

Timothy S. Rausch
Senior Vice President & Chief Nuclear Officer

PPL Susquehanna, LLC
769 Salem Boulevard
Berwick, PA 18603
Tel. 570.542.3345 Fax 570.542.1504
tsrausch@pplweb.com



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

**SUSQUEHANNA STEAM ELECTRIC STATION
RESPONSE TO MARCH 12, 2012 INFORMATION
REQUEST- SUPPLEMENTAL INFORMATION
RELATED TO THE SEISMIC HAZARD AND
SCREENING REPORT FOR RECOMMENDATION 2.1
PLA-7224**

**Docket No. 50-387
and No. 50-388**

References:

1. NRC Letter, "Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 12, 2012
2. Electric Power Research Institute (EPRI) Report 1025287, *Seismic Evaluation Guidance: Screening, Prioritization, and Implementation Details (SPID) for Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic*
3. EPRI Report 3002000704, *Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1 – Seismic*
4. PPL Letter (PLA-7145), titled "Susquehanna Steam Electric Station Seismic Hazard and Screening Report (CEUS Sites), Response to NRC Request for Information Pursuant to 10 CFR 50.54(f) Regarding Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated March 26, 2014
5. NRC Letter, 'Electric Power Research Institute Final Draft Report XXXXXX, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Near-Term Task Force Recommendation 2.1: Seismic," as an Acceptable Alternative to the March 12, 2012, Information Request for Seismic Reevaluations,' dated May 7, 2013
6. NRC Letter, "Screening and Prioritization Results Regarding Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Recommendations 2.1, 2.3, and 9.3, of the Near-Term Task Force Review of Insights from the Fukushima Dai-ichi Accident," dated July 21, 2014

On March 12, 2012, the Nuclear Regulatory Commission (NRC) issued Reference 1 to all power reactor licensees and holders of construction permits in active or deferred

status. Enclosure 1 of Reference 1 requested each addressee in the Central and Eastern United States (CEUS) to submit a Seismic Hazard and Screening Report.

PPL Susquehanna, LLC (PPL) submitted the Seismic Hazard and Screening Report for Susquehanna Steam Electric Station (SSES) Units 1 and 2 to NRC in Reference 4. The report provided the basis for both units to screen out of performing seismic risk evaluations in accordance with the guidance in the Seismic Evaluation Guidance: Screening, Prioritization, and Implementation Details (SPID) (Reference 2). This screening was based on demonstrating that the plant capacity spectra for SSES Units 1 and 2 from the Individual Plant Examination for External Events (IPEEE) exceed the new ground motion response spectrum (GMRS) in the 1 to 10 Hz range.

PPL demonstrated the adequacy of the IPEEE Programs, in accordance with the criteria in the SPID, for SSES Units 1 and 2 in Reference 4. In Reference 6, the NRC stated that for SSES Units 1 and 2, "...the Licensee has demonstrated IPEEE plant capacity, consistent with endorsed guidance, bounds the re-evaluated hazard."

In Reference 1, the NRC requested interim evaluations and actions "...to address higher seismic hazard....prior to completion of risk evaluation." Section 1 of the Augmented Approach guidance (Reference 3) states that "...this report addresses interim evaluations...to be implemented prior to performing complete plant seismic risk evaluations." The NRC endorsement of the Augmented Approach guidance (Reference 5), states that the Expedited Seismic Evaluation Process (ESEP) can provide seismic margin "...while more detailed and comprehensive plant seismic risk evaluations are being performed."

Consistent with the guidance contained in Reference 3, the Seismic Hazard and Screening Report (Reference 4) indicated that SSES Units 1 and 2 should screen-in for performance of the ESEP. However, the spectral amplitudes of the new GMRS for SSES Units 1 and 2 are sufficiently low that interim seismic risk evaluations for ESEP do not provide commensurate safety benefit. PPL considers that the resource-intensive interim evaluations per the Augmented Approach guidance for ESEP, which were intended to address high seismic hazards prior to completion of a seismic risk evaluation, are not warranted for SSES Units 1 and 2.

From a seismic safety perspective, the SSES Units 1 and 2 IPEEE, which used the EPRI seismic margin assessment (SMA) approach, has already demonstrated that the plant can safely shut down with redundant success paths with plant seismic capacity above the GMRS. Further, the new GMRS is only marginally greater than the safe-shutdown earthquake (SSE) spectra for SSES Units 1 and 2. Thus, an ESEP review per the Reference 3 guidance would only consider a minimal increase above SSE in seismic demand, and in fact would be bounded by the IPEEE evaluations and modifications already conducted. The review of a limited set of components to these demand levels, in

accordance with the ESEP guidance, would not provide a significant increase in safety insight or indication of seismic margin for the units beyond what was already provided by the IPEEE program.

Since SSES Units 1 and 2 have demonstrated seismic capacities above the GMRS, PPL concludes the benefit from the performance of an ESEP is not commensurate with resource expenditure and is furthermore bounded by the already conducted IPEEE evaluations and modifications.

Therefore, PPL does not intend to perform the ESEP for SSES Units 1 and 2. The commitment to perform a high frequency and Spent Fuel Pool evaluation, per the guidance in References 1 and 3, as indicated in the Seismic Hazard and Screening Report, remains unchanged.

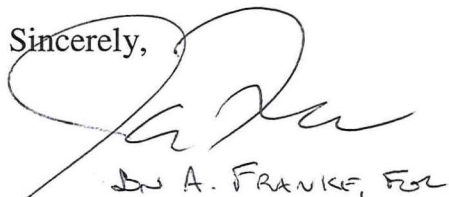
This letter contains no new regulatory commitments.

If you have any questions regarding this information, please contact Mr. John L. Tripoli, Manager – Nuclear Regulatory Affairs, at (570) 542-3100.

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

Executed on: AUGUST 28, 2014

Sincerely,



T.S. Rausch

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Copy: NRC Region I
Mr. J. E. Greives, NRC Sr. Resident Inspector
Mr. J. A. Whited, NRC Project Manager
Mr. L. J. Winker, PA DEP/BRP