



Florida Power & Light Company, 6351 S. Ocean Drive, Jensen Beach, FL 34957

December 13, 1999

L-99-259
10 CFR 50.90
10 CFR 50.73

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555

RE: St. Lucie Unit 2
Docket No. 50-389
Withdrawal of Proposed License Amendment
SIT and SDC Isolation Interlock Surveillances
and Retraction of LER 50-389/1999-001

References:

1. FPL Letter L-99-099 dated May 24, 1999, "Proposed License Amendment SIT and SDC Isolation Interlock Surveillances"
2. NRC Letter from William C. Gleaves to J. A. Stall dated November 2, 1999, "St. Lucie Unit 2 – Amendment Request Regarding Safety Injection Tank and Shutdown Cooling System Isolation Interlock Surveillances (TAC No. MA5619)"

In reference 2 the NRC stated that in the past FPL correctly implemented the surveillance requirements for the safety injection tank (SIT) and shutdown cooling system (SDC) isolation interlocks, and the proposed license amendment of reference 1 was not required. After careful review of the NRC's position documented in reference 2 regarding the surveillance requirements for the SIT and SDC isolation interlocks, FPL hereby withdraws the amendment request of reference 1 and retracts LER 50-389/1999-001.

FPL prepared administrative changes for the bases of Technical Specifications 3/4.5.1, "Safety Injection Tanks (SIT)" and 3/4.5.2 "ECCS Subsystems – Tave Greater Than or Equal to 325 °F," to provide clarification for the surveillance requirements of the SIT and SDC isolation valve interlocks. Reference 2 provided the bases and justification for these administrative changes, and the changes are presented in Attachment 1.

Please contact us with any questions.

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Very truly yours,



J. A. Stall
Vice President
St. Lucie Plant

JAS/EJW/KWF

Attachment

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant
Mr. W. A. Passetti, Florida Department of Health and Rehabilitative Services

Attachment 1 to FPL Letter L-99-259

Administrative TS Bases Changes

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BASES3/4.5.1 SAFETY INJECTION TANKS

The OPERABILITY of each of the Reactor Coolant System (RCS) safety injection tanks ensures that a sufficient volume of borated water will be immediately forced into the reactor core through each of the cold legs in the event the RCS pressure falls below the pressure of the safety injection tanks. This initial surge of water into the core provides the initial cooling mechanism during large RCS pipe ruptures.

The limits on safety injection tank volume, boron concentration, and pressure ensure that the assumptions used for safety injection tank injection in the safety analysis are met.

The safety injection tank power-operated isolation valves are considered to be "operating bypasses" in the context of IEEE Std. 279-1971, which requires that bypasses of a protective function be removed automatically whenever permissive conditions are not met. In addition, as these safety injection tank isolation valves fail to meet single failure criteria, removal of power to the valves is required.

The limit of 72 hours for operation with an SIT that is inoperable due to boron concentration not within limits, or due to the inability to verify liquid volume or cover-pressure, considers that the volume of the SIT is still available for injection in the event of a LOCA. If one SIT is inoperable for other reasons, the SIT may be unable to perform its safety function and, based on probability risk assessment, operation in this condition is limited to 24 hours.

→ INSERT
3/4.5.2 and 3/4.5.3 ECCS SUBSYSTEMS

The OPERABILITY of two separate and independent ECCS subsystems ensures that sufficient emergency core cooling capability will be available in the event of a LOCA assuming the loss of one subsystem through any single failure consideration. Either subsystem operating in conjunction with the safety injection tanks is capable of supplying sufficient core cooling to limit the peak cladding temperatures within acceptable limits for all postulated break sizes ranging from the double-ended break of the largest RCS hot leg pipe downward. In addition, each ECCS subsystem provides long-term core cooling capability in the recirculation mode during the accident recovery period.

The practice of calibrating and testing the SIT isolation valve interlock function below 515 psia (the current plant practice is to set and test the interlock function at 500 psia) meets the requirements of Technical Specification Surveillance 4.5.1.1.d.1. The staff accepted that testing the SIT isolation interlock at a more conservative setpoint demonstrates operability at and above the setpoint (NRC letter from William C. Gleaves to J.A. Stall dated November 2, 1999, subject "St. Lucie Unit 2 – Amendment Request Regarding Safety Injection Tank and Shutdown Cooling System Isolation Interlock Surveillances (TAC No. MA5619)."

EMERGENCY CORE COOLING SYSTEMS

BASES

ECCS SUBSYSTEMS (Continued)

In Mode 3 with RCS pressure <1750 psia and in Mode 4, one OPERABLE ECCS subsystem is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the limited core cooling requirements.

The trisodium phosphate dodecahydrate (TSP) stored in dissolving baskets located in the containment basement is provided to minimize the possibility of corrosion cracking of certain metal components during operation of the ECCS following a LOCA. The TSP provided this protection by dissolving in the sump water and causing its final pH to be raised to greater than or equal to 7.0.

The requirement for one high pressure safety injection pump to be rendered inoperable prior to entering MODE 5, although the analysis supports actuation of safety injection in a water solid RCS with pressurizer heaters energized, provides additional administrative assurance that a mass addition pressure transient can be relieved by the operation of a single PORV or SDCRV. A limit on the maximum number of operable HPSI pumps is not necessary when the pressurizer manway cover or the reactor vessel head is removed.

The Surveillance Requirements provided to ensure OPERABILITY of each component ensure that at a minimum, the assumptions used in the accident analyses are met and that subsystem OPERABILITY is maintained. Surveillance Requirements for throttle valve position stops and flow balance testing provide assurance that proper ECCS flows will be maintained in the event of a LOCA. Maintenance of proper flow resistance and pressure drop in the piping system to each injection point is necessary to: (1) prevent total pump flow from exceeding runout conditions when the system is in its minimum resistance configuration, (2) provide the proper flow split between injection points in accordance with the assumptions used in the ECCS-LOCA analyses, and (3) provide an acceptable level of total ECCS flow to all injection points equal to or above that assumed in the ECCS-LOCA analyses. The requirement to dissolve a representative sample of TSP in a sample of RWT water provides assurance that the stored TSP will dissolve in borated water at the postulated post-LOCA temperatures.

INSERT
3/4.5.4 REFUELING WATER TANK

The OPERABILITY of the Refueling Water Tank (RWT) as part of the ECCS ensures that a sufficient supply of borated water is available for injection by the ECCS in the event of a LOCA. The limits on RWT minimum volume and boron concentration ensure that (1) sufficient water is available within containment to permit recirculation cooling flow to the core, and (2) the reactor will remain subcritical in the cold condition following mixing of the RWT and the RCS water volumes with all control rods inserted except for the most reactive control assembly. These assumptions are consistent with the LOCA analyses.

The practice of calibrating and testing the SDC isolation valve interlock function below 515 psia (the current plant practice is to set and test the interlock function at 500 psia) meets the requirements of Technical Specification Surveillance 4.5.2.e.1. The staff accepted that testing the SDC isolation interlock at a more conservative setpoint demonstrates operability at and above the setpoint (NRC letter from William C. Gleaves to J.A. Stall dated November 2, 1999, subject "St. Lucie Unit 2 – Amendment Request Regarding Safety Injection Tank and Shutdown Cooling System Isolation Interlock Surveillances (TAC No. MA5619)."