From:	DiFrancesco, Nicholas
To:	Philippe Soenen (Pns3@pge.com)
Cc:	"Jahangir, Nozar" (NxJ1@pge.com); Vega, Frankie; Shams, Mohamed; Jackson, Diane
Subject:	NRC Technical Focus Areas for Support of Public Meeting on April 28
Date:	Thursday, April 23, 2015 1:33:00 PM

Mr. Soenen,

In support of the public meeting scheduled for April 28, 2015, the NRC staff would like to gain additional technical understanding in several areas to support productive public meeting discussions. In addition to providing a general overview of the SSC and GMC SSHAC Reports and March 2015 50.54(f) response for DCPP, please provide additional clarification on the following topics.

Seismic Source Characterization

1. Summarize the key data used to constrain the slip rate of the Hosgri fault, including associated uncertainties.

2. Clarify how elements of the thrust/reverse interpretation for the San Luis Range Thrust are incorporated into the SSC.

3. Clarify how the rupture models are derived from the fault source geometry models.

4. Summarize the methodology used to define the equivalent Poisson rates.

Ground Motion Characterization

1. Provide additional detail on the criteria used for the selection of the candidate ground motion prediction equations (GMPEs) for development of the common form median ground motion models for DCPP. Specifically, please elaborate on the basis for including GMPEs based on datasets other than NGA-West2.

2. Provide additional detail on development of the common functional form used to fit the candidate GMPEs. Specifically, please discuss how model parameters such as depth to Vs=1 km/s and 2.5 km/s (which are present in some of the candidate GMPEs) are accounted for in the functional form.

3. Provide additional detail on the approach for weighting the selected common form models as well as the criteria used to verify the physicality of the final models.

4. Provide additional detail on how the continuous distribution for total sigma (s_{SS}) was developed by combining the between-event and within-event aleatory variabilities.

Site Response

1. Section 2.3.2.1 of the 50.54(f) submittal states that shear modulus and damping curves are not directly applicable to DCPP since analytical modeling is not used and that non-linear site effects are implicitly included in the empirical GMPEs for Vs30=760 m/s. However, the NGA-West2 database has a limited amount of data for sites with Vs30 near 760 m/s and for earthquakes with magnitudes and source-to-site distances similar to those dominating the hazard for DCPP. Please provide additional information on how these limitations in the NGA-West2 database are accounted for in the site response model for DCPP.

2. Section 2.3.6 of the 50.54(f) submittal describes the development of the site term for

DCPP. For the calculations of between-event residuals, provide additional information on the criteria used to determine the appropriate distance range (+ and - Rrup) to the sample station. Please discuss the sensitivity of this distance range on between-event residual values. Please provide an example calculation that uses site-specific values to determine the values for f_{S2S}, including the epistemic uncertainty in the site term.

Please let me know if you have any questions on the above focus areas.

Thanks,

Nick DiFrancesco

Senior Project Manager - Seismic Reevaluation Activities
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation
Japan Lesson Learned Project Division
nicholas.difrancesco@nrc.gov | Tel: (301) 415-1115