N 04/06/19 REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS) DISTRIBUTION FOR INCOMING MATERIAL 50-335 DOCDATE: 03/27/78 ORG: UHRIG R E REC: DAVIS D K DATE RCVD: 04/04/78 NRC FL PWR & LIGHT COPIES RECEIVED NOTARIZED: NO DOCTYPE: LETTER ITR 3 ENCL 0 SUBJECT: FURNISHING SUMMARY OF RESULTS OF AN ADDITIONAL SPENT FUEL POOL COOLING SYSTEM, AND SUPPLEMENTING APPLICANT'S 08/31/77, SUBMITTAL, "SPENT FUEL STORAGE FACILITY MODIFICATION SAFETY ANALYSIS REPT", SECTION 4. 1. A., "SPENT FUEL COOLING SYSTEMS". REVIEWER INITIAL: XJM PLANT NAME: ST LUCIE #1 DISTRIBUTOR INITIAL: GENERAL DISTRIBUTION FOR AFTER ISSUANCE OF OPERATING LICENSE. (DISTRIBUTION CODE A001) BR_CHIEF REID**EMR_ONLY(7) FOR ACTION: NRC PDR**LTR ONLY(1) REG FILE**LTR ONLY(INTERNAL: OELD**LTR ONLY(1) T & E**LTR ONLY(2) CHECK**LTR ONLY(1) HANAUER**LTR ONLY(1) SHAO**LTR ONLY(1) EISENHUT**LTR ONLY(1) BUTLER**LTR ONLY(1) BAER**LTR ONLY(1) J COLLINS**LTR ONLY(1) GRIMES**LTR ONLY(1) .L MCGOUGH**LTR ONLY(1) LPDR'S EXTERNAL: FT PIERCE, FL**LTR ONLY(1) TIC**LTR ONLY(1) NSIC**LTR ONLY(1) ACRS CAT B**LTR ONLY(16) 780960021 DISTRIBUTION: CONTROL NBR: LTR 40 ENCL 0 SIZE: 2P **** THE END *********



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March 27, 1978 L-78-105 REBULATORY DUCKET FILE COPY

Office of Nuclear Reactor Regulation Attention: Mr. Don K. Davis, Acting Chief Operating Reactors Branch #2 Division of Operating Reactors U. S. Nuclear Regulatory Commission Washington, D. C. 20555



Dear Mr. Davis:

Re: St. Lucie Unit 1 Docket No. 50-335 Spent Fuel Pool Augmentation

Pursuant to informal telephone conversations with your staff, Florida Power & Light Company has evaluated an additional spent fuel pool cooling system case postulated by the staff reviewers. The following summarizes the results of this evaluation and supplements our August 31, 1977, submittal, "Spent Fuel Storage Facility Modification Safety Analysis Report", Section 4.1.a., "Spent Fuel Pool Cooling Systems".

The additional verification case was evaluated for 1/3 core of fuel completely discharged into the spent fuel pool 24 hours after the existing 72 hour Technical Specification limit on fuel movement. The evaluation assumes the pool contains nine offloads (1/3 cores) of 3 year irradiated fuel from the previous nine yearly refuelings. Two spent fuel pool cooling pumps are assumed to be in operation. The entire 1/3 core of 3 year full power irradiated fuel is assumed to be in the pool 96 hours after reactor shutdown (sub-criticality). The conservative ANS 5.1 decay heat curves with added uncertainties as stated in our August 31, 1977, submittal were used to calculate the heat load expected in the pool. Additionally, no credit for heat transfer to the pool walls or atmosphere was assumed and

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Mr. Don K. Davis Page Two March 27, 1978 L-78-105

conservative values for spent fuel pool heat exchanger shell and tube side temperatures and flows were used. This conservative evaluation yields a calculated heat load of 16.74×10^6 Btu/hr in the spent fuel pool four days after shutdown. This heat load could potentially result in a maximum pool temperature of 125.4°F, which is well within the spent fuel pool and spent fuel cooling system design capabilities.

Very truly yours,

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Robert E. Uhrig Vice President

REU:JAE:sl

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