August 7, 2007

Mr. Dale E. Young, Vice President
Crystal River Nuclear Plant (NA1B)
ATTN: Supervisor, Licensing & Regulatory Programs
15760 W. Power Line Street
Crystal River, Florida 34428-6708

SUBJECT: CRYSTAL RIVER, UNIT NO. 3 - REQUEST FOR ADDITIONAL INFORMATION REGARDING 1.6-PERCENT MEASUREMENT UNCERTAINTY RECAPTURE POWER UPRATE (TAC NO. MD5500)

Dear Mr. Young:

By letter dated April 25, 2007, the Florida Power Corporation submitted an application to amend the Crystal River, Unit 3 facility operating license and technical specifications. The proposed amendment consists of a 1.6-percent measurement uncertainty recapture power uprate that will increase the rated thermal power from 2568 megawatts thermal (MWt) to 2609 MWt.

The Nuclear Regulatory Commission staff has determined that it needs additional information in order to complete its review. Please respond to the enclosed request for additional information (RAI) within 30 days of the date of this letter.

Please contact me at 301-415-1321 if you have any questions on this issue.

Sincerely,

/RA/

Stewart N. Bailey, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: RAI

cc w/encl: See next page

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* by memo **OFFICIAL RECORD COPY**

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REQUEST FOR ADDITIONAL INFORMATION

CRYSTAL RIVER UNIT NO. 3

1.6-PERCENT MEASUREMENT UNCERTAINTY RECAPTURE

POWER UPRATE LICENSE AMENDMENT

DOCKET NO. 50-302

By letter dated April 25, 2007, the Florida Power Corporation (the licensee) submitted License Amendment Request No. 296 for the Crystal River Unit No. 3 (CR-3) facility operating license and technical specifications. The proposed amendment consists of a 1.6-percent measurement uncertainty recapture (MUR) power uprate that will increase the rated thermal power from 2568 megawatts thermal (MWt) to 2609 MWt. The Nuclear Regulatory Commission staff has determined that it needs responses to the following items in order to continue the review:

1. On page 34 of Attachment D, you indicated that "a review of calculations performed which assessed the integrity of tubes containing flaws of various types when subjected to operating and accident loads was conducted." In addition, you indicated "this review ensured that existing structural margins are maintained for the MUR Power Uprate Program design conditions." This wording is unclear; therefore, confirm that this review did ensure that all existing structural margins are maintained for the power uprate. In addition, please discuss how the various flaw types for SG tubes (existing and potential) were affected by the MUR power uprate.

2. In Section 4.2.5.2, Inservice Testing (IST) Program, you indicate ". . . that the MUR uprate is bounded by current analysis and any changes are insignificant." Please discuss the possible "insignificant changes" that may be made to the IST Program and what makes these changes "insignificant."

3. Confirm that the steam generators (SGs) will continue to satisfy all original design criteria under the power uprate conditions. In addition, confirm that your analysis addresses the current condition of your SGs (e.g., plugs, tube repairs, loose parts, etc.) and addresses flow induced vibration. Also, provide confirmation that your SG tube plugging limit is still appropriate for power uprate conditions, given the guidance in Regulatory Guide 1.121, "Bases for Plugging Degraded PWR (Pressurized-Water Reactor) Steam Generator Tubes."

4. Confirm that the coating qualification temperature and pressure profile used by CR-3 to originally qualify Service Level I coatings remains bounding in light of the power uprate pressures and temperatures. If the original coating qualification pressure and temperature profile is no longer bounding, discuss the conditions to be used and corrective actions that will be taken to assure that Service Level I containment coatings will be qualified.

Enclosure

5. Please confirm the following regarding the SG blowdown system:

   a. That you considered whether the additional operating time due to the power uprate will result in system components being more susceptible to flow accelerated corrosion (FAC).

   b. That your current evaluation of the SG blowdown system under power uprate conditions considered the effect of a potential increase of impurities in the SG water.

   c. That any change to the inlet pressure of the SG blowdown system is still within the range of original design operating parameters.

6. You indicated that “the predicted increases in maximum component wear rates and reductions in service lives will be managed by the CR-3 FAC program.” Discuss how significant the increases in wear rates and reductions in service lives are for the power uprate conditions. In addition, discuss any changes made to CR-3's FAC program (i.e., criteria used for selecting components for inspection following the power uprate, criteria for repair and replacement, increased inspection scope, etc.) due to the power uprate conditions. Also, identify the systems that are expected to experience the greatest increase in wear as a result of the power uprate. Discuss whether inspections will be performed to assess wear prior to entering power uprate conditions.

7. Provide confirmation that your evaluation for the chemical and volume control system demonstrates that the conditions for the power uprate are bounded by the original design conditions (thermal performance, letdown and makeup requirements, etc.).