

June 22, 2006

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

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING THE 2005 STEAM
GENERATOR TUBE INSPECTIONS AT CRYSTAL RIVER UNIT 3 (TAC NOS.
MC9562, MD0220, MD0357)

Dear Mr. Young:

By letters dated December 3, 2005, February 15, and March 8, 2006, Florida Power Corporation (the licensee also doing business as Progress Energy - Florida) submitted information summarizing the results of the 2005 steam generator tube inspections at Crystal River Unit 3. These inspections were performed during the fourteenth refueling outage. In addition to these reports, the U.S. Nuclear Regulatory Commission staff participated in a conference call concerning the 2005 steam generator tube inspections at Crystal River Unit 3. This call is in the process of being summarized.

In order for the NRC staff to complete its review of the licensee's reports, we request that the licensee provide responses to the enclosed questions. The additional information needed is discussed in the enclosed request for additional information (RAI) that was discussed with your licensing staff on June 8, 2006, during a teleconference. As discussed in the teleconference, your staff agreed to respond within 45 days of the date of this RAI.

If you have any questions regarding this matter, please contact me at (301) 415-2020.

Sincerely,

/RA/

Brenda L. Mozafari, Senior Project Manager
Plant Licensing Branch II-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-302

Enclosure:
Request for Additional Information

cc w/enclosure: See next page

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REQUEST FOR ADDITIONAL INFORMATION
REGARDING THE CRYSTAL RIVER UNIT 3
RESULTS OF THE ONCE-THROUGH STEAM GENERATOR
TUBE INSERVICE INSPECTION CONDUCTED
DURING REFUELING OUTAGE 14 (2005)
DOCKET NO. 50-302

By letters dated December 3, 2005 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML053410277), February 15, 2006 (ADAMS Accession No. ML060550264), and March 8, 2006 (ADAMS Accession No. ML060740185), Florida Power Corporation (the licensee also doing business as Progress Energy - Florida) submitted information summarizing the results of the 2005 steam generator tube inspections at Crystal River Unit 3. These inspections were performed during the fourteenth refueling outage (14R). In order for the U.S. Nuclear Regulatory Commission's staff to complete its review of the these reports, we request responses to the questions presented below.

1. In your December 3, 2005 letter, you indicated that postulated steam line break accident-induced leakage based on your 2005 inspection results was less than that projected from your previous (2003) inspection results. Clarify whether this was true for each of the degradation mechanisms for which leakage was projected. If there were any instances in which the projected leakage (based on 2003 results) was less than the as-found leakage (based on 2005 results) for a specific degradation mechanism, please discuss what corrective actions were taken.
2. On page 3 of 6 in your December 3, 2005, letter, you provided the in situ test pressures for several indications. Discuss the basis for these test pressures. For example, was the 5550 pounds per square inch test pressure based on a large break loss-of-coolant accident? In addition, confirm that these test pressures were based on your most limiting condition (e.g., a design basis accident with the appropriate safety factor or three times your normal operating pressure differential).
3. On page 3 of 16 in your March 8, 2006, letter, you indicated that approximately 68 tubes were degraded. Confirm that all of these degraded tubes were a result of wear. If not, please discuss the basis for sizing the indications.
4. On page 10 of 16 in your March 8, 2006, letter, you indicated that as an additional check of the tube-end-cracking (TEC) leakage methodology, you projected the 14R leakage based on the 13R inspection results. Provide the data supporting your conclusion that the methodology over-predicted the as-found TEC leakage (e.g., new leakage, as-left leakage, etc.). Provide the data for both the upper and lower tubesheet in both steam generators.

Enclosure

5. Clarify the statement on page 10 of 16 in your March 8, 2006, letter, where you indicate that the linear projection method is still considered adequate since the projected leakage for 15R is larger than the 14R as-found leakage. It would appear that a more appropriate comparison for determining the adequacy of the linear projection method would be comparing the leakage projection from the previous outage with the as-found leakage at the next outage.
6. On page 13 of 16 in your March 8, 2006, letter, you indicated that one Alloy 600 welded plug, which was considered to be leaking, was removed and replaced. Discuss whether this leaking plug had adequate structural integrity including a summary of the basis for your conclusion.
7. Regarding the in situ pressure test of tube A3-30, discuss the magnitude of the change in the size of the indication as a result of the pressure test.
8. Regarding your condition monitoring assessment, discuss the sources of accident-induced leakage and the amount of leakage assigned to each of those sources.
9. Clarify the number and size of indications found in the unexpanded region of the tube within the upper and lower tubesheet. Indicate which indications were detected with the bobbin probe, rotating probe, or both probes.
10. Clarify the number and size of indications attributed to groove intergranular attack (IGA)/stress corrosion cracking.
11. A number of volumetric indications (other than first span IGA and wear) were identified. Discuss the cause of these indications. Confirm that all volumetric indications (other than first span IGA and wear) were plugged.

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

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

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

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

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

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

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

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

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

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