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RECIP.NAME RECIPIENT AFFILIATION
VARGA,S.A. Operating Reactors Branch 1

SUBJECT: Submits info re plans to prevent ECCS computational errors in response to NRC 800612 ltr.Std procedure document for steam generator tube plugging analysis has been written.QA audits indicated correction of previous errors.

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FLORIDA POWER & LIGHT COMPANY

October 14, 1980
L-80-339

Office of Nuclear Reactor Regulation
Attention: Mr. Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Varga:

Re: Turkey Point Units 3 & 4
Docket Nos. 50-250 & 50-251
ECCS Computational Errors

The purpose of this letter is to respond to your letter of June 12, 1980, which requested that we inform you of our plans to prevent ECCS computational errors in the future.

From November 1979 through May 1980 three errors were found in ECCS analyses performed for Turkey Point Units 3 and 4. Each event was reported to the NRC in accordance with Technical Specification 6.9.2 (Reportable Occurrences). Because of this relatively short history of errors, Florida Power & Light Company requested that the NSSS vendor provide assurance that the present analysis had been performed correctly and that future analyses would not encounter similar problems.

In response to our request, the NSSS vendor has again verified the input data to the Turkey Point LOCA analysis, and taken other measures to ensure that the present LOCA analysis furnished to FPL contains no errors and is consistent with approved models. Additional corrective action taken or planned by the NSSS vendor as a result of computational errors are as follows:

(1) With respect to the pressure drop input to the steam generator tube plugging analysis, a standard procedure document for steam generator tube plugging analysis has been written. Other existing standard procedure documents dealing with SATAN pressure drops have been revised to include a cautionary statement to insure proper consideration of the impact of data changes.

(2) With respect to the reactor vessel upper head modeling input to the SATAN code, the standard procedure document for reactor vessel upper head modeling was clarified to guard against use of inappropriate modeling assumptions. In addition, an automated cross check of input data with data for a similar plant is now required in order to identify potential discrepancies. For future ECCS efforts, analysts will be provided with a base plant-specific input deck from an automated generator/processor system. This system will create the plant input deck from a permanent library of data which has been verified and documented. This feature will provide an additional

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element of confidence that the analysis efforts are being performed consistently and correctly.

(3) With respect to the use of a clad heatup rate dependent burst curve in the large break model, the NSSS vendor has demonstrated that proposed improvements in the Westinghouse evaluation model would compensate for the penalties associated with clad heatup rate dependence and the fuel rod models proposed by the NRC in draft NUREG-0630.

In future evaluation model changes, the effect on clad heatup rate will be checked along with other sensitive parameters, and appropriate model changes will be made when necessary.

To obtain further assurance of the correctness of the vendor ECCS analysis, FPL has performed two Quality Assurance (QA) Audits of the Westinghouse ECCS Safeguards Engineering Group in 1980. The first one which took place on March 4-5 at Monroeville, Pa.. resulted in a recommendation to cross check the results of the Turkey Point LOCA computer deck against the results of the standard loop deck. The error, which was reported to the Region II Office of Inspection and Enforcement on May 27, 1980, was found after this cross check had been performed.

The second audit of the Westinghouse ECCS Group was performed by FPL personnel from the QA and Nuclear Analysis Departments on September 3-5, 1980 at Monroeville, Pa. Present and proposed future methods, procedures and standards used by the ECCS Group for assuring the validity of the ECCS analysis were reviewed. The auditors examined in detail a number of input parameters and traced back the origin of these input values. It was concluded that Westinghouse had indeed corrected previous errors and improved their methods and procedures, and that the occurrence of input errors, such as had been found during the last year, was highly unlikely in the future.

In summary, both FPL and the NSSS vendor are concerned about ensuring the adequacy of ECCS analysis results. The steps described above have been taken with this goal in mind and should serve to prevent ECCS computational error in the future.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced Systems & Technology
REU/MAS/ras

cc: Mr. J. P. O'Reilly, Region II
Harold F. Reis, Esquire