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W3F1-2016-0028

August 22, 2016

U.S. Nuclear Regulatory Commission  
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11555 Rockville Pike  
Rockville, MD 20852

Subject: NEI 12-06, Appendix H, Revision 2, H.4.2 Path 2: GMRS < SSE with High Frequency Exceedances, Mitigating Strategies Assessment (MSA) report for the New Seismic Hazard Information Waterford Steam Electric Station, Unit 3 (Waterford 3) Docket No. 50-382 License No. NPF-38

- References:
1. NEI 12-06, Revision 2, Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, December 2015, (ADAMS Accession Number ML16005A625)
  2. JLD-ISG-2012-01, Revision 1, Compliance with Order EA-12-049, Order Modifying Licenses with Regard to Requirements for Mitigation Strategies for Beyond-Design-Basis External Events,(ADAMS Accession Number ML15357A163)
  3. Entergy Letter to NRC, "Entergy 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 27, 2014 (W3F1-2014-0023) (ADAMS Accession Number ML14086A427)
  4. NRC Letter, Waterford Steam Electric Station, Unit 3 - Staff Assessment of Information provided Pursuant to Title 10 of the Code of Federal Regulations Part 50, Section 50.54(f), Seismic Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima DAI-ICHI Accident, dated December 15, 2015 (ADAMS Accession Number ML15335A050)
  5. Entergy Letter to NRC, "High Frequency Supplement to Seismic Hazard Screening Report, Response 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 December 16, 2015 (W3F1-2015-0077), (ADAMS Accession Number ML15350A389)

6. NRC Letter, “Staff Review of High Frequency Confirmation associated with Reevaluated Seismic Hazard in response to March 12, 2012 50.54(f) Request for Information”, dated February 18, 2016, (ADAMS Accession Number ML15364A544)
7. EPRI 3002004396, Final Report, July 2015, High Frequency Program Application Guidance for Functional Confirmation and Fragility Evaluation, (ADAMS Accession Number ML15223A102)
8. NRC Letter, Endorsement of Electric Power Research Institute Final Draft Report 3002004396, “High Frequency Program: Application Guidance for Functional Confirmation and Fragility”, dated September 17, 2015, (ADAMS Accession Number ML15218A569)

Dear Sir or Madam:

The purpose of this letter is to provide the results of the assessment for Waterford 3 to determine if the FLEX strategies developed, implemented and maintained in accordance with NRC Order EA-12-049 can be implemented considering the impacts of the reevaluated seismic hazard. The assessment was performed in accordance with the guidance provided in Appendix H of NEI 12-06 Revision 2 (Reference 1) which was endorsed by the NRC (Reference 2).

The Mitigating Strategies Seismic Hazard Information (MSSHI) is the licensee’s reevaluated seismic hazard information at Waterford 3, developed using Probabilistic Seismic Hazard Analysis (PSHA). The MSSHI includes a performance-based Ground Motion Response Spectrum (GMRS), Uniform Hazard Response Spectra (UHRS) at various annual probabilities of exceedance, and a family of seismic hazard curves at various frequencies and fractiles developed at the Waterford 3 control point elevation. Waterford 3 submitted the reevaluated seismic hazard information including the UHRS, GMRS and the hazard curves to the NRC on March 27, 2014 (Reference 3). The NRC staff concluded that the GMRS that was submitted adequately characterizes the reevaluated seismic hazard for the Waterford 3 site (Reference 4).

Consistent with Section H.4.2 of Reference 1, the Waterford 3 GMRS is bounded by the Safe Shutdown Earthquake (SSE) spectrum at frequencies between 1 to 10 Hz and the GMRS spectrum above 10 Hz exceeds the SSE spectrum. References 5 and 6 provides the high frequency confirmation assessment that was performed for Waterford 3 and NRC concurrence, respectively. For Waterford 3, the GMRS to SSE exceedance at frequencies greater than 10 Hz qualify as minimal high frequency exceedances defined in Sections 3.1.1 of EPRI 3002004396 (Reference 7), as endorsed by NRC (Reference 8), and are considered inconsequential. Therefore, the FLEX strategies for Waterford 3 can be implemented as designed and no further seismic evaluations are necessary.

This letter contains no new Regulatory Commitments and no revision to existing Regulatory Commitments.

Should you have any questions regarding this submittal, please contact John Jarrell, Regulatory Assurance Manager, at (504) 739-6685.

I declare under penalty of perjury that the foregoing is true and correct. Executed on August 22, 2016.

Sincerely,

A handwritten signature in black ink, appearing to read "MRC Chusani". The signature is fluid and cursive, with a distinct dot at the end of the last word.

MRC/AJH

cc: Mr. Kriss Kennedy, Regional Administrator  
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