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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 102 TO FACILITY OPERATING LICENSE NO. DPR-31

AND AMENDMENT NO. 96 TO FACILITY OPERATING LICENSE NO. DPR-41

FLORIDA POWER AND LIGHT COMPANY

TURKEY POINT UNIT NOS. 3 AND 4

DOCKET NOS. 50-250 AND 50-251

I. Introduction

By letter dated February 22, 1983, the NRC staff identified concerns relating to the blocking of Safety Injection (SI) signals during startup or cooldown in a manner which could be inconsistent with some pressurized water reactors (PWRs) plant specific Technical Specifications. We requested that the Turkey Point Plant, Units 3 and 4, be reviewed to assure consistency in this area.

II. Evaluation

Technical specifications set forth the operability requirements for engineered safety feature actuation (ESF) channels which specify actions which are to be taken when ESF channels are inoperable. For those plants which use the format of the current Standard Technical Specifications, the operability requirements are stated in terms of defined operating modes. Thus during some operating modes the operability requirements are not applicable. For older plants the operability requirements of ESF channels are determined based on the action statements imposed when the minimum operability requirements are not met. Generally, the action is identified as either hot shutdown or cold shutdown.

When an operating bypass is provided which prevents the actuation of ESF systems, the technical specifications indicate the conditions under which the interlock or blocking action takes place. This precludes a conflict with the operability requirements under conditions where the ESF channel is rendered inoperable due to an operating bypass. The failure to identify conditions under which safety actions are blocked by an operating bypass is considered in violation of the operability requirements for that channel. Thus, in order to preclude such conflicts, technical specifications should be explicit with regards to identifying the conditions under which operating bypasses will block ESF channels.

While current Standard Technical Specifications identify operating bypasses, it has been found that some Westinghouse plants do not currently identify all operating bypasses under the operability requirements of ESF channels. A review was conducted of the operability requirements for ESF channels for all licensed Westinghouse plants. The channels which initiate safety

injection on low pressurizer pressure always include an operating bypass to permit plant shutdown. The channels which sense steam line breaks and actuate safety injection and/or steam line isolation may or may not include a manually initiated operating bypass.

The specific concerns identified for the Turkey Point Plant, Units 3 and 4 were:

> Table 3.5-2 does not indicate any conditions under SAFETY INJECTION initiated on High Differential Pressure between any Steam Line and the Steam Line Header, or High Steam Flow in 2/3 Steam Lines and Low T_{avg} or Low Steam Line Pressure may be blocked. Item 2.1 in Table 3.5-3 does not indicate any conditions under which STEAM LINE ISOLATION may be blocked.

By letter dated April 13, 1983, Florida Power and Light Company (FPL) indicated the existing Technical Specifications for Turkey Point, Units 3 and 4, were reviewed and did allow for bypassing of the SI signals identified in our letter. FPL further indicated that an amendment request would be submitted to provide clarification of the operating bypass conditions. FPL also stated that there were no conditions under which steam line isolation would be blocked.

By letter dated December 28, 1983, FPL submitted proposed Technical Specifications changes for Table 3.5-2, "Engineered Safety Features Actuation." The proposed changes add footnotes for Items 1.3 and 1.5 specifically identifying the conditions which must exist to allow for bypassing of the signals. The bypassing of the (Item 1.3) High differential pressure between any steam line and steam line header and (Item 1.5) High steam flow in 2/3 steam lines coincident with low T_{avg} or steam line pressure are necessary to permit operational flexibility during normal plant startup or cooldown.

The existing Technical Specifications allow the automatic safety injection signal from low pressurizer pressure (2/3) to be manually blocked when the reactor coolant pressure is below 2000 psig and will automatically unblock above this pressure.

The bypassing of the high differential pressure between any steam line and steam line header is necessary because when the reactor is shutdown and is to be cooled down and depressurized, the steam generator main steam isolation valves are normally closed. This brings steam header pressure to 0 psig. As the system is cooled via the steam dumps to atmosphere, the pressure in the steam generators is reduced. By design the output from the steam line header pressure transmitter is set such that the signal will not fall below that equivalent to 585 psig. Thus, a safety injection would occur when steam generator pressure reaches 485 psig (100 psi Delta p) if the signal is not blocked.

The bypassing of the automatic safety injection signal from high steam flow coincident with either low steam line pressure or low T_{avg} when the reactor coolant average temperature is below 543°F and will automatically unblock above this temperature. The reactor could not be cooled down and depressurized without initiating a safety injection if the signal was not bypassed.

III. Summary

The proposed Technical Specifications add footnotes to explicitly identify the bypass conditions that are necessary during startup and cooldown as described above. The existing Technical Specifications are not clear in this area and the addition of the footnotes will provide consistency throughout the Technical Specifications and eliminate any potential conflicts in this area.

IV. Environmental Consideration

We have determined that these amendments do not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendments involve an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR §51.5(d)(4), that an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of these amendments.

V. Conclusion

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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: April 13, 1984

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