

**Florida  
Power**

CORPORATION  
Crystal River Unit 3  
Docket No. 80-802

November 21, 1997  
3F1197-24

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555-0001

Subject: Plan and Schedule for RCS Attachment Piping Class 1 Fatigue Analyses  
(TAC No. M95347)

References: 1. FPC to NRC letter, 3F0697-21, dated June 17, 1997  
2. NRC to FPC letter, 3N0497-09, dated April 7, 1997

Dear Sir:

In accordance with the commitment in Reference 1, Florida Power Corporation (FPC), hereby submits the plan and schedule for performing Class 1 fatigue analyses of Reactor Coolant System (RCS) Attachment Piping for Crystal River Unit 3 (CR-3). FPC and Framatome Technologies, Inc. (FTI), have performed a study of the RCS Attachment Piping to determine the piping that may be sensitive to thermal fatigue. The study identified portions of the Core Flood (CF) System, the Decay Heat (DH) System, and a segment of the auxiliary pressurizer spray (APS) line that may be sensitive to thermal fatigue.

Reference 1 discussed CR-3's licensing basis for the boundaries between RCS Piping and "nuclear" piping other than RCS piping. FPC recognizes the need to improve the design analysis of the subject piping to ensure these piping sections will perform their intended function for the remainder of CR-3's plant life. Therefore, FPC plans to perform a more detailed fatigue analysis than that provided by USAS (ANSI) B31.1.0-1967. FPC is also working with the other B&W Owners Group (B&WOG) plants to use industry experience with this issue and to develop a consistent approach for resolution.

9711260144 971121  
PDR ADOCK 05000302  
P PDR



FPC has determined that sufficient design margin exists for the CF System, DH System, and the segment of the APS line due to low fatigue usage factors for the attached nozzles. Since these components already have fatigue evaluations with low fatigue usage (significantly less than 1.0) and CR-3 is approximately halfway through its design life, no design limits are at risk of being approached. In addition, FPC has performed selective inspections of the CF System, DH System, and the APS piping in accordance with the Inservice Inspection (ISI) Program. To date, no flaws or defects of concern have been found.

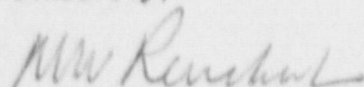
Therefore, FPC plans to perform Class 1 fatigue analysis for RCS Attachment Piping that are in the CF System from the reactor vessel to the first riser for both CF lines, the DH System from the hot leg nozzle to and including valve DHV-4, and a horizontal segment of the pipe that connects the APS line to the main pressurizer spray. These analyses will be completed by November 30, 1998. This schedule is consistent with the level of effort required for performance of fatigue analysis for these lines. As part of this effort, FPC will revise the affected design and licensing basis documents, including FCIR Figure 4-1, to clarify the design code boundaries and provide consistency with FSAR Section 4.1.3.2 and FSAR Table 4-6 description.

This effort will not be a part of the CR-3 restart schedule since the affected piping already meets USAS B31.1-1967 code requirements, and there are no safety concerns identified with upgrading to a more rigorous analytical methodology.

The commitments in this letter are contained in the Attachment.

If you have any questions regarding this submittal, please contact Mr. David Kunsemiller, Manager, Nuclear Licensing at (352) 563-4566.

Sincerely,



M. W. Rencheck  
Director  
Nuclear Engineering and Projects

MWR/gh/jwt  
Attachment

xc: Regional Administrator, Region II  
Senior Resident Inspector  
NRR Project Manager

### List of Regulatory Commitments

The following table identifies those actions committed to by Florida Power Corporation in this document. Any other actions discussed in the submittal represent intended or planned actions by Florida Power Corporation. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Manager, Nuclear Licensing of any questions regarding this document or any associated regulatory commitments.

COMMITMENT	IMPLEMENTATION
Perform Class 1 fatigue analysis for RCS Attachment Piping that are in the Core Flood (CF) System from the reactor vessel to the first riser for both CF lines, the Decay Heat (DH) System from the hot leg nozzle to and including valve DHV-4, and a horizontal segment of the pipe that connects the auxiliary pressurizer spray (APS) line to the main pressurizer spray, and revise the affected design and licensing basis documents.	November 30, 1998