



50-302

UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 27, 1996

Mr. Percy M. Beard, Jr.  
Senior Vice President, Nuclear Operations  
Florida Power Corporation  
ATTN: Manager, Nuclear Licensing (SA2A)  
Crystal River Energy Complex  
15760 W Power Line Street  
Crystal River, Florida 34428-6708

SUBJECT: CRYSTAL RIVER NUCLEAR GENERATING PLANT UNIT 3 - POTENTIAL  
OVERPRESSURIZATION OF THE NSCCC SYSTEM PIPING - REQUEST FOR  
ADDITIONAL INFORMATION (TAC NO. M93604)

Dear Mr. Beard:

In a Service Water (SW) System Self-Assessment Inspection which we conducted on July 10-14, 1995 (Inspection Report No. 50-302/95-15), the NRC staff noted a concern regarding licensing and design basis associated with the Nuclear Services Closed Cycle Cooling System (NSCCC). The concern was related to the design of the NSCCC system to deal with a Reactor Coolant Pump (RCP) seal cooler tube failure. Such a failure has the potential to rupture the service water system and to produce a non-isolable loss-of-coolant accident (LOCA) outside containment. Our understanding of your response to this concern is that failure of an RCP seal cooler tube is outside your licensing basis and not described in the Final Safety Analysis Report Chapter 14 accident analyses. However, you also assured the inspection team that resolution of this concern is being considered. The Inspection Report identified this concern as open item No. IFI 50-302/95-15-03. We are currently evaluating this open item. We have determined that the following additional information is needed to complete our review effort. Accordingly, please confirm whether potential RCP seal cooler failure is within your licensing/design basis, and provide the basis for your conclusion. If you conclude that a potential RCP seal cooler failure is not within your licensing/design basis, please provide the following information.

1. Provide a copy of ABB Impell Report No. 0920-208-01, Revision 1, "Evaluation of SW System Overpressurization."
2. Discuss the RCP thermal barrier heat exchanger design, and system inspections including inservice inspection of tube integrity.
3. Discuss the impact of the seal area cooler failures on the RCP seal injection and other safety-related components which are cooled by the NSCCC or the decay heat cooling system.
4. Discuss the NSCCC system's as-built condition and system response during an overpressurization event with emphasis on system relief and containment isolation capabilities.

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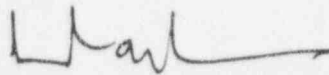
Mr. Percy M. Beard, Jr.

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5. Discuss the transients that could result from a RCP thermal barrier heat exchanger failure as an initiating event and related operator actions to mitigate them. Please provide applicable emergency operating procedures for operator action times and plant protection features. Also, please discuss plant response during these transients and cooldown using natural recirculation.
6. Provide a discussion of risk insights, including frequencies, probabilities and applicable operator actions, for this scenario. If this scenario was screened out in your Individual Plant Examination (IPE), please provide justification.

We request your response within 45 days from the date of this letter. If you have any questions regarding this request, please write or call me at (301) 415-1471.

Sincerely,



L. Raghavan, Project Manager  
Project Directorate II-3  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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cc: See next page

Mr. Percy M. Beard, Jr.  
Florida Power Corporation

Crystal River Unit No. 3  
Generating Plant

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Mr. Percy M. Beard, Jr.

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Original signed by

L. Raghavan, Project Manager  
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Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

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