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Subject: Briefing to the Executive Team on the Oconee Nuclear Station
External Flooding Issue

Participants: Executive Team – E. Leeds, B. Boger, J. Grobe

Division of Engineering – P. Hiland, D. Skeen, M. Khanna, G. Wilson

Division of Operating Reactor Licensing – J. Giitter, A. Howe, G. Kulesa, J. Stang

Division of Risk Assessment – M. Cunningham

Region II – L. Wert, J. Bartley

Office of General Counsel – C. Scott, M. Simon

Discussion: On January 6, 2010, the participants met to discuss the path forward regarding the Oconee Nuclear Station (Duke Energy – licensee) external flooding issue. The staff provided the Executive Team (ET) with background information, including the staff's issuance of two 50.54(f) demand for information letters (initial letter dated August 2008 and a supplemental letter dated April 2009). Duke Energy responded to these letters in September 2008 and November 2009. The staff determined that Duke Energy did not provide a complete response to the demand letters.

The staff presented two paths for the ET's consideration: (1) issue a letter under the 50.54(f) process to demand supplemental information and to follow this with the appropriate regulatory action (i.e., an Order) in the future; or (2) immediately issue an Order demanding information and requiring mitigation of external flooding events in a timely manner. The staff identified pros and cons for each proposal (see attached slides) and the ET discussed the merits of each approach.

Recommendation: The ET unanimously agreed to proceed with the issuance of a letter, and then to follow up with an Order after the licensee provides additional information on the parameters used for the Keowee Dam and the Oconee intake dike.

Path Forward/Action Items: In going forward, the staff addressed the following actions in order to obtain resolution of the issue:

- (1) Staff to receive and review Duke Energy's interim compensatory measures. (Duke Energy's letter was submitted on January 15, 2010, and the staff is currently reviewing the letter.)
- (2) Staff to issue a supplement to the 50.54(f) demand for information letter by January 29, 2010, which would include the request for additional technical information and any preliminary assessment of Duke Energy's interim compensatory measures.
- (3) Staff to complete the adequate protection/back-fit analysis by January 29, 2010.
- (4) In parallel with the development of the letter, the staff will begin drafting the Order so that it can be issued at the appropriate time..
- (5) Duke Energy to submit its corrective action plan by November 30, 2010.
- (6) Meeting with Senior NRC and Duke managers to discuss ongoing technical issues at the site, including tornado/HELB, fire protection, external flooding (February/March 2010).

Attachment: Presentation slides

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EXTERNAL FLOODING ISSUE OCONEE NUCLEAR STATION (ONS)

- BACKGROUND
 - THE NRC STAFF IS CONCERNED THAT CERTAIN EXTERNAL FLOODING EVENTS, INCLUDING FAILURE OF THE JOCASSEE DAM, MAY RENDER KEY SYSTEMS UNABLE TO PERFORM THEIR SAFETY FUNCTIONS. DUE TO THE CONFIGURATION OF ONS ON LAKE KEOWEE, ACCIDENT MITIGATION FOR SEVERAL CONDITIONS RELIES ENTIRELY ON THE OPERATION OF A STANDBY SHUTDOWN FACILITY (SSF). THE SSF IN THESE CONDITIONS PROVIDES REACTOR COOLANT PUMP SEAL COOLING, INVENTORY CONTROL, AND SECONDARY SIDE HEAT REMOVAL. THEREFORE, AN EXTERNAL FLOODING EVENT WHICH INCAPACITATES THIS FACILITY WOULD RENDER ONS UNABLE TO MITIGATE ACCIDENT CONDITIONS BROUGHT ON BY FLOODING OF THE SITE AND DEFENSE-IN-DEPTH WOULD NOT EXIST FOR SUCH EVENTS.
- NRC 50.54(f) LETTER DEMAND FOR INFORMATION (08/15/2008)
- LICENSEE RESPONSE (09/26/2008)
- NRC RESPONSE (04/30/2009)
 - ALL ANALYSIS AND MODIFICATION SCHEDULE REQUESTED BY 11/30/2009
- LICENSEE RESPONSE (11/30/2009)
 - ANALYSIS DID NOT INCLUDE ALL INFORMATION ASSOCIATED WITH THE JOCASSEE EARTHEN WORKS. NRR STAFF CANNOT REACH A CONCLUSION THAT THE ANALYSIS PERFORMED BY THE LICENSEE PROVIDES REASONABLE ASSURANCE THAT ALL LICENSING BASIS EXTERNAL FLOODING EVENTS CAN BE MITIGATED.

PATH FORWARD

- ISSUE A LETTER DEMANDING THE LICENSEE PROVIDE THE INFORMATION NEEDED BY THE STAFF
- REVIEW THE INFORMATION AND TAKE THE APPROPRIATE REGULATORY ACTION FOR FINAL RESOLUTION

OR

- ISSUE AN ORDER NOW DEMANDING INFORMATION AND REQUIRING MITIGATION OF EXTERNAL FLOODING EVENTS AT THE OCONEE SITE IN A TIMELY MANNER

LETTER FOLLOWED BY AN APPROPRIATE REGULATORY ACTION

- **PROS**

- THE STAFF WILL HAVE AMPLE TIME TO COMPLETE THE ADEQUATE PROTECTION/BACKFIT ANALYSIS REQUIRED FOR THE ORDER
- SIGNATURE AUTHORITY
- GIVES THE LICENSEE CREDIT FOR ADDRESSING THE ISSUE

- **CONS**

- NOT AS ENFORCEABLE AS AN ORDER
- SLOWER TIME FOR RESOLUTION OF EXTERNAL FLOODING ISSUE
- ADDITIONAL REGULATORY ACTIONS WILL BE NEEDED FOR RESOLUTION

ISSUE AN ORDER NOW

- PROS

- STRONG REGULATORY POSITION
- FASTER RESOLUTION OF EXTERNAL FLOODING ISSUE
- REQUIRES LICENSEE TO PROVIDE INFORMATION ON AN ENFORCEABLE TIMELINE

- CONS

- POTENTIAL FOR HEARING
- CANNOT ISSUE AN ORDER BECAUSE OF LACK OF INFORMATION
- MIXED MESSAGE: None of the other issues at Oconee resulted in issuing an order, (i.e. Tornado and HELB). External flooding becomes be the most critical regulatory issue at the Oconee site to resolve
- SIGNATURE AUTHORITY

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STAFF RECOMMENDATION

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