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ACCESSION NBR: 7812140150 DOC. DATE: 78/12/11 NOTARIZED: YES

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50-251 Turkey Point #4, Florida Power & Light Co.

DOCKET #

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AUTH. NAME AUTHOR AFFILIATION
 UHRIG, R.E. FLORIDA POWER & LIGHT CO.
 RECIP. NAME RECIPIENT AFFILIATION
 STELLO, V. *DIV. OF OPERATING REACTORS

SUBJECT: Submits request to amend Append A of Facil Oper Lic#DPR-31 &
 DPR-41, in response to 780719 NRC ltr. Amend concerns
 operability & surveillance of facil Overpressure Mitigating.

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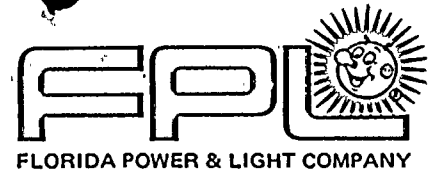
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December 11, 1978
L-78-382

Director of Nuclear Reactor Regulation
Attention: Mr. Victor Stello, Director
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Stello:

REGULATORY DOCKET FILE COPY

Re: Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Proposed Amendment to Facility
Operating Licenses DPR-31 and DPR-41

A proposed Technical Specification amendment, which addressed the operability and surveillance of the Turkey Point Units 3 and 4 Overpressure Mitigating System (OMS), was forwarded to your office on November 20, 1978 (L-78-368). Several editorial changes that had been made during our review process were inadvertently omitted from that submittal. The purpose of this letter is to withdraw letter L-78-368 in its entirety and replace it with the attached proposal.

In accordance with 10 CFR 50.30, Florida Power & Light Company submits herewith three (3) signed originals and forty (40) conformed copies of a request to amend Appendix A of Facility Operating Licenses DPR-31 and DPR-41. This submittal has been prepared in response to a July 19, 1978 letter from Mr. A. Schwencer of your staff.

The proposed amendment, which addresses the operability and surveillance of the Turkey Point Units 3 and 4 OMS, is described below and shown on the accompanying Technical Specification pages bearing the date of this letter in the lower right hand corner.

Page 3.1-1

New Specification 3.1.1.a.5 addresses the starting of a reactor coolant pump under certain low temperature conditions.

Page 3.14-1

New Specification 3.14 gives the OMS limiting conditions for operation.

Page 4.15-1

New Specification 4.15 gives the OMS surveillance requirements.

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Director of Nuclear Reactor Regulation
Page Two

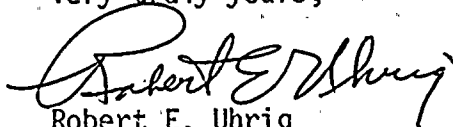
Pages B3.1-1, B3.14-1, and B4.15-1

New and revised Bases sections are provided in support of the OMS.

The proposed amendment has been reviewed by the Turkey Point Plant Nuclear Safety Committee and the Florida Power & Light Company Nuclear Review Board. They have concluded that it does not involve an unreviewed safety question.

Implementation of the OMS at Turkey Point has proceeded in two phases. Phase I addressed the circuitry needed to add the Power Operated Relief Valve (PORV) low setpoint feature and associated alarms. Phase II addresses (1) OMS-arming/valve-position interlock circuitry, and (2) redundant nitrogen supply to the PORV's. Phase I has been completed on both Units 3 and 4. It was our intent to implement Phase II during the refueling outages in 1978, but due to equipment procurement delays we have not been able to do so. All of the modification design work has been completed and all necessary parts are on order. Phase II is scheduled for implementation as soon as parts are available and plant conditions permit. We expect to complete Phase II during the 1979 refueling outages, which are both scheduled for Spring 1979.

Very truly yours,



Robert E. Uhrig
Vice President

REU/MAS/cpc

Attachment

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

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3.0 LIMITING CONDITIONS FOR OPERATION

3.1 REACTOR COOLANT SYSTEM

Applicability: Applies to the operating status of the Reactor Coolant System.

Objective: To specify those limiting conditions for operation of the Reactor Coolant System which must be met to assure safe reactor operation.

Specification: 1. OPERATIONAL COMPONENTS

a. Reactor Coolant Pumps

1. A minimum of ONE pump shall be in operation when the reactor is in power operation, except during low power physics tests.
2. A minimum of ONE pump, or ONE Residual Heat Removal Pump, shall be in operation during reactor coolant boron concentration reduction.
3. Reactor power shall not exceed 10% of rated power unless at least TWO reactor coolant pumps are in operation.
4. Reactor power shall not exceed 45% of rated power with only two pumps in operation unless the overtemperature ΔT trip setpoint, K_1 , for two loop operation, has been set at 0.88.
5. A reactor coolant pump shall not be started when cold leg temperature is $\leq 275^\circ\text{F}$ unless steam generator secondary water temperature is less than 50°F above the RCS temperature (including instrument error).

b. Steam Generators

1. A minimum of TWO steam generators shall be operable when the average coolant temperature is above 350°F .

c. Pressurizer Safety Valves

1. ONE valve shall be operable whenever the head is on the reactor vessel except during hydrostatic tests.
2. THREE valves shall be operable when the reactor coolant average temperature is above 350°F or the reactor is critical.

Applicability: Establishes operating limitations to assure that the limits of 10 CFR 50, Appendix G, are not exceeded.

Objectives: To minimize the possibility of an overpressure transient which could exceed the limits of 10 CFR 50, Appendix G.

- Specification:
1. At RCS temperature less than or equal to 380°F, valves MOV--843 A, MOV--843 B, MOV--866 A, and MOV--866 B shall be closed.
 2. If any of the valves in 3.14.1 are found to be open while RCS temperature is less than or equal to 380°F, perform at least one of the following within the next 8 hours:
 - a. block the corresponding flow path to the reactor vessel,
 - b. close the valve, or
 - c. depressurize and vent the RCS through an opening with an area of at least 2.20 square inches, or
 - d. verify at least one pressurizer power operated relief valve is maintained open.
 3. At RCS temperature less than or equal to 275°F, two pressurizer power operated relief valves shall be operable at the low setpoint range.
 - a. If one power operated relief valve is inoperable with RCS temperature less than or equal to 275°F, perform at least one of the following within 7 days:
 - (1) restore operability of the power operated relief valve, or
 - (2) depressurize and vent the RCS through an opening with an area of at least 2.20 square inches, or
 - (3) verify at least one pressurizer power operated relief valve is maintained open
 - b. If both power operated relief valves are inoperable with RCS temperature less than or equal to 275°F, perform at least one of the following within the next 24 hours:
 - (1) restore operability of at least one power operated relief valve, or
 - (2) depressurize and vent the RCS through an opening with an area of at least 2.20 square inches, or
 - (3) verify at least one pressurizer power operated relief valve is maintained open.

4.15 OVERPRESSURE MITIGATING SYSTEM

Applicability: Applies to periodic surveillance of the Overpressure Mitigating System.

Objective: To demonstrate operability of the Overpressure Mitigating System.

- Specification:
1. Within 1 month prior to operation in a condition where the PORV would be required to be operable, the pressurizer power operated relief valve actuation circuitry shall be functionally tested. The functional test need not include actual valve operation.
 2. While RCS temperature is less than or equal to 380°F, verify daily that valves MOV--843 A, MOV--843 B, MOV--866 A, and MOV--866 B are closed.
 3. While RCS temperature is less than or equal to 275°F, verify weekly that the isolation valve for each operable pressurizer power operated relief valve is open.
 4. While RCS temperature is less than or equal to 275°F, the pressurizer power operated relief valve actuation circuitry shall be functionally tested monthly. The functional test need not include actual valve operation.
 5. Testing shall be in accordance with approved plant procedures.

1. Operational Components

The specification requires that a sufficient number of reactor coolant pumps be operating to provide coast down core cooling in the event that a loss of flow occurs. The flow provided will keep DNBR well above 1.30. When the boron concentration of the Reactor Coolant System is to be reduced the process must be uniform to prevent sudden reactivity changes in the reactor. Mixing of the reactor coolant will be sufficient to maintain a uniform boron concentration if at least one reactor coolant pump or one residual heat removal pump is running while the change is taking place. The residual heat removal pump will circulate the reactor coolant system volume in approximately one half hour.

Each of the pressurizer safety valves is designed to relieve 293,330 lbs. per hr. of saturated steam at the valve set point. (1) Below 350 F and 450 psig in the Reactor Coolant System, the Residual Heat Removal System can remove decay heat and thereby control system temperature and pressure. If no residual heat were removed by any of the means available the amount of steam which could be generated at safety valve lifting pressure would be less than the capacity of a single valve. Also, two safety valves have capacity greater than the maximum surge rate resulting from complete loss of load. (2)

The 50°F limit on maximum differential between steam generator secondary water temperature and reactor coolant temperature assures that the pressure transient caused by starting a reactor coolant pump when cold leg temperature is $< 275^{\circ}\text{F}$ can be relieved by operation of one Power Operated Relief Valve (PORV). The 50°F limit includes instrument error.

2. Pressure/Temperature Limits

All components in the Reactor Coolant System are designed to withstand the effects of cyclic loads due to system temperature and pressure changes. These cyclic loads are introduced by normal load transients, reactor trips, and startup and shutdown operations. The various categories of load cycles used for design purposes are provided in

BASES FOR LIMITING CONDITIONS OF OPERATION, OVERPRESSURE
MITIGATING SYSTEM

The operability of two PORV's or an RCS vent opening of greater than or equal to 2.20 square inches ensures that the RCS will be protected from pressure transients which could exceed the limits of Appendix G to 10 CFR Part 50 when one or more of the RCS cold legs are $\leq 275^{\circ}\text{F}$. Either PORV has adequate relieving capability to protect the RCS from overpressurization when the transient is limited to either (1) the start of an idle RCS with the secondary water temperature of the steam generator $\leq 50^{\circ}\text{F}$ above the RCS cold leg temperature (includes margin for instrument error) or (2) the start of a HPSI pump and its injection into a water solid RCS.

B4.15

BASES FOR SURVEILLANCE REQUIREMENTS, OVERPRESSURE
MITIGATING SYSTEM

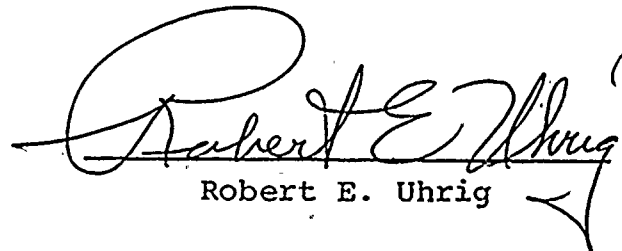
The specified testing of the Overpressure Mitigating System (OMS) will verify its operability. The capacity of one pressurizer Power Operated Relief Valve is sufficient to relieve potential overpressure transients when the RCS is in the low temperature overpressure protection range. Proper functioning of the OMS combined with selected administrative controls will demonstrate the integrity of the system.

STATE OF FLORIDA)
)
COUNTY OF DADE) ss.

Robert E. Uhrig, being first duly sworn, deposes and says:

That he is a Vice President of Florida Power & Light Company,
the Licensee herein;

That he has executed the foregoing document; that the state-
ments made in this said document are true and correct to the
best of his knowledge, information, and belief, and that he
is authorized to execute the document on behalf of said
Licensee.


Robert E. Uhrig

Subscribed and sworn to before me this

11th day of December, 1978

Betty Brittain
NOTARY PUBLIC, in and for the county of Dade,
State of Florida

My commission expires: NOTARY PUBLIC STATE OF FLORIDA at LARGE
MY COMMISSION EXPIRES MARCH 27, 1982
BOUNDED BY MAYNARD BONDING AGENCY

