

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

# SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

## RELATED TO AMENDMENT NO. 78

## TO FACILITY OPERATING LICENSE NO. DPR-67

## FLORIDA POWER & LIGHT COMPANY

## ST. LUCIE PLANT, UNIT NO. 1

## DOCKET NO. 50-335

## INTRODUCTION

By letter dated September 10, 1984, Florida Power and Light Company (FPL), submitted a proposed administrative change to Technical Specification (TS) 4.6.2.2.d. This TS surveillance requirement was to verify a minimum sodium hydroxide (NaOH) flow rate from the spray additive tank (SAT). The TS purpose was to ensure that sufficient NaOH was injected into the containment spray system (CSS) to remove radio-iodines released into the reactor containment following a postulated design basis loss of coolant accident (LOCA). Also, for clarification, it should be noted that the SAT has been synonymously referred to in the <u>Final Safety Analysis Report</u> (FSAR) and drawings as the NaOH storage tank and as the chemical additive tank. Additional and clarifying information was submitted by letter dated November 3, 1986. This latter submittal did not affect the substance of the proposed changes noticed in the <u>Federal Register</u> or alter the staff's proposed no significant hazards consideration determination. The staff's evaluation of the test flow rates follows.

#### EVALUATION

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The staff determined that the lift check valves, V-07256 and V-07258, which were being tested by TS 4.6.2.2.d, did not satisfy the guidance for testing normally closed check valves. The installed SAT 3600# lift check valves, V-07256 and V-07258, could not be demonstrated to pass the full flow rate value of 47 gpm per check valve that was taken credit for in FSAR, Section 6.2.6.2.2, with the test connection used. Based on this observation, the licensee reanalyzed the FSAR maximum NaOH flow rate. The conclusion of this reanalysis was provided in the licensee's letter of November 3, 1986, which stated:

"FPL obtained updated information on pH for various combinations of boric acid solutions and NaOH concentrations and recalculated worst case minimum and maximum post-LOCA pH values for both the sump fluid and the CS nozzles. Based on these calculations, the required NaOH flowrate ([(sic)] (18  $\pm$  1.5 gpm) is lower than the earlier FSAR value (47 gpm). As a result, the IRS [iodine removal system] was modified during the

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last refueling outage [that commenced on 10-20-85 and ended on 12-25-85 by adding flow restricting orifice plates immediately upstream of the suction of each caustic eductor. These orifice plates reduce the caustic flow to each eductor to  $18 \pm 1.5$  gpm when either one or both CS [containment spray] pumps are operating."

Also, the originally proposed amendment of September 10, 1984, was modified to remove the specific test parameters from the TS that would properly be kept in the surveillance procedure. For example, the demineralized water supply and SAT pressures of  $19 \pm 2$  psig would only be achieved using special test connections, since no operating flow path existed between the SAT and tap FI-07-2 to supply demineralized water, as per drawing 8770-G-0088, Revision 9, "Flow Diagram Containment Spray and Refueling Water Systems." The SAT typical operating pressure was approximately 4 psig, as referenced in FSAR, Section 6.2.6.1.1.b.

Another discrepancy noted by the staff was the omission to test the eductor header check valves, V-07269 and V-07270. The Safety Evaluation (SE), dated January 23, 1985, granted relief to test valves V-07269 and V-07270 in accordance with TS 4.6.2.2.d. This TS does not test these check valves. Based on this finding, the licensee modified the inservice test program to include V-07269 and V-07270; and documented in their letter of November 3, 1986, that these check valves are in the inservice test program.

Based on the reanalysis for the maximum flow rate for check valves, V-07256 and V-07258, the final proposed TS change, as clarified by the licensee's November 3, 1986 letter, does provide a full flow demonstration to adequately verify the flow path from the SAT to each containment spray pump through the normally closed check valves.

Based upon the above, the staff finds the proposed TS change is acceptable.

#### ENVIRONMENTAL CONSIDERATION

This amendment involves a change in the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or a change in surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously published a proposed finding that the amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR  $\S51.22(c)(9)$ . Pursuant to 10 CFR  $\S51.22(b)$ , no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment. We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5

Date: March 30, 1987

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