C 5-3-78

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DOCDATE: 04/28/78
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DOCTYPE: LETTER NOTARIZED: NO

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SUBJECT:
FURNISHING INFO CONCERNING PERMANENT TORNADO-PROTECTED SOURCE OF WATER TO THE REACTOR COOLANT SYSTEM .

PLANT NAME: ST LUCIE #1

REVIEWER INITIAL: XEF
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GENERAL DISTRIBUTION FOR AFTER ISSUANCE OF OPERATING LICENSE.
(DISTRIBUTION CODE A001)

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FLORIDA POWER & LIGHT COMPANY

April 28, 1978
L-78-155

REGULATORY DOCKET FILE COPY

RECEIVED DISTRIBUTION SERVICES UNIT
1978 MAY 3 AM 12 01
US NRC DISTRIBUTION SERVICES BRANCH

Office of Nuclear Reactor Regulation
Attention: Mr. Robert W. Reid, Chief
Operating Reactors Branch No. 4
Division of Operating Reactors
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

Dear Mr. Reid:

Re: St. Lucie Unit 1
Docket No. 50-335
Conditions of License

Condition of License I.4 for St. Lucie Unit 1 requires that a permanent tornado-protected source of makeup water to the reactor coolant system to accommodate moderator shrinkage during plant shutdown be installed prior to startup following the first regularly scheduled refueling outage. Our letters of July 7, 1977 (L-77-215) and September 23, 1977 (L-77-300) provided information to the NRC staff concerning the installation we developed to satisfy the Condition of License. The installation consists of a permanent 2-inch line and associated valves between the Safety Injection Tank (SIT) drain line and the Volume Control Tank (VCT). (See letter L-77-300). The installation has been completed and is available for inspection by the Region II Office of Inspection and Enforcement.

Following the submittal of our earlier letters, telephone discussions were held with members of the NRC staff which established the technical acceptability of our design. We were left with the task of determining whether technical specifications were needed to ensure the availability of sufficient SIT capacity to accommodate moderator shrinkage, and, if so, we agreed to submit a proposed amendment in order to close the issue. The available inventory of one (of two) Boric Acid Makeup Tank (BAMT) and two (of four) SITs is sufficient to accommodate cooldown shrinkage to an average Reactor Coolant System (RCS) temperature of 200 F (through operational mode 4). We have reviewed the St. Lucie Unit 1 Technical Specifications and have found that they presently require operability of at least one BAMT in all operational modes, and require the operability of all 4 SITs in modes 1 and 2, and in mode 3

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Re: St. Lucie Unit 1
Docket No. 50-335
Conditions of License

when pressurizer pressure is greater than or equal to 1750 psia.

During heatup or cooldown, the pressurizer pressure is less than 1750 psia and the average coolant temperature is greater than 200 F for only a few hours. The RCS is generally at reduced temperature when pressurizer pressure is less than 1750 psia. During these times the SITs remain operable although this is not required by Technical Specifications. Thus, in order to have a situation where we would not have the necessary SIT volume to accommodate moderator shrinkage, we would have to have a situation in which:

1) pressurizer pressure is less than 1750 psia and average coolant temperature is greater than 200 F (we estimate 4 shutdowns per year, or about 32 hours-less than 0.4%-of total available operating time), and

2) more than two of the four SITs are unavailable when permitted by Technical Specifications, and

3) both the Refueling Water Tank (RWT) and the Primary Water Storage Tank (PWST) have been rendered inoperable by tornado.

We have never encountered such a situation and feel that the potential for having insufficient SIT makeup capacity during the short time frame when SITs would not be required operable by Technical Specifications coincident with tornado damage to the RWT and PWST is too small to warrant unique Technical Specifications on the subject of tornado protected makeup sources.

Based on the above reasoning we have concluded that Technical Specifications addressing moderator shrinkage do not need to be issued and request that the installation of the connecting line between the SITs and the VCT be sanctioned by the deletion of Condition I.4 from Operating License DPR-67.

Very truly yours,

Robert E. Uhrig

Robert E. Uhrig
Vice President

REU/MAS/LLL/mb

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