Florida Power & Light Company, 6501 S. Ocean Drive, Jensen Beach, FL 34957

December 4, 2008

L-2008-254
10 CFR 50.46

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

Re: St. Lucie Unit 1
Docket No. 50-335
Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors
10 CFR 50.46 Change Report

During the fall 2008 SL1-22 refueling outage, Florida Power and Light (FPL) observed reduced low pressure safety injection (LPSI) flow during operation of the shutdown cooling system. This flow reduction would also be present during the injection phase of a loss of coolant accident (LOCA). The subsequent calculation that assessed the effects of this condition, along with other previous changes and errors in the accident analysis, resulted in a new peak cladding temperature (PCT) value within the regulatory limit of 2200 °F provided in 10 CFR 50.46. However, the accumulated effect on PCT was greater than 50 °F.

According to 10 CFR 50.46, when a cumulative PCT change in errors or changes to the analysis of 50 °F occurs, a 30 day report shall be sent to the NRC with a proposed schedule for providing reanalysis or taking action as may be needed to show compliance with 50.46 requirements. This information is provided in the attachment to this letter.

Please contact Ken Frehafer at (772) 467-7748 should you have any questions regarding this submittal.

Sincerely,

Eric S. Katzman
Licensing Manager
St. Lucie Plant

ESK/KWF

Attachment

A002
NRR

St. Lucie Unit 1 10 CFR 50.46 30-Day Change Report

Emergency core cooling system (ECCS) analyses for St. Lucie Unit 1 are performed by AREVA NP Inc. The following 30-Day report pertaining to the application of AREVA NP Inc. large break loss of coolant accident (LBLOCA) evaluation model SEM/PWR-98 to St. Lucie Unit 1, is provided pursuant to 10 CFR 50.46(a)(3). A summary of calculated peak cladding temperature (PCT) changes is provided in Table 1 below.

1.0 Change to LPSI flow and Impact on LBLOCA

1.1 One change to the LBLOCA ECCS evaluation model analysis was done which involved a reduction of 300 gpm in the low pressure safety injection (LPSI) pump flow used in the analysis of record. The reanalysis was performed as a result of LPSI flow rate anomalies observed during operation of the shutdown cooling system during refueling outage operations. This change resulted in an estimated effect on the peak cladding temperature (PCT) of +12 °F based on the SEM/PWR-98 evaluation model. With this change, the cumulative effect of the changes/errors on the LBLOCA evaluation model PCT for St. Lucie Unit 1 was determined to be 56 °F.

Previous LBLOCA PCT changes are documented in Reference 2.1. Table 1 summarizes the estimated impact of the changes/errors on the St. Lucie Unit 1 LBLOCA PCT. The limiting LBLOCA PCT with the estimated effect of all the changes/errors is 2059 °F.

1.2 The sum of the St. Lucie Unit 1 LBLOCA PCT from the most recent analyses using the accepted evaluation methodology and the estimates of PCT impact for changes and errors identified since the last analysis (2059 °F) continues to comply with the 10 CFR 50.46 acceptance criterion of 2200 °F. Therefore, no reanalysis of LBLOCA event is necessary.

1.3 The LBLOCA event will be reanalyzed as part of the ongoing Extended Power Uprate (EPU) project, and is tentatively scheduled to be complete by end of year 2009.

2.0 References

2.1 FPL Letter L-2008-046, Gordon L. Johnston to USNRC Document Control Desk, "St. Lucie Units 1 and 2, Docket Nos. 50-335 and 50-389, Acceptance Criteria for Emergency Core Cooling Systems for Light Water Nuclear Power Reactors: 10 CFR 50.46 Annual Report," March 18, 2008.

Table 1: St. Lucie Unit 1 LBLOCA PCT Margin Summary Sheet – 30 Day Report

Evaluation Model: EMF-2087(P)(A) Revision 0 (SEM/PWR-98)

Evaluation Model PCT: **2005 °F**

			Net PCT Effect	**Absolute PCT Effect**
A.	Prior 10 CFR 50.46 Changes or Error Corrections – Previous Years	ΔPCT	+ 42 °F	+ 44 °F
B.	Prior 10 CFR 50.46 Changes or Error Corrections – Year 2008	ΔPCT	+ 0 °F	+ 0 °F
C.	Current 10 CFR 50.46 Changes: - This Report			
	LPSI Flow Reduction	ΔPCT	+ 12 °F	+ 12 °F
D.	Absolute Sum of 10 CFR 50.46 Changes	ΔPCT	----	+ 56 °F

Final PCT with 10 CR 50.46 Changes: **2059 °F**