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**Subject:** [External\_Sender] 6/29/16 Webinar Summary for Prairie Island Nuclear Generating Plant Flood Hazard Reevaluation Report Interim Actions (CAC Nos. MF7710, MF7711)  
**Date:** Thursday, July 07, 2016 8:01:28 AM

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Anthony –

NSPM submitted the Prairie Island Nuclear Generating Plant (PINGP) flood hazard reevaluation report (FHRR) by letter L-PI-16-039 on May 9, 2016 in response to the March 12, 2012 letter sent by the United States Nuclear Regulatory Commission (NRC) pursuant to Section 50.54(f) of Title 10 of the Code of Federal Regulations (the 50.54(f) letter). The 50.54(f) letter and NSPM's response are related to the flooding aspects of Near-Term Task Force Recommendation 2.1. The FHRR contains information related to interim actions or evaluations, taken or planned, to mitigate the impacts of reevaluated hazards that exceed the current design basis or were not evaluated as part of the plant's original licensing. The intent of these interim actions and/or evaluations is to provide an appropriate response to beyond design basis flooding while an integrated assessment or focused evaluation is prepared. As part of its review of this information, the NRC staff had questions related to PINGP's evaluations that showed no actions were necessary. A clarification call was held on June 29, 2016 to discuss the issues raised by the NRC. The questions are reproduced below:

**Background:**

FHRR Section 2.1.2 and Table 2, "Local Intense Precipitation Flood Levels," indicate that the maximum predicted floodwater elevation could exceed the finished floor elevations at 5 of 14 doors. Of these five doors, only door 47 is not maintained as normally closed. The FHRR notes that the remaining doors (100, 102, 104, and 164) for the Auxiliary Building/Radioactive Waste Building are normally closed.

**Information Request:**

Do the four doors noted above (doors 100, 102, 104, and 164) have seals that prevent water ingress from LIP flooding? If so, are these seals periodically inspected and maintained to prevent ingress of floodwater?

For doors that are not water tight,

- Describe the procedures for monitoring the status of these doors to ensure that water leakage is kept to a minimum, if subjected to the LIP event.
- Describe why water flowing behind these doors during a LIP event would not affect SSCs.
- Describe the locations of SSCs that are susceptible to a LIP flooding event and any room features (e.g., pedestals, higher elevations, etc.) that protect SSCs from water intrusion.

Below is a summary of the information presented by NSPM during the 6/29/16 webinar regarding the flood hazard reevaluation report and interim actions.

The FHRR reported four doors, Doors 100, 102, 104, and 164, to be in the normally closed position. For the analysis, the doors were modeled in the configuration expected based on

their location and security, environmental, or fire protection boundary considerations. The doors are not maintained to prevent ingress of local intense precipitation (LIP) flood waters.

Section 2.1.2, 2.1.3, and 2.10.1 of the FHRR summarized the LIP conclusions and referenced Calculation 180461.51.1005. Table 5.3.3-1 in Calculation 180461.51.1005 (calculation provided for FHRR water elevation audit) discusses LIP flood levels that exceeded finished floor elevations for Doors 100, 102, 104, and 164. Per Table 5.3.3-1, Doors 100, 102, 104, and 164 are associated with the Auxiliary Building and have a maximum water depth of 0.45 feet (5.4 inches) above grade.

The Auxiliary Building internal flooding calculation ENG-ME-448 discusses the water elevation prior to impact of plant equipment of significance. Section 5.4.1 of ENG-ME-448 (calculation pages provided in ePortal) states that flood heights at or below 9 inches (0.75 feet) will not affect the safe shutdown equipment listed in USAR Appendix I, Table I.1.4-1. All structures, systems, components (SSCs), such as pumps, motors, supply cables, MOVs and MCC bus bars are installed high enough that water elevations up to and including 9 inches above the 695 foot elevation cannot affect operability.

For the FHRR, the position of the doors was modeled to align with the normal plant configuration. A building adjacent to the walls in which Doors 100 and 164 are located was conservatively not modeled. Thus, Doors 100 and 164 were modeled as exterior doors. Further, a block wall is located behind Door 164 (as noted in Attachment D to Calculation 180461.51.1005). No LIP water is expected to reach the Door 164 threshold.

Based on the above, it was determined that Doors 100, 102, 104, and 164 were not critical in mitigating the impact of LIP conditions. Additionally, the SSCs discussed above are located past the double door entrances into the Special Ventilation Zone of the Auxiliary Building. The SSCs are located in excess of 75 feet from the exterior doors modeled in the LIP.

Based on the above, the greatest LIP water height at the exterior doors (0.45 feet) is bounded by the internal flooding height of 0.75 feet. NSPM concluded that no interim actions were necessary.

#### References:

1. Calculation 180461.51.1005, Revision 0 – Provided on Audit DVD for FHRR water elevation review
2. ENG-ME-448, Auxiliary Building Flood Analysis, Revision 1A – Pages provided in ePortal
3. USAR 6.1.2.8, Engineered Safety Features Protection from Internal flooding – Available to NRC
4. USAR Appendix I, Postulated Pipe Failure Analysis Outside of Containment – Available to NRC

If further clarifying information is needed, please contact me.

**Lynne Gunderson**

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