

50-335



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 14, 1998

Mr. Thomas F. Plunkett
President, Nuclear Division
Florida Power and Light Company
Post Office Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: ST. LUCIE UNIT 1 STEAM GENERATOR RUN TIME ANALYSIS
(TAC NO. M95230)

Dear Mr. Plunkett:

By letter dated October 24, 1996, Florida Power and Light Company (FPL) provided a run time analysis in support of a 15-month period of operation for the St. Lucie Unit 1 steam generators. Revisions to this analysis were provided in letters dated April 4 and June 3, 1997. The information pertains to Cycle-14 operation of Unit 1 which began in July 1996.

The NRC staff performed a preliminary review of the October 24, 1996, FPL submittal and determined that additional information, including a revised dose assessment calculation, was necessary to complete the review of the analysis. However, this preliminary review did not identify any significant safety concerns associated with the proposed 15-month operating cycle. After receipt of the requested additional information, priority reviews of safety-significant issues at other plants prevented completion of a detailed review of the FPL analysis prior to completion of the 15-month operating cycle in October 1997. Since Unit 1 has replaced the steam generators, continued Nuclear Regulatory Commission (NRC) staff effort to complete this review would be an unnecessary expenditure of resources. Therefore, we have terminated our review of the FPL run time analysis.

Prior to termination of our review, NRC technical staff had identified questions and issues related to the analysis. These questions and issues concerning the analysis are listed in the enclosure for your information. Resolution of these concerns is not necessary in the context of run time. However, their resolution may avoid delays in review of future submittals if similar assumptions or analysis are utilized. If convenient for your staff, I

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will arrange a call with the appropriate NRC reviewer to discuss these questions. However, a formal response to these questions is not necessary.

We appreciate your cooperation in responding to the staff's requests for information and the sharing of information concerning the condition of the St. Lucie steam generators. If you have questions concerning this issue, please contact me at (301) 415-1495.

Sincerely,



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

Docket No. 50-335

Enclosure: NRC Staff Questions and Comments

cc w/encl: See next page



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/s/

L. A. Wiens, Senior Project Manager
Project Directorate II-3
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COMMENTS REGARDING ST. LUCIE UNIT 1 MID-CYCLE ANALYSIS

1. The SAIC-97-1008, Revision 1, analysis includes the assumption that the plant is allowed to operate for 100 hours at a pre-existing spike activity level of 60 $\mu\text{Ci/g}$ before the plant must start shutdown procedures. However, per Technical Specification (TS) 3.4.8, Action a., as soon as that value is reached the plant must be placed in Hot Standby within 6 hours.
2. The removal efficiencies for control room charcoal adsorber and HEPA filter were not appropriately reduced to account for the in-place test acceptance criteria being 1%. Such an accounting typically results in a 0.95% reduction in efficiency.
3. The analysis assumed an adsorber efficiency of 95% for the elemental and organic forms of iodine when the laboratory test for charcoal in the TS surveillance only requires that the adsorber demonstrate an efficiency of 90%. In addition, the laboratory test is conducted at a temperature of 130°C, which is far above the temperatures expected in the control room.
4. TS surveillance requirements for control room ESF ventilation system flow rates are inconsistent with the analysis. The TS surveillance for the adsorber limits flow to 2,000 cfm \pm 10%. However, the analysis assumed a flow of 2,450 cfm. The pressurization flow range allowed by TSs is 0-450 cfm. The analysis assumed pressurization flow was 450 cfm. This assumption is not the most limiting case with respect to control room operator doses. The analysis assumption for recirculation flow was 2,000 cfm. If pressurization flow is assumed to be 450 cfm, maximum recirculation flow is limited to 1,750 cfm.
5. It appears the meteorology data is changed from that in their design basis. If revised design basis meteorology values are used to establish new χ/Q values for the EAB, LPZ and control room, then the data to support such changes must be submitted to the NRC for review and approval prior to its use.
6. There appears to be an error with respect to the accuracy of the control room ventilation system model. The term A_{rn} should include the return of the recirculation air from the control room which has been passed through the recirculation filter.
7. The consequences of the accident-initiated spike and the failed fuel cases appear to have underestimated the thyroid dose consequences by, in some cases, an order of magnitude.

Questions Concerning the Evaluation

1. From information contained in the UFSAR, with a loss of offsite power, it was not clear whether there is a period of time before the control room ventilation systems operate. If there is, then the analysis needs to account for this delay.
2. Previous values for the control room volume indicated a volume of approximately 107,000 ft³. Section 6.4 of the Updated Final Safety Analysis Report would seem to indicate this as such. If the value for the control room volume has been changed, what was the basis for the reduction to 62,000 ft³?
3. What is the isolation time for the control room intake for a main steamline break accident? What is the isolation based upon?
4. Table 6.4-1 indicates that the control room inleakage is 34 cfm. The analysis assumed 100 cfm. Explain the basis for the difference.