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FLORIDA POWER & LIGHT COMPANY

L-84-288
October 29, 1984

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 No. 2
Docket No. 50-389
Cycle 2 Reload

Attached is Florida Power & Light Company's response to Containment Systems Branch's request for additional information.

Very truly yours,

J. W. Williams, Jr.
Group Vice President
Nuclear Energy

JWW/RJS/cab

Attachment

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NRC Question No. 1:

The Cycle 2 Reload Safety Report Table 3.3.4-1 shows higher peak pressures, but lower peak temperatures, for the corresponding postulated accidents in Table 6.2-4 of the FSAR. Why do the peak pressures increase and the peak temperatures decrease?

FPL Response:

Containment peak pressure/temperature analysis results presented in the FSAR and the Cycle 2 Reload Safety Report are not comparable for the following reasons:

1. The Cycle 2 Reload Safety Report values are absolute peak pressure/temperature values that do not occur simultaneously for the same event.

2. Since more than one variable has been changed between the FSAR and the Cycle 2 Reload Report analysis (i.e., CS flow rate, CS start time, CSAS set point and mass/energy release data) it is not feasible to establish a uniform trend for the peak pressure/temperature variation. Moreover, the peak pressure and temperature are influenced differently by changing the parameters mentioned above.

3. The Cycle 2 Reload Safety Report peak pressure/temperature values were based on a containment initial pressure of 15.1 psia whereas the FSAR analysis assumes 14.7 psia for the same parameter. The higher containment initial pressure would tend to lower the peak temperature.

NRC Question No. 2:

The Cycle 2 Reload Safety Report indicates higher peak containment pressures than in the FSAR. Why shouldn't the Technical Specification value for Pa be increased?

FPL Response:

As stated in FSAR Section 6.2.1.1.1, the contaiment is designed to provide protection to the public from the consequences of a loss of coolant accident (LOCA) up to and including a double-ended rupture of the largest reactor coolant pipe, and to ensure that with the Engineered Safety Features, the radiological exposure to the public resulting from such an occurrence is below 10 CFR 100 guidelines.

The peak containment pressure specified in the Cycle 2 Reload Safety Report for the LOCA is 42.7 psig. This value is less than the current Technical Specification value of 43.4 psig for Pa, and therefore, a change to the Technical Specification for Pa is not necessary.

NRC Question No. 3:

The Cycle 2 Reload Safety Report stated that the post LOCA hydrogen build-up inside containment was reanalyzed and found to comply with the existing system design criteria. What is the basis for this finding or what are the results of the reanalysis?

FPL Response:

The results of the hydrogen build-up reanalysis are as follows:

H_2 Concentration when Recombiner Started	Recombiner Start Time (hrs)	Resulting Maximum H_2 Concentration
2.0%	13.32	3.81% at 264 hrs.
2.5%	30.48	3.86% at 264 hrs.
3.0%	50.41	3.94% at 240 hrs.

As stated in the FSAR Section 6.2.5.2.2, administrative procedures would require the operator to start the recombiner within 24 hours following a LOCA. The operator is alerted when the containment H_2 level reaches 3.0% as signaled by the redundant Class IE alarms of the Containment Hydrogen Analyzer System. As indicated above, starting the recombiner at 3.0% H_2 concentration prevents the maximum H_2 concentration from exceeding the 4.0% limit.

NRC Question No. 4:

Justification should be provided for the 4.0 psig RPS setpoint and 4.7 psig Containment Isolation setpoint on Containment Pressure-High.

FPL Response:

FPL has determined that the RPS setpoint on Containment Pressure-High should be reduced from 4.0 psig to 3.0 psig. This is based on a maximum normal containment pressure of 0.4 psig (Tech Spec limit), and a 2.6 psig margin to account for instrumentation uncertainty, operational transients such as line voltage fluctuations, temperature effects, etc., and to assure that there will be no inadvertent reactor trips and unnecessary challenges to safety systems.

The Containment Isolation setpoint should be reduced from 4.7 psig to 3.5 psig. This is based on the 3.0 psig RPS setpoint plus 0.5 psig to prevent a containment isolation prior to the reactor trip.

These setpoint values were reviewed by Combustion Engineering, and they indicated that no inadvertent reactor trips should occur and that the setpoints were consistent with other plants of similar design.