, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents," dated March 12, 2012
4. NRC Order EA-13-109, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated June 6, 2013

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Order EA-12-049 (Reference 1) to PSEG Nuclear LLC (PSEG). NRC Order EA-12-049 requires the Hope Creek Generating Station (HCGS) 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. This letter transmits a request for relaxation from the requirements of NRC Order EA-12-049 for HCGS.

As described in the HCGS Overall Integrated Plan (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 NRC Order EA-13-109 (Reference 4) rescinded the requirements of NRC Order EA-12-050, established new requirements and revised the implementation schedule for reliable hardened containment vents capable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 HCGS to fully implement the requirements of NRC Order EA-12-049 within the required time frame.

In accordance with Section IV of NRC Order EA-12-049, PSEG 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 Attachment 1 to this letter.

PSEG considers that the requested relaxation would constitute a change in the implementation schedule requirements of NRC Order EA-12-049 for HCGS. There are no regulatory commitments contained in this letter.

If you have any questions or require additional information, please do not hesitate to contact Mr. Brian J. Thomas at 856-339-2022.

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

Executed on April 16, 2014  
(Date)

Sincerely,



Paul J. Davison  
Site Vice President  
Hope Creek Generating Station

APR 16 2014

Order EA-12-049

Page 3  
LR-N14-0093

Attachment 1: Hope Creek Generating Station 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"

cc: Mr. E. Leeds, Director of Office of Nuclear Reactor Regulation  
Mr. W. Dean, Administrator, Region I, NRC  
Mr. J. Lamb, Project Manager, NRC  
NRC Senior Resident Inspector, Hope Creek  
Mr. P. Mulligan, Manager IV, NJBNE  
Hope Creek Commitment Tracking Coordinator  
PSEG Corporate Commitment Coordinator

APR 16 2014

LR-N14-0093

**Attachment 1**

**Hope Creek Generating Station 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"**

**Hope Creek Generating Station  
PSEG Nuclear LLC**

## **Relaxation Request**

In accordance with Section IV of NRC Order EA-12-049 (Reference 1), PSEG hereby requests relaxation of the Order requirement for HCGS 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 from Which Relaxation is Requested**

Condition IV.A.2 of NRC Order EA-12-049 requires full implementation of the Order requirements by no later than two refueling cycles after submittal of the overall integrated plan required by Condition C.1.a, or December 31, 2016, whichever comes first. For HCGS, the current requirement for full implementation of NRC Order EA-12-049 is prior to restart from HCGS Refueling Outage 19 (H1R19) in Spring 2015.

As described in the HCGS Overall Integrated Plan (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 additional requirements, and revised the implementation schedules for reliable hardened containment vents capable of operation under severe accident conditions. HCGS is required to comply with the Phase 1 (containment wetwell) venting requirements of NRC Order EA-13-109 prior to restart from the H1R20 outage in Fall 2016. The revised requirements in NRC Order EA-13-109 affect the ability of HCGS to fully implement the requirements of NRC Order EA-12-049 prior to restart from H1R19 in Spring 2015.

## **Justification for Relaxation Request**

HCGS has a General Electric Mark I containment design, and has installed a direct wetwell (torus) vent 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. 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. HCGS is required to comply with the wetwell venting requirements of NRC Order EA-13-109 prior to restart from HCGS Refueling Outage 20 (H1R20) in Fall 2016. Implementation of mitigation strategies pursuant to NRC Order EA-12-049 (Reference 2) is required prior to restart from H1R19 in Spring 2015. The mitigation strategies described in the HCGS Overall Integrated Plan (Reference 2) 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.

PSEG 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 HCGS. PSEG therefore requests deferral of full compliance with NRC Order EA-12-049 until restart from H1R20 in Fall 2016, in order to enable coordination of plant modifications and related evaluations as needed to achieve compliance with the wetwell venting requirements of NRC Order EA-13-109. PSEG will implement the other requirements of NRC Order EA-12-049 mitigation strategies, and will rely on the use of the existing torus venting capabilities, in accordance with the original schedule prescribed by NRC Order EA-12-049 (prior to restart from H1R19). This schedule relaxation request only applies to the hardened containment vent portion of the mitigation strategies of NRC Order EA-12-049.

The proposed date for full implementation of NRC Order EA-12-049 remains within the December 31, 2016 date in Order Condition IV.A.2. 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. PSEG will use its existing torus 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.

Changes to containment venting requirements consistent with NRC Order EA-13-109 implementation by H1R20 will provide additional defense-in-depth to mitigate beyond-design-basis events. Based on the change in containment venting requirements and schedule milestones imposed by NRC Order EA-13-109, PSEG considers that full implementation of the NRC Order EA-12-049 requirements at HCGS according to the prescribed schedule would involve undue hardship with no appreciable increase in safety.

Accordingly, PSEG requests that the NRC Order EA-12-049, Condition IV.A.2, full implementation milestone for HCGS be relaxed to prior to restart from H1R20 in Fall 2016.

### **Conclusion**

Full compliance with the mitigation strategy implementation schedule requirements of NRC Order EA-12-049 at HCGS 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, PSEG 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 HCGS Refueling Outage 20 in Fall 2016.

**References**

1. NRC Order Number EA-12-049, "Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond Design Basis External Events," dated March 12, 2012
2. PSEG Letter LR-N13-0031, "PSEG Nuclear LLC's Overall Integrated Plan for the Hope Creek Generating Station 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 27, 2013
3. NRC Order EA-12-050, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents," dated March 12, 2012
4. NRC Order EA-13-109, "Order Modifying Licenses with Regard to Reliable Hardened Containment Vents Capable of Operation Under Severe Accident Conditions," dated June 6, 2013
5. NRC Letter, "Installation of a Hardened Wetwell Vent (Generic Letter 89-16)," dated September 1, 1989