August 29, 2005

MEMORANDUM TO: Evangelos Marinos, Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

FROM: Christopher Gratton, Sr. Project Manager, Section 1 ***/RA/***
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: VOGTLE ELECTRIC GENERATING STATION, UNITS 1 AND 2 - FACSIMILE TRANSMISSION OF DRAFT REQUEST FOR ADDITIONAL INFORMATION (TAC NOS. MC4225 AND MC4226)

The Nuclear Regulatory Commission (NRC) staff transmitted the attached facsimile containing questions to Mr. Jack Stringfellow of the Southern Nuclear Operating Company on June 16, 2005. The request for additional information supported a June 30, 2005, conference call with the licensee regarding their application dated August 13, 2004. The licensee's application proposed to supplant the previous spent fuel pool rack criticality analysis with updated criticality calculations.

This memorandum and the attached questions do not convey or represent an NRC staff position regarding the licensee's request.

Docket Nos. 50-424 and 50-425

Attachments: 1. Request for Additional Information sent 6/16/2005

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SUPPLEMENTAL REQUEST FOR ADDITIONAL INFORMATION (RAI)

SPENT FUEL POOL RACK CRITICALITY ANALYSIS

SOUTHERN NUCLEAR OPERATING COMPANY (SNC)

VOGTLE ELECTRIC GENERATING PLANT (VEGP), UNITS I AND 2

DOCKET NUMBERS: 50-424 AND 50-425

1. Regarding calculation X6CKA.01, dated 9/25/97, the results for both methods demonstrate that the criticality assumption is bounded by the manufacturing specifications of both types of panels, but it is not clear to the staff whether manufacturing tolerances were factored into the calculations. Please discuss whether manufacturing tolerances were factored into the B-10 areal density calculations.

2. In your response to RAI No.1b (ML051260207), you stated that Maine Yankee (MY) had implemented a surveillance procedure once per cycle which involved drag testing and visual inspection of the cells to monitor for signs of bulging. Given that blistering is now known to occur in the Boral panels, does VEGP have any surveillance procedures in place, and if not, does it plan to implement any surveillance procedures similar to those at MY to monitor the potential for bulging and blistering (via drag testing, visual inspection or any other method)?

3. In your response to RAI No. 3 (ML051260207), you named some of the conservatisms that would offset the effects of blistering on reactivity. Two of the conservatisms were that the B-10 content is uniformly reduced by 10 percent and that the limiting flux trap size is modeled. Regarding the B-10 content conservatism, the staff is not clear whether this 10 percent reduction is taken from the value of 0.0238 g/cm^2 or if it is already included in this value. With respect to the modeling of the flux trap size, it is not clear to the staff what this entails. Is this assumption meant to take into account the effects of blistering on reactivity?

4. In your response to RAI No. 3 (ML051260207), you stated that SNC continues to monitor issues regarding the application of Boral in spent fuel racks through its Operating Experience and Corrective Actions Program and through the internal operating experience at one of its other plants that has a Boral surveillance program. The staff would like more information regarding the use of Boral in the other SNC plant; for example:

    a. How long has the Boral been in use there?
    b. What kind of tests are performed and how often have the coupons been tested?
    c. Is the coupon environment (fuel exposure) similar to that of VEGP?

ATTACHMENT

In addition, the staff would like to confirm that VEGP has the proper material certification documentation from MY for any testing and a discussion of the results performed to the Boral prior to their installation in VEGP.