UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 29, 2015

Mr. Robert Braun
President and Chief Nuclear Officer
PSEG Nuclear LLC
P.O. Box 236, N09
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION – RELAXATION OF THE SCHEDULE REQUIREMENTS FOR ORDER EA-12-049, "ISSUANCE OF ORDER TO MODIFY LICENSES WITH REGARD TO REQUIREMENTS FOR MITIGATION STRATEGIES FOR BEYOND-DESIGN-BASIS EXTERNAL EVENTS" (TAC NO. MF0867)

Dear Mr. Braun:

By letter dated March 12, 2012 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12054A735), the U.S. Nuclear Regulatory Commission (NRC) ordered PSEG Nuclear LLC (PSEG, the licensee) to take certain actions at Hope Creek Generating Station (HCGS) associated with the Fukushima Near-Term Task Force Recommendations. Order EA-12-049 directed that actions be taken by licensees to develop and implement strategies to maintain or restore core cooling, containment cooling, and spent fuel pool cooling capabilities during beyond-design-basis external events (BDBEEs).

By separate letter dated March 12, 2012 (ADAMS Accession No. ML12054A694), the NRC ordered PSEG to install a reliable hardened containment vent system at HCGS via Order EA-12-050. By letter dated June 6, 2013 (ADAMS Accession No. ML13143A321), the NRC superseded the requirements of Order EA-12-050 with those of Order EA-13-109, which requires the installation of reliable hardened containment vents capable of operation under severe accident conditions. The compliance date requirements of Order EA-13-109 extended beyond those of Order EA-12-049 for HCGS.

Section IV of Order EA-12-049 states that licensees proposing to deviate from requirements of the order may request that the Director, Office of Nuclear Reactor Regulation, relax or rescind certain requirements. By letter dated April 16, 2014 (ADAMS Accession No. ML14107A374), the licensee requested schedule relaxation from the final compliance date of Order EA-12-049. Specifically, the licensee requested an extension of one refueling cycle so that HCGS could complete implementation of the hardened severe accident capable containment wetwell vent and utilize that vent in the strategy for compliance with Order EA-12-049. The extension request was proposed because the installation of a containment wetwell vent that meets the requirements of Order EA-13-109, Phase I, will take additional time to complete, as compared to the compliance date of the spring 2015 refueling outage associated with Order EA-12-049. By letter dated May 20, 2014 (ADAMS Accession No. ML14113A316), the NRC issued a relaxation to Order EA-12-049, extending the requirement for full implementation of the order until the completion of the fall 2016 refueling outage. However, part of the basis for NRC approval of the schedule relaxation included PSEG's expected completion of the activities required to implement the mitigation strategies required by NRC Order EA-12-049, other than those

activities associated with the severe accident capable vent, prior to startup from the spring 2015 refueling outage.

By letter dated March 11, 2015 (ADAMS Accession No. ML15071A139), as supplemented by letter dated April 13, 2015 (ADAMS Accession No. ML15103A291), the licensee requested further schedule relaxation for other activities associated with the mitigation strategies required by Order EA-12-049. Specifically, the licensee requested an extension to December 18, 2015, to complete activities required for compliance with the order, other than the activities associated with installation of the containment wetwell vent for which schedule relaxation has already been granted.

For example, PSEG determined that it was necessary to revise their diverse and flexible (FLEX) coping strategies. Due to the potential for high water levels at the site due to hurricane storm surge, PSEG will be storing the two FLEX diesel generators on the roof of the HCGS Unit 2 reactor building rather than using ground level storage. HCGS Unit 2 was never completed, so the Unit 2 structures that were erected are available for these purposes. PSEG reports that this change resulted in the following challenges:

1. Placement of the FLEX diesel generators at a higher elevation affected the seismic design, necessitating further work to complete the structural design.
2. The relocation affected the design of the motor control centers that will be energized by the FLEX diesel generators.

PSEG stated that the plant modifications for FLEX strategies that require unit shutdown will be completed during the spring 2015 refueling outage, and that the remainder of the work will be completed prior to December 18, 2015. The NRC staff notes that HCGS has robust design features that reduce the risk associated with external events. For example, HCGS has four independent emergency diesel generators (EDGs) which are designed to survive the design basis external hazards such as earthquakes, floods, hurricanes, and tornadoes, while the typical reactor has two EDGs.

In light of the facts presented in the licensee's letters dated March 11 and April 13, 2015, the NRC staff has determined that the licensee has demonstrated good cause for a schedule relaxation for the activities required to implement the mitigation strategies. By completing the specified plant configuration changes by December 18, 2015 (other than the severe accident capable containment wetwell vent), and maintaining the ability to vent containment in accordance with existing procedures, a substantial portion of the desired increase in capability to respond to a BDBEE will be realized within the timeframe specified in Order EA-12-049. The NRC staff also considered that, following the accident at Fukushima Dai-ichi, the NRC concluded that a sequence of events such as the Fukushima Dai-ichi accident is unlikely to occur in the United States based on the current regulatory requirements and existing plant capabilities. The NRC staff agrees that compliance with the HCGS schedule requirements of Order EA-12-049 could create a hardship without a compensating increase in the level of safety. Given the plant-specific circumstances at HCGS, and that the proposed completion date is prior to the ultimate December 2016 implementation date of the order, the NRC staff approves the relaxation.

Accordingly, based upon the authority granted to the Director, Office of Nuclear Reactor Regulation, the requirement of the order for full implementation is relaxed until December 18, 2015. The relaxation applies to the plant configuration changes other than the activities associated with installation of the containment wetwell vent, for which a schedule relaxation has already been granted.

If you have any questions, please contact John P. Boska at 301-415-2901 or via e-mail at John.Boska@nrc.gov.

Sincerely,

William M. Dean, Director
Office of Nuclear Reactor Regulation

Docket No. 50-354

cc: Listserv

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/RA/

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