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U.S. Nuclear Regulatory Commission
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SUBJECT: Request for Deferral of Actions Related to Beyond-Design-Basis External Events Flooding Actions - Commitment Changes
Docket Nos. 50-247 and 50-286
License Nos. DPR-26 and DPR-64

REFERENCES:

1) Entergy letter, "Notification of Permanent Cessation of Power Operations, Indian Point Nuclear Generating Unit Nos. 2 and 3", dated February 8, 2017 (ML17044A004).

2) NRC letter, "Coordination of Requests for Information Regarding Flooding Hazard Reevaluations and Mitigating Strategies for Beyond Design Basis External Events", dated September 1, 2015 (ML 15174A257)

3) Entergy Letter, "Entergy's Required Response for NTTF Recommendation 2.1: Flooding -Hazard Reevaluation Report Indian Point Unit Numbers 2 and 3" Docket Nos. 50-247 and 50-286 Dated December 23, 2013 (File ML 13364A005) & Entergy Letter NL-14-148, Entergy's Supplemented with FHRR Rev 2 Dated December 9, 2014 (ML14356A633)

4) NEI 12-06 (Rev. 2) - Diverse and Flexible Coping Strategies (FLEX) Implementation Guide, December 2015

5) Entergy Letter, "Entergy's Response to the March 12, 2012, Request for Information Enclosure 2, Recommendation 2.1, Flooding, Required Response 1, Integrated Assessment Approach" dated January 29,201 3 (ML 13042A223)

6) Entergy Letter NL-16-123, "Mitigating Strategies Assessment (MSA) for Flooding Submittal for Indian Point Units 2 and 3 (CAC Nos. MF-3313 and 3314)" Docket Nos. 50-247 and 50-286, October 27, 2016 (ML 16305A331)

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7) Nuclear Energy Institute, NEI 16-05, Revision 1, "External Flooding Assessment Guidelines," June 10, 2016, ADAMS Accession No. ML16165A176.

8) NRC Letter, "Indian Point Nuclear Generating Unit Nos. 2 and 3 – Flood Hazard Mitigation Strategies Assessment (Cac Nos. MF7935 and MF7936)", dated April 10, 2017 (ML17059C227).

Dear Sir or Madam:

The purpose of this letter is to inform the U.S. Nuclear Regulatory Commission (NRC) Staff of commitment changes, as well as to request deferral of actions related to Beyond-Design-Basis External Events (BDBEE) flooding actions for Indian Point Entergy Center (IPEC).

In Reference 1, IPEC provided notification to the NRC that the plant would cease operation for IP2 in 2020 and IP3 in 2021. In light of the decision to permanently shut down and defuel, activities planned between now and the shutdowns were reviewed. One of the activities scheduled during this period was the performance of the Integrated Assessment to meet the evaluation request documented in Reference 2 and committed to in reference 5.

IPEC no longer considers the performance of the Integrated Assessment to be necessary given the results of the flood hazard reevaluation (Reference 3), modifying the Flex Strategy as a result of the Mitigating Strategy Assessment (MSA) (Reference 6 and 8), and the preliminary determinations in preparations for the Integrated Assessment Report (Reference 7).

IPEC informed the NRC that it has completed the actions required by NRC Orders EA-12-049 and EA-12-051 in ML 16235A292 and ML 15149A140. The completion of these NRC orders provides IPEC with safety benefits that address the licensing basis flooding risks. Compliance with these orders provides the ability to establish an indefinite coping capability to prevent damage to the fuel in the reactor and spent fuel pools and to maintain the containment function under extended loss of alternating current power (ELAP)/loss of the ultimate heat sink (LUHS) events. Additionally, in order to meet the requirements of 10CFR50.54(hh)(2), IPEC has additional actions in place to restore core cooling, containment and spent fuel pool cooling under loss of large areas of the plant. IPEC has performed and submitted the MSA using the beyond-design-basis reevaluated flood hazards (Reference 6). The NRC has reviewed the MSA (Reference 8) and concluded that the Indian Point MSA was performed consistent with the guidance described in Appendix G of NEI 12-06, Revision 2 (Reference 4) and that the licensee has demonstrated that the mitigating strategies, if appropriately implemented, are reasonably protected from reevaluated flood hazards conditions for beyond-design-basis external events.

The IPEC MSA found limited impact to the site Flex Strategy from the Reevaluated Flood Hazards. Reference 6 concluded that the existing FLEX strategy can be successfully implemented and deployed as designed for all applicable flood causing mechanisms except for storm surge. Modifications implemented to raise manholes, seal conduits and procedure implementation of temporary passive flood protection features ensures the FLEX strategy was not impacted for the reevaluated local intense precipitation (LIP) flood hazard. The deterministic Storm surge combined event mitigating strategies flood hazard information (MSFHI) of 18.9' stillwater resulted in the need to raise the temporary flood protection features on two interior

doors leading to the Unit 2 480V switchgear room and exterior doors leading to both the aux boiler feedpump room and Control Building from the Unit 2 & 3 transformer yards during storm preparations controlled by plant procedures. IPEC has implemented these changes providing substantial safety improvement by ensuring that the FLEX strategies are acceptable for the new flood hazards. Procedure 0-MET-402-GEN has been revised to provide the additional temporary flood protection features necessary to comply with the MSA flood levels contained in Ref 6.

Preliminary review of the MSFHI impact on the plant using Reference 7 determined three flood hazard mechanisms (LIP, Dam Failure, and Streams and Rivers Stillwater) would screen as Focused Evaluation (FE) Path 2 and the controlling storm surge combined event would trigger the Integrated Assessment (IA). The LIP event has effective flood protection for permanent plant equipment as discussed above and in References 3, 6 and 8. The Dam Failure event has effective protection provided by site grade. Streams and Rivers Stillwater with advance warning from a significant rainfall event or storm surge event is less than the temporary flood protection features currently implemented in abnormal operating procedures (AOPs). As previously determined, including Path 2 FE with the IA was the preferred submittal method. This preliminary qualitative review of the IA scenario resulting in consequential impact to the Unit 2 & 3 Service water pumps was determined to be low risk. This is consistent with the reference 3 annual exceedance probability (AEP) for the storm surge combined event determined to be on the order of 2×10^{-5} for 17.7' and below the consequential impact to the Unit 2 and Unit 3 service water pumps occurring above 17.9'. Formally completing the calculations and the IA Report would not yield any significantly different result. As determined by the FLEX Strategy and the MSA, the Service water pumps are not needed for the mitigating strategy. As a result, the FLEX Strategy is available as additional defense in depth and may be utilized should a significant tropical cyclone be predicted for the Hudson estuary.

IP2 and IP3 will cease operation in 2020 and 2021 respectively. Considering the Integrated Assessment due date, time required for NRC review and determination if additional plant changes are needed, time for the plant to evaluate, design, schedule and implement any actions, there is insufficient time for the IA effort to result in any actual appreciable safety benefit.

Therefore, this letter provides notification of the deferral of the completion dates for the IP2 and IP3 Integrated Assessment made in reference 5. The current commitment for performance of the IPEC Integrated Assessment made in reference 5 is hereby being deferred to August 31, 2021.

If you have any questions or require additional information, please contact Robert Walpole, Regulatory Assurance Manager at (914) 254-6710.

Sincerely,

AJV/mm

cc: Mr. Daniel H. Dorman, Regional Administrator, NRC Region I
Mr. John Boska, Branch Chief (Acting), NRR/JLD/JOMB
Mr. Joe Sebrosky, Senior Project Manager, Japan Lessons-Learned Division
Mr. Richard Guzman, NRR Senior Project Manager
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