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FACIL:50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
AUTH.NAME AUTHOR AFFILIATION
UHRIG,R.E. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION
EISENHUT,D.G. Division of Licensing

SUBJECT: Application for amend to License DPR-67 to add addl conservatism re incore detector operability beyond that provided in 810813 original request for amend.

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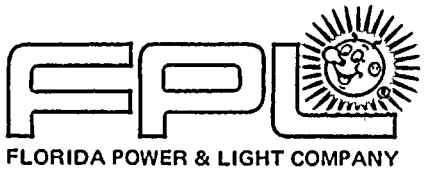

FLORIDA POWER & LIGHT COMPANY

August 20, 1981
L-81-363

Office of Nuclear Reactor Regulation
Attention: Mr. Darrell G. Eisenhut, Director
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Eisenhut:

Re: St. Lucie Unit 1
Docket No. 50-335
Proposed License Amendment
Incore Detector Operability

In our letter (L-81-354) dated August 13, 1981, we proposed to amend Appendix A of Facility Operating License DPR 67 to allow operation with a reduced number of incore detectors operable. The purpose of this letter is to provide additional information as we discussed with your staff.

Proposed Limiting Condition of Operation 3.3.3.2. should be changed to say:

"3.3.3.2 The incore detection system shall be OPERABLE with:

a. At least 50% of all incore detector locations, and

b. A minimum of three quadrant symmetric incore detectors for at least three levels."

This change is made to add additional conservatism beyond that provided by the anlaysis included with the initial request.

Florida Power & Light Company routinely conducts a core follow program to ensure that actual core performance is in accordance with design. The analytical models used to perform this function have been developed by FPL based upon "as-built" design data and actual assembly burnup distributions developed from incore power distribution measurements. Throughout Cycle 4 a comparison of the simulated and measured average power fraction in the instrumented detector string has been made on an Effective Full Power Month schedule. A calculation of the standard deviation of the power weighted difference between simulated and measured values resulting from the comparison is made. Refer to letter L-80-147 of May 9, 1980 for further details.

With the failure level of incore detector strings above 25% Florida Power & Light Company will, for the remainer of Cycle 4, perform the power distribution surveillance detailed above on an once per 15 Effective Full Power Days schedule. Additionally, any deviation that exceeds the acceptance criteria detailed in letter L-80-147 will be promptly investigated by the St. Lucie Reactor Engineer and the Nuclear Analysis Department for determination of appropriate action.

A001
S/P

For the remainder of Cycle 4, with the failure level of incore detectors strings above 25%, a more conservative method for calculation of incore alarm setpoints will be administratively implemented via a temporary change to procedure O.P. 3200050, (Calculation and Adjustment of Fixed Incore Detector Alarm Setpoints). This more conservative method is as follows:

> The alarms for the minimum margin to the linear heat rate (kw/ft) limit would be set on all of the detectors rather than the existing method of setting the alarms in each axial quarter of the core based on the maximum kw/ft at each level. This imposes restraints on the power distribution as well as the peak linear heat rate and precludes the occurrence of undetected peaks larger than the limit. When incore detector alarms are set using this method, several alarms would be received in the event of a shift in the power distribution even though the maximum local peak linear heat rate may not be exceeded.

Should you have any further questions on our amendment request, we will be happy to address them.

Very truly yours,

Robert E. Uhrig

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/PLP/ras

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