



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

September 30, 2011

Mr. Jon A. Franke, Vice President
Crystal River Nuclear Plant (NA2C)
ATTN: Supervisor, Licensing & Regulatory Programs
15760 W. Power Line Street
Crystal River, Florida 34428-6708

SUBJECT: CRYSTAL RIVER UNIT 3 – REVIEW OF 30-DAY NOTIFICATION REPORT
REGARDING CHANGES TO AN EMERGENCY CORE COOLING SYSTEM
EVALUATION RESULTING IN A PEAK CLADDING TEMPERATURE
DIFFERENCE IN EXCESS OF 50 DEGREES FAHRENHEIT (TAC NO. ME4944)

Dear Mr. Franke:

By letter dated September 8, 2010 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML 102530447), as supplemented by letter dated December 3, 2010 (ADAMS Accession No. ML 103440391), Florida Power Corporation (the licensee) reported an error correction discovered in the emergency core cooling system (ECCS) evaluation model, or in the application of such a model, that affects the peak cladding temperature (PCT) calculation at Crystal River Unit 3 Nuclear Generating Plant (CR-3). The letter dated September 8, 2010, was submitted to satisfy the requirements of Title 10 of the *Code of Federal Regulations* (10 CFR), paragraph 50.46(a)(3)(ii), which requires reporting of a calculated PCT change in excess of 50 degrees Fahrenheit (°F). The reported error was an estimated increase of 225 °F in PCT for a postulated small break loss-of-coolant-accident.

The intent of the 10 CFR 50.46(a)(3)(ii) reporting requirement is to enable the U.S. Nuclear Regulatory Commission (NRC) to determine the safety significance of errors and changes identified in ECCS evaluation models, and to take action if the NRC staff determines that the ECCS evaluation models do not meet applicable regulatory requirements.

The licensee's submittal dated September 8, 2010, did not contain sufficient information to enable a determination of the safety significance of the error, as described above. Based on the NRC staff's concerns regarding the safety significance of the error and the adequacy of the overall evaluation model, the NRC staff requested the licensee provide additional information.

In response to the NRC staff's request for additional information, the licensee's supplemental letter dated December 3, 2010, provided additional detail regarding the axial power shapes assumed in the acceptable evaluation model, and clarified how the error impact was estimated using analyses that assumed a more limiting power shape.

Further, on June 15, 2011, the licensee submitted a license amendment request (LAR) seeking approval to implement an extended power uprate (EPU) for CR-3. This LAR is currently under acceptance review by the NRC staff. The EPU amendment, if approved, would implement a new ECCS evaluation that corrects this error. This satisfies the intent of the 10 CFR 50.46(a)(ii)

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reporting and reanalysis requirement for CR-3, and eliminates the model error. Therefore, no additional review under TAC ME4944 is needed.

If you have any questions regarding this letter, please feel free to contact me at (301) 415-1447.

Sincerely,

A handwritten signature in black ink, appearing to read "Farideh E. Saba". The signature is written in a cursive, flowing style.

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-302

cc: Distribution via Listserv

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/RA/

Farideh E. Saba, Senior Project Manager
Plant Licensing Branch II-2
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