August 31, 2005

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

SUBJECT: CRYSTAL RIVER UNIT 3 — REQUEST FOR ADDITIONAL INFORMATION (RAI) RE: PROPOSED LICENSE AMENDMENT REQUEST NO. 290, REVISION 1 (TAC NO. MC5813)

Dear Mr. Young:

By letter dated August 12, 2005, you submitted a revised amendment application to revise the Crystal River Unit 3 (CR-3) Improved Technical Specifications (ITS) to allow utilization of a probabilistic methodology to determine the contribution to Main Steam Line Break leakage rates for the Once-Through Steam Generator from the Tube End Crack Alternate Repair Criteria described in ITS 5.6.2.10.2.f.

For the NRC staff to complete its review on schedule, your response to the enclosed RAI is requested no later than September 15, 2005. This date was mutually agreed upon in a telephone conversation with Paul Infanger on August 24, 2005. If circumstances result in the need to revise the target date, please call me at the earliest opportunity at 301-415-2020.

Sincerely,

/RA/

Brenda L. Mozafari, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: As stated

cc w/encl: See next page

REQUEST FOR ADDITIONAL INFORMATION

CRYSTAL RIVER UNIT 3

LICENSE AMENDMENT REQUEST

PROBABILISTIC METHODOLOGY FOR DETERMINING

ACCIDENT LEAKAGE ASSOCIATED WITH TUBE END CRACKS

IN STEAM GENERATOR TUBES

1. On page 2 of Attachment F to your submittal dated August 12, 2005, please clarify what is meant by the "described method satisfies the minimum requirements for calculating the projected TEC leakage contained in BAW-2346P Rev 0 as required by ITS 5.6.2.10.2.f." In addition, clarify what is meant that the leakage will be determined in conjunction with "NRC approved LAR # 290 or existing leak rates" to determined the required tube repairs. This latter sentence may not be consistent with the proposed technical specification change which states that main steam line break (MSLB) leakage rates shall be determined by the methodology in Addendum B to BAW-2346P, Rev 0.

2. On page 2 of Attachment F to your submittal, Framatome calculation 32-5053981-00 is referenced. Please discuss what this reference is and provide a copy for NRC review and approval since it may be used in the calculation of tube end cracking (TEC) leakage. This may also be in conflict with the proposed technical specification which states that the contribution to MSLB leakage rates from TEC indications shall be determined utilizing the methodology in Addendum B dated August 10, 2005 to Topical Report BAW-2346P, Revision 0.

3. Regarding item d on page 2 of Attachment F to your submittal, the NRC staff agrees that leakage is the parameter of concern from a safety perspective. However, the amount of leakage from the steam generator is a direct result of the number of TEC indications. In addition, your proposed methodology for determining the amount of leakage has inherent assumptions with respect to the number and distribution of indications. That is, although you are proposing to apply the probability of detection value directly to the as-found leakage (rather than to the number of indications), this approach is equivalent to determining the number of indications that were missed during the inspection and then assigning a leakage value to each of these indications. In addition, your approach for new leakage is inherently assuming that the distribution of new indications (i.e., as a function of tubesheet radius or radial zone) is identical between successive operating intervals. Given that these assumptions are critical to ensuring that any projections of accident induced leakage are conservative, please discuss your plans for modifying your proposed technical specifications to include reporting requirements related to implementation of this methodology. For example, include reporting requirements to provide the number of tubes with TEC indications and the number of TEC indications as a function of tubesheet radius and zone, and the

as-found, the as-left, the POD, and the new TEC leakage for both the lower and upper tubesheet indications. In addition, include reporting requirements for assessing the adequacy of the predictive methodology including assessing the distribution of indications found in each steam generator to ensure that your inherent assumption regarding the similarity of the distribution of indications remains consistent from one cycle to the next and that the assumption of a linear increase in leak rate remains valid. The reporting requirements should also include proposed corrective actions in the event that your assessment indicates that your assumptions can not be fully supported.

4. Figure 2 of Attachment F to your submittal is intended to demonstrate that any increase in leakage can be modeled using a linear extrapolation. In this figure, the number of tubes with TECs is plotted as a function of time. Since the number of indications is the parameter used in the leakage calculation and each tube can have multiple indications, please provide a plot of the number of indications as a function of time. Please address how you will account for additional indications that may have initiated in tubes that were repaired (since tubes may be left in service longer under the proposed revision to the amount of leakage assigned to each indication resulting in more time for indications to initiate).

August 31, 2005

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

SUBJECT: CRYSTAL RIVER UNIT 3 — REQUEST FOR ADDITIONAL INFORMATION (RAI) RE: PROPOSED LICENSE AMENDMENT REQUEST NO. 290, REVISION 1 (TAC NO. MC5813)

Dear Mr. Young:

By letter dated August 12, 2005, you submitted a revised amendment application to revise the Crystal River Unit 3 (CR-3) Improved Technical Specifications (ITS) to allow utilization of a probabilistic methodology to determine the contribution to Main Steam Line Break leakage rates for the Once-Through Steam Generator from the Tube End Crack Alternate Repair Criteria described in ITS 5.6.2.10.2.f.

For the NRC staff to complete its review on schedule, your response to the enclosed RAI is requested no later than September 15, 2005. This date was mutually agreed upon in a telephone conversation with Paul Infanger on August 24, 2005. If circumstances result in the need to revise the target date, please call me at the earliest opportunity at 301-415-2020.

Sincerely,

/RA/
Brenda L. Mozafari, Senior Project Manager, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure: As stated

cc w/encl: See next page

Distribution: PUBLIC PDII-2 r/f KKarwoski EMurphy LLund
RidsNrrPMBMozafari RidsNrrPMCPatel RidsNrrLACHawes RidsNrrDlpmLpdii2
RidsNrrDlpmLpdii RidsOgcRp RidsAcrsAcnwMailCenter(JMunday)

ADAMS Accession No.: ML052380205 NRR-088

OFFICE	PDII-2/PM	PDII-2/LA	PDII-2/ SC
NAME	BMozafari	CHawes	MMarshall
DATE	8/ 29 /05	8/ 29 /05	8/ 31 /05

OFFICIAL RECORD COPY

Mr. Dale E. Young
Florida Power Corporation

Crystal River Nuclear Plant, Unit 3

cc:
Mr. R. Alexander Glenn
Associate General Counsel (MAC-BT15A)
Florida Power Corporation
P.O. Box 14042
St. Petersburg, Florida 33733-4042

Mr. Jon A. Franke
Plant General Manager
Crystal River Nuclear Plant (NA2C)
15760 W. Power Line Street
Crystal River, Florida 34428-6708

Mr. Jim Mallay
Framatome ANP
1911 North Ft. Myer Drive, Suite 705
Rosslyn, Virginia 22209

Mr. William A. Passetti, Chief
Department of Health
Bureau of Radiation Control
2020 Capital Circle, SE, Bin #C21
Tallahassee, Florida 32399-1741

Attorney General
Department of Legal Affairs
The Capitol
Tallahassee, Florida 32304

Mr. Craig Fugate, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive
Tallahassee, Florida 32399-2100

Chairman
Board of County Commissioners
Citrus County
110 North Apopka Avenue
Inverness, Florida 34450-4245

Mr. Michael J. Annacone
Engineering Manager
Crystal River Nuclear Plant (NA2C)
15760 W. Power Line Street
Crystal River, Florida 34428-6708

Mr. Daniel L. Roderick
Director Site Operations
Crystal River Nuclear Plant (NA2C)
15760 W. Power Line Street
Crystal River, Florida 34428-6708

Senior Resident Inspector
Crystal River Unit 3
U.S. Nuclear Regulatory Commission
6745 N. Tallahassee Road
Crystal River, Florida 34428

Mr. Terry D. Hobbs
Manager, Nuclear Assessment
Crystal River Nuclear Plant (NA2C)
15760 W. Power Line Street
Crystal River, Florida 34428-6708

David T. Conley
Associate General Counsel II - Legal Dept.
Progress Energy Service Company, LLC
Post Office Box 1551
Raleigh, North Carolina 27602-1551