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NL-13-053

March 12, 2013

U.S. Nuclear Regulatory Commission
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SUBJECT: Entergy's Required Response 2 for NTTF Recommendation 2.1:
Flooding - Hazard Reevaluation Report
Indian Point Unit Numbers 2 and 3
Docket Nos. 50-247 and 50-286
License Nos. DPR-26 and DPR-64

- 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 (ADAMS Accession ML12053A340)
 2. NRC letter, Prioritization of Response Dates For Request for Information Pursuant to Title 10 of the Code of Federal Regulations 50.54(f) Regarding Flooding Hazard Reevaluations for Recommendation 2.1 of the Near-Term Task Force Review of Insights from the Fukushima Dai-Ichi Accident, dated May 11, 2012 (ADAMS Accession ML)
 3. Interim Staff Guidance, JLD-ISG-2012-05 "Guidance for Performing the Integrated Assessment for External Flooding," Revision 0 (ADAMS Accession ML12311A214), November 30, 2012

Dear Sir or Madam:

On March 12, 2012, the NRC issued the Reference 1 letter requesting information to support the evaluation of the NRC staff recommendations for the Near-Term Task Force (NTTF) review of the accident at the Fukushima Dai-ichi nuclear facility. Enclosure 2 of the referenced letter contains specific requested actions, requested information, and required responses associated with Recommendation 2.1: Flooding. Phase 1 of the NRC two phase approach to recommendation 2.1 was to evaluate potential vulnerabilities and submit an interim action plan where the reevaluated flood exceeds

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design basis. Phase 2 would be an integrated assessment of the plant where the reevaluated flood exceeds design basis. To implement Phase 1, IPEC was requested to provide a Hazard Reevaluation Report in accordance with the schedule identified in Reference 2.

Because of its location on the Hudson River, which has characteristics of an extended estuary connected with the Atlantic Ocean, the reevaluation of the flood hazard due to storm surge is required at IPEC.

In accordance with regulatory guidelines, calculation of the Probable Maximum Storm Surge (PMSS) can be performed based on a deterministic analysis of the Probable Maximum Hurricane (PMH). The PMH parameters (i.e., central pressure, radius of maximum winds, storm forward speed and storm track direction) are defined in NOAA NWS Technical Report 23 (NWS23). Consistent with the requirements of NUREG-0800, Section 2.3, a detailed site and region-specific hurricane climatology should be performed to show that the parameters of the PMH, as defined in NOAA NWS Technical Report 23 (NWS23), are consistent with the current state of knowledge.

The recent occurrence of Superstorm Sandy, which had certain unusual meteorological characteristics, adds to the complexity of understanding very low probability storms and the PMH. Our preliminary analysis based on Reference 3 indicates that the extreme ranges of certain parameters presented in NWS 23 may not be consistent with the current state of knowledge for the mid-Atlantic and northeast US (including the vicinity of New York harbor and the Hudson River).

The recent (January, 2013) issuance of Interim Staff Guidance JLD-ISG-2012-06 "Guidance for Performing a Tsunami, Surge, or Seiche Hazard Assessment", indicated the NRC will now accept probabilistic analysis as an alternative method for establishing the storm surge flood hazard. Use of probabilistic analyses may be important to the flood hazard re-evaluation at IPEC. Since, JLD-ISG-2012-06 requires use of two dimensional hydrodynamic models (e.g., NOAA SLOSH model, the Advanced Circulation Surge [ADCIRC] Model) to evaluate the storm surge flood hazard these activities will require additional time and effort to complete.

Based on this substantial effort required to model the flood and complete the reevaluation report, IPEC is requesting an extension to the response date from March 12, 2013 to December 31, 2013. Continued plant operation during these continuing evaluation activities does not pose an imminent risk to public health and safety since an accident with consequences similar to the Fukushima accident is highly unlikely to occur at IPEC (Reference 1). Additionally, the events being analyzed in the flooding hazard reevaluation are beyond the plant's current design and licensing basis.

A preliminary storm surge flood re-evaluation analysis confirms that the site is currently protected against hurricanes of significant intensity (note that the re-evaluation of the PMH is on-going). The probability of a PMH-type hurricane occurring during the brief extension period of nine months is extremely low. Therefore the requested schedule extension will not result in any significant increase in risk to the site or to public health and safety.

Recently completed walkdowns verified compliance with the current IPEC flooding licensing basis. Instances of small Available Physical Margin (APM) were entered into the Corrective Action Program and dispositioned. Thus, the current licensing basis is being met. The events being analyzed in the flooding hazard reevaluation are beyond the plant's current design basis and licensing basis. Sandbags have been pre-staged to address potential Local Intense Precipitation (LIP) flood issues. Our procedures are being updated to provide direction regarding doors that need to be protected.

In addition to the above action, the following actions are also germane:

- Sandbags have been pre-staged to allow for reduced deployment time that is sufficient to protect against the CLB flood hazard with additional margin, and IPEC procedures will be updated to provide direction regarding doors that need to be protected.
- Deployable temporary barriers will be implemented to reduce placement time and provide additional flood margin above the CLB for 480V Switchgear rooms and auxiliary boiler feed pump rooms, MCC 24A, and MCC34.

These actions will be completed by July 1, 2013 which is at the beginning of the hurricane season that runs from June 1 to November 30 and has a maximum activity from early to mid September.

The attachment to this letter summarizes the commitments made in this response. If you have any questions concerning this submittal, please contact Mr. Robert Walpole, Manager, Licensing at (914) 254-6710.

I declare under penalty of perjury that the foregoing is true and correct; executed on March 12, 2013.

Respectfully,



JAV/sp

cc: Mr. Douglas V. Pickett, Senior Project Manager, NRC NRR DORL
Mr. William M. Dean, Regional Administrator, NRC Region 1
NRC Resident Inspectors Office
Mr. Francis J. Murray, Jr., President and CEO, NYSERDA
Ms. Bridget Frymire, New York State Dept. of Public Service

ATTACHMENT TO NL-13-053

LIST OF REGULATORY COMMITMENTS

**ENTERGY NUCLEAR OPERATIONS, INC.
INDIAN POINT NUCLEAR GENERATING UNIT NOS. 2 and 3
DOCKET NOS. 50-247 and 50-286**

List of Regulatory Commitments

The following table identifies those actions committed to by Entergy in this document. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

COMMITMENT	TYPE (Check One)		SCHEDULED COMPLETION DATE (If Required)
	ONE- TIME ACTION	CONTINUING COMPLIANCE	
Sandbags have been pre-staged to allow for reduced deployment time that is sufficient to protect against the CLB flood hazard with additional margin, and IPEC procedures are being updated to provide direction regarding doors that need to be protected.	x		July 1, 2013
Deployable temporary barriers will be implemented to reduce placement time and provide additional flood margin above the CLB for 480V Switchgear rooms and auxiliary boiler feed pump rooms, MCC 24A, and MCC34.	x		July 1, 2013