

# Florida Power

CORPORATION

Crystal River Unit 3

Docket No. 50-302

April 18, 1996  
3F0496-23

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D.C. 20555

Subject: Technical Specification Change Request No. 203, Revision 2 and  
Commitments to Future Activities

Reference: A. FPC to NRC letter, 3F0396-19 dated March 21, 1996  
B. FPC to NRC letter, 3F0496-04 dated April 8, 1996  
C. FPC to NRC letter, 3F0496-18 dated April 15, 1996

Dear Sir:

Florida Power Corporation (FPC) provided Technical Specification Change Request Number TSCRN) 203, Revision 2 in Reference A. The TSCRN proposed a dispositioning strategy for dealing with Inter-granular Attack (IGA) in the first span of Crystal River Unit 3 (CR-3) Once-Through-Steam-Generators (OTSGs). As part of the proposed approach, FPC included conservative NDE practices based on knowledge gained from previous NDE and destructive examinations performed during two previous tube pull campaigns. FPC also performed in-situ pressure testing (References B and C) of 13 steam generator tubes containing 74 IGA indications. The test was conducted at 3100 psid pressure differential (20% higher than an upper bound steam line break pressure differential of 2575 psid) with no leakage observed from any of the tube sections tested.

Based on the in-situ testing results and the database of inservice first span indications, FPC submitted analyses (Reference C) which included a statistical analysis which established a confidence level for the overall population of CR-3 first-span indications and an evaluation of the consequences of hypothetical leakage of indications not statistically bounded by that analysis. The conclusion of the analysis is that postulated leak rates are manageable. FPC also provided an evaluation of the effects of those non-statistically bounded indications on the CR-3 safety analysis.

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The accident conditions assumed in the evaluation were:

- o The steam line break occurs with a concurrent 100 gpm leak in the steam generator and this leak rate exists for the entire duration of the accident.
- o The accident duration is 5.7 hours (used only to calculate the amount of activity). However, a puff-release is actually assumed for the dose calculation.
- o Credit for radionuclide decay was not taken.
- o Core thermal power was assumed to be 102% of full power.
- o Core history is identical to the Cycle 11 radiation analysis performed for the Cycle 11 Reload Analysis.
- o The dose was calculated using all five of the significant iodine isotopes using the TID-14844 dose conversion factors.
- o FSAR Section 14.2.2.1.6 assumptions apply.

The analysis predicted a resulting two hour thyroid dose of 84.5 REM and whole body dose of .32 REM at the exclusion area boundary (EAB). These doses are below the CR-3 licensing basis (10 CFR 100) limits of 300 REM thyroid and 25 REM whole body. These doses were calculated based on Reactor Coolant System (RCS) activity of 7.1 micro-Curies/gm dose-equivalent (DE) I-131. However, CR-3 Technical Specification (TS) 3.4.15 limits RCS activity to 1.0 micro-curies/gm DE I-131. The 2-hour EAB thyroid dose calculated using this more restrictive limit of our Technical Specifications is 11.9 REM. This satisfies SRP 15.1.5 acceptance criteria on dose and it is therefore, acceptable.

As we stated in Reference C, FPC will continue to refine an NDE-based correlation with data from our two previous tube pull campaigns. FPC intends to use that correlation to support a permanent Technical Specification change request regarding IGA indications in the first span of CR-3 OTSGs. The request will be similar to TSCRN 203, Revision 2 (Reference A). FPC will need to implement it during our next OTSG inspection currently scheduled for Refueling Outage 11 (Spring 1998). FPC expects to submit this TSCRN by January 31, 1997 to provide the NRC staff with adequate review time.

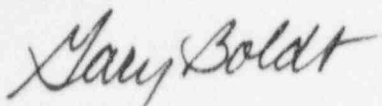
Reference C communicated our plans to perform additional in-situ testing of a statistically meaningful sample of indications during Refuel Outage 11 (11R). The results of the in-situ testing and the new database will generate enough datapoints for a statistical analysis to further demonstrate leak tightness conclusions. This and other commitments related to OTSG tube inspections are shown below. These commitments will be implemented as long as FPC is implementing its dispositioning strategy approved under TSCRN 203, Revision 2 or similar Technical Specification requirements approved under a subsequent TSCRN. These commitments are as follows:

1. Consistent with the positions of Generic Letter (GL) 95-05 FPC will perform 100% eddy-current-testing of first-span tubes containing known IGA indications during 11R.

2. FPC will perform in-situ testing of a statistically meaningful sample of indications during 11R assuming that FPC and NRC do not reach agreement on an acceptable NDE correlation for leakage.
3. FPC will make every effort to utilize the same analysis and acquisition techniques used in the Refuel 10 inspection for consistency and to facilitate the Staff's review of IGA indications' growth assessment that has been proposed as part of TSCRN 203, Revision 2.
4. FPC will pull a number of OTSG tubes in 11R following the guidelines of GL 95-05. Tube pull campaigns conducted in subsequent outages will also follow the GL guidelines including potentially participating in a cooperative B&W Owners Group tube pull program.

FPC appreciates your continued attention and feedback regarding TSCRN 203, Revision 2.

Sincerely,



G. L. Boldt,  
Vice President  
Nuclear Production

GLB/LVC

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