



RS-14-230

10 CFR 50.54(f)

August 29, 2014

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
11555 Rockville Pike
Rockville, MD 20852

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Subject: Supplemental Information Related to the Seismic Hazard and Screening Report in 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

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. EPRI Report 1025287, Seismic Evaluation Guidance, Screening, Prioritization and Implementation Details (SPID) for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic
3. EPRI Technical Report 3002000704, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima Near-Term Task Force Recommendation 2.1: Seismic," dated May 2013
4. Exelon Generation Company, LLC, Seismic Hazard and Screening Report (Central and Eastern United States (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 31, 2014 (RS-14-065)
5. NRC Letter, Electric Power Research Institute Final Draft Report XXXXXX, "Seismic Evaluation Guidance: Augmented Approach for the Resolution of Fukushima 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

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 located in the Central and Eastern United States (CEUS) to submit a Seismic Hazard Evaluation and Screening Report within 1.5 years from the date of Reference 1.

Exelon Generation Company, LLC (EGC) submitted the Seismic Hazard and Screening Report for Byron Station, 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 SPID (Reference 2). This screening was based on demonstrating that the plant capacity spectra for Byron Station, 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. Reference 4 also demonstrated IPEEE adequacy, in accordance with the criteria in the SPID, for both Units. Consistent with the guidance contained in Reference 3, the Seismic Hazard and Screening Report (Reference 4) indicated that Byron Station, Units 1 and 2 screen-in for performance of the Expedited Seismic Evaluation Process (ESEP).

In Reference 1, the NRC requested interim evaluations and actions "...to address the higher seismic hazard....prior to completion of the 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 ESEP can demonstrate seismic margin "...while more detailed and comprehensive plant seismic risk evaluations are being performed."

Since the new GMRS for the Byron Station, Units 1 and 2 has acceptably low spectral amplitudes and seismic risk evaluations are not required (Reference 4), EGC believes that 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.

From a seismic safety perspective, the Byron Station, Units 1 and 2 IPEEE, which used the EPRI seismic margin assessment (SMA) approach, demonstrated that the plants can safely shut down with redundant success paths that have demonstrated seismic capacities above the GMRS. In addition, the Byron Station, Units 1 and 2 GMRS is only marginally greater between 1 and 10 Hz than the corresponding design basis, or safe-shutdown earthquake (SSE) spectra (Reference 4). A review per the Reference 3 guidance would only need to consider a minimal increase above SSE in seismic demand (up to 20% in a narrow frequency band). 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 margin for the plants beyond what was already provided by the IPEEE program.

EGC has therefore concluded that, for both Byron Station Units, there is an insignificant safety benefit from the performance of the ESEP since no long-term seismic risk evaluations are required based on the submitted screening results (Reference 4) and Byron Station, Units 1 and 2 have demonstrated seismic capacities above the GMRS.

In accordance with EGC's commitment to nuclear safety, our resources are focused on activities that provide the most effective safety benefit. Performance of the ESEP for Byron Station, Units 1 and 2 requires a significant commitment of resources and does not provide a requisite safety benefit. Therefore, EGC does not intend to perform the ESEP for Byron Station, Units 1 and 2. The commitment to perform a High Frequency Confirmation evaluation, Relay Chatter review, and Spent Fuel Pool evaluation, per the guidance in References 2 and 3, as indicated in the Seismic Hazard and Screening Report (Reference 4), remains unchanged.

This letter contains no new regulatory commitments.

This letter also provides the basis for cancellation and closure of Commitment No. 4 from the Byron Station, Units 1 and 2 Seismic Hazard and Screening Report (Enclosure 2 of Reference 4).

If you have any questions regarding this report, please contact Ron Gaston at (630) 657-3359.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 29th day of August 2014.

Respectfully submitted,



Glen T. Kaegi
Director - Licensing & Regulatory Affairs
Exelon Generation Company, LLC

cc: Director, Office of Nuclear Reactor Regulation
Regional Administrator - NRC Region III
NRC Senior Resident Inspector - Byron Station
NRC Project Manager, NRR - Byron Station
Ms. Jessica A. Kratchman, NRR/JLD/PMB, NRC
Mr. Eric E. Bowman, NRR/DPR/PGCB, NRC or Ms. Eileen M. McKenna,
NRO/DSRA/BPTS, NRC
Mr. Nicholas J. DiFrancesco, NRR/JLD/PPSD/JHMB, NRC
Illinois Emergency Management Agency - Division of Nuclear Safety