

50-335

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TO:

Mr. Victor Stello.

FROM:

Florida Power & Light Company
Miami, Florida
R. E. Uhrig

DATE OF DOCUMENT

5/20/77

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5/23/77

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DESCRIPTION

ENCLOSURE

Amdt. to OL/change to Appendix A tech
specs:..notorized 5/20/77....re secondary
water chemistry program.....

ACKNOWLEDGED

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(3-P)

(5-P)

PLANT NAME:

St. Lucie Unit No. 1

RJL

40 encl.

SAFETY

FOR ACTION/INFORMATION

ENVIRO

ASSIGNED AD:

BRANCH CHIEF: (5)

PROJECT MANAGER:

LIC. ASST. :

ZIEMANN

Reeves

DIGGS

ASSIGNED AD:

BRANCH CHIEF:

PROJECT MANAGER:

LIC. ASST. :

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OPERATING TECH.

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CONSULTANTS:

AS CAT B

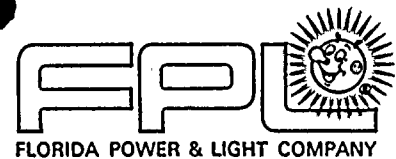
BROOKHAVEN NAT. LAB.

ULRIKSON (ORNL)

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Ap 2

(50)



May 20, 1977

L-77-151

Regulatory

File Cy.

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

Dear Mr. Stello:

Re: St. Lucie Unit 1
Docket No. 50-335
Proposed Amendment to
Facility Operating License DPR-67



A November 15, 1976 letter from Mr. Dennis L. Ziemann of your staff requested that we submit a secondary water chemistry program for inclusion in our St. Lucie Unit 1 Technical Specifications. We have considered the bases and effects of such technical specifications and have concluded that, for the following reasons, limiting conditions for operation should not be placed on secondary water chemistry:

1. The safety aspects of steam generator pressure boundary integrity are addressed by Technical Specification 3.4.6.2.C. This specification establishes a steam generator tube leakage limit and requirements for plant shutdown should the limit be exceeded.
2. Technical Specification 4.4.5 is directed toward ensuring the integrity of steam generators by means of eddy current testing consistent with Regulatory Guide 1.83, "Inservice Inspection of Pressurized Water Reactor Steam Generator Tubes." Such testing provides a means by which the integrity of individual tubes can be evaluated during periodic planned outages.
3. Technical Specification 4.4.5 is directed toward assuring the integrity of the steam generators without identifying the causes, if any, of their possible degradation. Potential causes might be deficiencies in design (including material selection), quality assurance, installation, and primary or secondary environments of the steam generator. Lengthy technical specifications could conceivably be written to bar each potential cause of degradation. This would not,

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April 5, 1977

however, be consistent with our understanding of the purpose of technical specifications as authorized by the Atomic Energy Act and as utilized by the Nuclear Regulatory Commission.

We understand that the purpose of technical specifications is to identify those parameters of design and operation whose violation, by some margin, would or could present an unacceptable safety risk. Thus, the term "limiting conditions for operation" is defined in 10 CFR 50.36(c) (2) as "the lowest functional capability of performance levels of equipment required for safe operation of the facility." It is therefore appropriate to place a technical specification limit on the leakage through a primary boundary such as the steam generator tubing. However, in our judgment, it would not be appropriate to write a technical specification addressing the potential causes of degradation of such boundaries.

4. Technical specifications would be particularly inappropriate to secondary water chemistry parameters whose equilibrium conditions fluctuate during normal plant operational modes, such as power changes, startups and shutdowns. There is no evidence that short-term variations in secondary water chemistry are significant to steam generator tube integrity. Technical specification limitations on such fluctuations could only result in enforcement problems, lack of operational flexibility and diminution of the safety significance of technical specifications. Deviations from secondary water quality guidelines are not a safety problem and are therefore not appropriately the subject of technical specifications; the condition of steam generator tubes, on the other hand, is appropriate for such consideration and technical specifications exist to provide for direct monitoring of the condition of the steam generator tubes in order to assure that continued integrity is maintained.
5. The unnecessary proliferation of technical specifications should be avoided. Since the addition, deletion or revision of technical specifications involves the formal, time-consuming license amendment process, the technical specifications should contain only those requirements that are directly relatable to safe operation. Other means should be utilized for providing direction on matters that are indirectly related to the safety of operation. There are many examples of this philosophy at operating plants, wherein many operating practices, procedures, tests, plans, etc., are covered by means other than the imposition of technical specifications.
6. The November 15, 1976 letter also addresses the need for continual monitoring and control of steam side water chemistry in order to ensure against an accumulation of harmful impurities in the steam generators. We agree that for long-term reliability and continued assurance of tube integrity, a chemistry

control program is necessary. The specific chemistry guidelines are periodically updated in conjunction with the steam system supplier recommendations. Chemistry data and records are maintained at the plant site and are subject to review by the NRC or any other authorized activity. Regulatory review can then result in a critique of our ability to maintain chemistry within established guidelines and can result in corrective action when necessary.

The above arguments against limiting conditions for operation also apply to detailed surveillance requirements, however, an entry into the technical specifications requiring that a surveillance program be practiced is not objectionable. Therefore, we have prepared a proposed amendment along those lines and now submit it for your review. In accordance with 10 CFR 50.30, three (3) originals and forty (40) copies of the proposal to amend Appendix A of Operating License DPR-67 are hereby submitted for your consideration. The proposed changes are described below and shown on the accompanying Technical Specification pages bearing the date of this letter in the lower right hand corner.

Pages 3/4 7-10 through 7-12

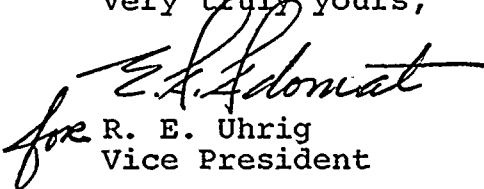
Specification 3.7.1.6 is revised and Specification 4.7.1.6 is revised to refer to approved plant procedures.

Page B 3/4 7-3

Bases section 3/4.7.1.6 is revised to be consistent with our position on secondary water chemistry.

The proposed amendment has been reviewed by the St. Lucie Facility Review Group and the Florida Power & Light Company Nuclear Review Board. They have concluded that it does not involve an unreviewed safety question.

Very truly yours,


for R. E. Uhrig
Vice President

REU/MAS/pg
Attachment

cc: Norman C. Moseley, Region II
Robert Lowenstein, Esquire

PLANT SYSTEMS

SECONDARY WATER CHEMISTRY

LIMITING CONDITION FOR OPERATION

3.7.1.6 There are no limiting conditions for operation associated with secondary water chemistry.

SURVEILLANCE REQUIREMENTS

4.7.1.6 The secondary water chemistry shall be determined to be within procedural limits by analysis in accordance with approved plant procedures.

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PLANT SYSTEMS

BASES

3/4.7.1.5 MAIN STEAM LINE ISOLATION VALVES

The OPERABILITY of the main steam line isolation valves ensures that no more than one steam generator will blowdown in the event of a steam line rupture. This restriction is required to 1) minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown, and 2) limit the pressure-rise within containment in the event the steam line rupture occurs within containment. The OPERABILITY of the main steam isolation valves within the closure times of the surveillance requirements are consistent with the assumptions used in the accident analyses.

3/4.7.1.6 SECONDARY WATER CHEMISTRY

Operating history will be used to establish appropriate limits on secondary water chemistry and to determine appropriate frequencies for monitoring these parameters. Approved plant procedures will be used to administratively control secondary water chemistry.

3/4.7.2 STEAM GENERATOR PRESSURE/TEMPERATURE LIMITATION

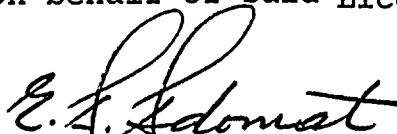
The limitation on steam generator pressure and temperature ensures that the pressure induced stresses in the steam generators do not exceed the maximum allowable fracture toughness stress limits. The limitations of 70°F and 200-psig are based on a steam generator RT_{NDT} of 50°F and are sufficient to prevent brittle fracture.

STATE OF FLORIDA)
)
COUNTY OF DADE) ss.

E. A. Adomat, being first duly sworn, deposes and says:

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

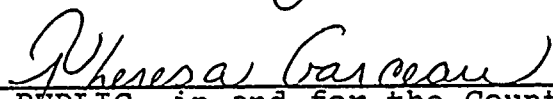
That he has executed the foregoing document; that the statements made in this said document are true and correct to the best of his knowledge, information, and belief, and that he is authorized to execute the document on behalf of said Licensee.



E. A. Adomat

Subscribed and sworn to before me this

20 day of May, 1977



NOTARY PUBLIC, in and for the County of Dade,
State of Florida

NOTARY PUBLIC, STATE OF FLORIDA
MY COMMISSION EXPIRES JAN. 26, 1979
BONDED THRU GENERAL INSURANCE UNDERWRITERS

My commission expires: _____

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