From: Poole, Justin
Sent: Monday, August 10, 2009 9:25 AM
To: 'Hale, Steve'; COSTEDIO, JAMES
Subject: Draft - Point Beach RAIs regarding modifications to the auxiliary feedwater system

Steve,

By letter dated April 7, 2009, as supplemented by letter dated June 17, 2009, FPL Energy Point Beach, LLC, submitted a license amendment application for Point Beach Nuclear Plant Units 1 and 2 which included modifications to the auxiliary feedwater system.

The Electrical Engineering Branch has reviewed the information provided and determined that in order to complete its evaluation, additional information is required. We would like to discuss the questions, in draft form below, with you in a conference call.

This e-mail aims solely to prepare you and others for the proposed conference call. It does not convey a formal NRC staff position, and it does not formally request for additional information.

Justin C. Poole
Project Manager
NRR/DORL/LPL3-1
U.S. Nuclear Regulatory Commission
(301)415-2048
email: Justin.Poole@nrc.gov

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DRAFT

1. The licensee stated that resulting worst case calculated transient voltage dip is approximately 48 percent during the start of the motor driven auxiliary feedwater (MDAFW) pump at the time of emergency diesel generator (EDG) breaker closure. The staff notes that this voltage dip is well below the acceptance limit of 75 percent of nominal voltage during a motor start from the EDG. Please provide documentation (test data and transient analyses) to demonstrate that all loads (worst case accident loads) can be sequenced successfully while maintaining the voltage and frequency within its design limits.

2. The licensee stated that the transient frequency response of all four EDGs remains above 57 hertz (Hz) at all times. Provide documentation to show that, during sequencing, the EDG frequency will be restored to within 2 percent of nominal in less than 60 percent of each load-sequence interval for stepload increase and in less than 80 percent of each load sequence interval for disconnection of the single largest load. Also, describe how the effects of frequency variations have been evaluated to satisfy the design bases for emergency core cooling system loads and vital loads, including EDG loading.
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3. Since auxiliary feedwater pump cables are routed thru duct banks, explain the design features provided to prevent submergence of cables and periodic testing to be performed to monitor the condition of the cables.

4. Describe the environmental parameters for the MDAFW pump motor locations. Are the MDAFW pump motors located in a room that is susceptible to a high energy line break or harsh environment? Are the MDAFW pump motors required to be qualified in accordance with 10 CFR 50.49 requirements? If not, provide the basis.

5. In response to the staff's acceptance review question number 7, regarding changes to the time delay relays for 4.16 kilo-Volt (kV) and 480 Volt (V) loss-of-voltage (LOV) relays and the EDG breaker close delay relay, the licensee stated that the acceptance criteria is satisfied since the total calculated time is 13.3 seconds, which is less than the acceptance criteria of 14 seconds. The licensee also stated that this time bounds the delay time from initiation of the LOV signal to closure of the EDG output breaker assumed in the Point Beach Nuclear Plant accident analysis. However, the staff notes that this time (14 seconds) is inconsistent with the EDG design basis provided in Section 8.8.1 of the Point Beach Nuclear Plant's Final Safety Analysis Report (FSAR) which states that the EDGs are required to start and be ready for loading within 10 seconds after receiving a start signal. The staff was unable to confirm the design bases requirement for the 14-second acceptance criteria that was referenced in the licensee's response. Provide the basis for the changes to the time delay relays for the 4.16 kV and 480 V LOV relays and the EDG breaker close delay relay.

6. Provide the supporting documentation that was used in developing your response to questions 1-7 of the staff's acceptance review. At a minimum, the supporting documentation must include the assumptions used, key parameters evaluated, conclusions, and basis for the conclusions.