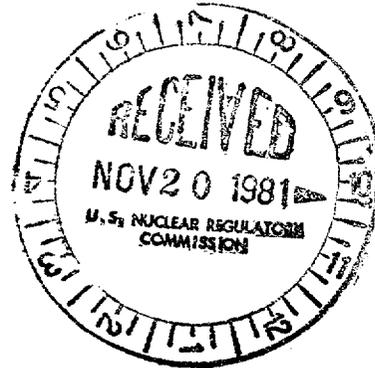


NOV 16 1981

Docket No. 50-335



Dr. Robert E. Uhrig  
Vice President  
Advanced Systems & Technology  
Florida Power & Light Company  
P. O. Box 529100  
Miami, Florida 33152

Dear Dr. Uhrig:

The Commission has issued the enclosed Amendment No. 47 to Facility Operating License No. DPR-67 for St. Lucie Unit No. 1. This amendment consists of changes to your Technical Specifications in response to your application dated November 10, 1981.

This amendment changes the Technical Specifications to permit resumption of operation after the Cycle 5 refueling outage with less than 100% inspection of all steam generator tubes in each steam generator.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Original signed by:

Christian C. Nelson, Project Manager  
Operating Reactors Branch #3  
Division of Licensing

CP  
1

Enclosures:

1. Amendment No. 47 to DPR-67
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:

See next page

8112100102 811116  
PDR ADOCK 05000335  
PDR

\*See previous page for concurrence and distribution.

OFFICE	ORB#3:DL *	ORB#3:DL*	ORB#3:DL*	C-MtEB*	AD:OR:DL*	OELD*	
SURNAME	PMKreutzer	CNelson/pn	RAClark	SPawlicki	TMNovak	Thessin	
DATE	11/13/81	11/13/81	11/13/81	11/13/81	11/13/81	11/13/81	

Docket No. 50-335

DISTRIBUTION:

Docket File  
NRC PDR  
L PDR  
NSIC  
TERA  
ORB#3 Rdg  
DEisenhut  
PMKreutzer-3  
OELD  
CNeelson  
RAClark  
I&E-4  
GDeegan-4  
DBrinkman  
ACRS-10

CMiles  
RDiggs  
RBallard  
Chairman, ASLAB  
Gray File (+4)  
DMB-10

*E. Murphy (MTEB)*

Dr. Robert E. Uhrig  
Vice President  
Advanced Systems & Technology  
Florida Power & Light Company  
P. O. Box 529100  
Miami, Florida 33152

Dear Dr. Uhrig:

The Commission has issued the enclosed Amendment No. 47 to Facility Operating License No. DPR-67 for St. Lucie Unit No. 1. This amendment consists of changes to your Technical Specifications in response to your application dated November 10, 1981.

The amendment changes the Technical Specifications to grant relief from the prescribed action of Table 4.4-2 for steam generator tube inspections conducted during Cycle 5 Refueling.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,

Christian C. Nelson, Project Manager  
Operating Reactors Branch #3  
Division of Licensing

Enclosures:

1. Amendment No. 47 to DPR-67
2. Safety Evaluation
3. Notice of Issuance

cc w/enclosures:

See next page

*No legal objection as to form*

OFFICE ▶	ORB#3:DL <i>for file</i>	ORB#3:DL	ORB#3:DL	C-MTEB	AD-OR:DL	OELD	
SURNAME ▶	PMKreutzer	CNeelson/pn	RAClark	SPawlicki	TMNowak	Theissin	
DATE ▶	11/13/81	11/13/81	11/13/81	11/13/81	11/13/81	11/13/81	

Florida Power & Light Company

cc:

Harold F. Reis, Esquire  
Lowenstein, Newman, Reis & Alexrad  
1025 Connecticut Avenue, N.W.  
Washington, D. C. 20036

Norman A. Coll, Esquire  
McCarthy, Steel, Hector & Davis  
14th Floor, First National Bank Building  
Miami Florida 33131

Indian River Junior College Library  
3209 Virginia Avenue  
Fort Pierce, Florida 33450

Administrator  
Department of Environmental Regulation  
Power Plant Siting Section  
State of Florida  
2600 Blair Stone Road  
Tallahassee, Florida 32301

Mr. Weldon B. Lewis  
County Administrator  
St. Lucie County  
2300 Virginia Avenue, Room 104  
Fort Pierce, Florida 33450

U.S. Environmental Protection Agency  
Region IV Office  
ATTN: Regional Radiation  
Representative  
345 Courtland Street, N.E.  
Atlanta, Georgia 30308

Mr. Charles B. Brinkman  
Manager - Washington Nuclear Operations  
C-E Power Systems  
Combustion Engineering, Inc.  
4853 Cordell Avenue, Suite A-1  
Bethesda, Maryland 20014

Mr. Jack Schreve  
Office of the Public Counsel  
Room 4, Holland Building  
Tallahassee, Florida 32304

Resident Inspector/St. Lucie  
Nuclear Power Station  
c/o U.S.N.R.C.  
P. O. Box 400  
Jensen Beach, Florida 33457

cc w/enclosure(s) and incoming  
dated: 11/10/81

Bureau of Intergovernmental  
Relations  
660 Apalachee Parkway  
Tallahassee, Florida 32304



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

FLORIDA POWER & LIGHT COMPANY

DOCKET NO. 50-335

ST. LUCIE PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 47  
License No. DPR-67

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Florida Power & Light Company (the licensee) dated November 10, 1981, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

8112100111 811116  
PDR ADDCK 05000335  
PDR

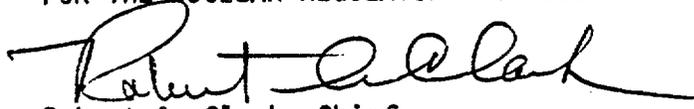
2. Accordingly, Facility Operating License No. DPR-67 is amended by changes to the Technical Specifications as indicated in the Attachment to this license amendment, and by amending paragraph 2.C(2) to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 47, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: November 16, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 47

FACILITY OPERATING LICENSE NO. DPR-67

DOCKET NO. 50-335

Replace the following page of the Appendix "A" Technical Specifications with the enclosed page. The revised page is identified by amendment number and contains vertical lines indicating the area of change. The corresponding overleaf page is also provided to maintain document completeness.

Page

3/4 4-11

TABLE 4.4-2

## STEAM GENERATOR TUBE INSPECTION

1ST SAMPLE INSPECTION			2ND SAMPLE INSPECTION		3RD SAMPLE INSPECTION		
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required	
A minimum of S Tubes per S. G.	C-1	None	N/A	N/A	N/A	N/A	
	C-2	Plug defective tubes and inspect additional 2S tubes in this S. G.	C-1	None	N/A	N/A	
			C-2	Plug defective tubes and inspect additional 4S tubes in this S. G.	C-1	None	
					C-2	Plug defective tubes	
	C-3	Perform action for C-3 result of first sample	N/A	N/A			
	C-3	Inspect all tubes in this S. G., plug de- fective tubes and inspect 2S tubes in each other S. G. *	Prompt notification to NRC pursuant to specification 6.9.1	All other S. G.s are C-1	None	N/A	N/A
				Some S. G.s C-2 but no additional S. G. are C-3	Perform action for C-2 result of second sample	N/A	N/A
Additional S. G. is C-3				Inspect all tubes in each S. G. and plug defective tubes. Prompt notification to NRC pursuant to specification 6.9.1	N/A	N/A	

$S = 3 \frac{N}{n} \%$  Where N is the number of steam generators in the unit, and n is the number of steam generators inspected during an inspection

\* The requirement to inspect all tubes may be relaxed for Cycle 5 Refueling since an engineering evaluation has shown that the condition(s) has been adequately bounded by inspection.

## REACTOR COOLANT SYSTEM

### 3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

#### LEAKAGE DETECTION SYSTEMS

#### LIMITING CONDITION FOR OPERATION

---

3.4.6.1 The following Reactor Coolant System leakage detection systems shall be OPERABLE:

- a. A containment atmosphere particulate radioactivity monitoring system,
- b. The reactor cavity sump level and flow monitoring system, and
- c. A containment atmosphere gaseous radioactivity monitoring system.

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

- a. With one of the above required radioactivity monitoring leakage detection systems inoperable, operations may continue for up to 30 days provided:
  1. The other two above required leakage detection systems are OPERABLE, and
  2. Appropriate grab samples are obtained and analyzed at least once per 24 hours;otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With both the above required radioactivity monitoring leakage detection systems inoperable, operations may continue for up to 30 days provided:
  1. The reactor cavity sump level and flow monitoring system is OPERABLE,
  2. Appropriate grab samples are obtained and analyzed at least once per 24 hours, and
  3. A Reactor Coolant System water inventory balance is performed at least once per 8 hours during steady state operation except when operating in the shutdown cooling mode;otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
SUPPORTING AMENDMENT NO. 47 TO FACILITY OPERATING LICENSE NO. DPR-67

FLORIDA POWER & LIGHT COMPANY

ST. LUCIE PLANT, UNIT NO. 1

DOCKET NO. 50-335

Introduction and Background

Steam generator inspections performed during the current refueling outage at St. Lucie Unit 1 revealed a sufficient number of pluggable indications (>40% through wall) to place both steam generators in Category C-3 in accordance with Section 3.4.5 of the plant Technical Specifications (TS). For Category C-3, the TS require that the initial inspection sample be expanded to include 100% of the steam generator tubes.

To date, 27% of the tubes in steam generator A and 39% of the tubes in steam generator B have been inspected. This includes 100% sampling of the zone to which the Florida Power & Light Company (the licensee) believes the degradation to be confined. The licensee believes that the inspections performed to date provide a high confidence level that the steam generators are free from any undetected tube problems, and that additional inspections would not produce any useful information. Additional inspections would result in additional inspection cost, unit down time, and man-rem exposure. Therefore, by letter dated November 10, 1981, the licensee has requested a change to the plant TS which would permit less than a 100% inspection to be performed. The proposed change would be applicable only to the current Cycle 5 refueling outage and includes words to the effect that the inspections completed to date have adequately bounded the problem areas.

Discussion

The staff met with the licensee and Combustion Engineering on November 9, 1981 to discuss the inspection program and the results obtained. The information provided to the staff has been documented in a meeting summary (dated November 12, 1981) issued by the NRC Project Manager for St. Lucie Unit 1.

Prior to the refueling outage in September, 1981, the plant had been operating with a very small primary to secondary leak (approximately 200 milliliters per day) in the B steam generator. A helium leak test performed during the outage revealed the source of the leakage as a tube in row 10.

8112100117 811116  
PDR ADDCK 05000335  
P PDR

Therefore, the licensee elected to expand its initial eddy current inspection program to include additional inner row tubes. These inspections revealed additional inner row tubes with indications at or near the apex of the U-bend. Supplemental inspections with a multicoil array revealed the indications to be located at the intrados of the U-bend, initiating on the OD surface.

With the finding of additional indications in the inner row area, the licensee expanded the inspection program to include all inner row tubes from row 3 up to row 23 in both steam generators. The indications found were located between rows 7 and 18, with the majority of indications between rows 8 and 12. The apex location for tube rows 7 through 12 corresponds to an intersection location for the tube batwing supports. At the locations of the batwing intersections, the restricted flow area is larger than it is away from the intersections.

In addition to the inner row tubes, most tubes in rows 66 to 74 were inspected due to potentially similar flow restrictions by the batwing support intersections. No additional indications were found in this area.

The results of the eddy current inspections are summarized as follows:

SG	No. of tubes Inspected	No. of Tubes with Eddy Current Indications		
		<20%	20-40%	>40%
A	2282	9	6	24
B	3228	17	4	42

The tube plugging limit in the TS is 40%. Previous inspections at this and other CE units have not indicated any tube problems in the inner rows; however, only a few tubes have normally been inspected in this region. Because of the uncertainty over when the corrosion problem first developed, and thus the uncertainty over how quickly it is developing, the licensee has elected to plug all tubes with greater than 20% indications.

Other than to note the correlation of the location of the eddy current indications with an area of relatively low flow, the licensee has not yet been able to identify the cause of this degradation. The plant has operated since 1976. The licensee reports that secondary water chemistry control has been good and that no main condenser leaks have occurred since titanium condenser tubes were installed in March 1979.

### Evaluation

We have reviewed the licensee's inspection program and results. We find that the licensee has performed an adequate inspection to demonstrate that the degradation is systematic to the inner row U-bends, between rows 7 and 18, rather than occurring randomly throughout the tube bundle. The licensee

has inspected all tubes between rows 3 and 23 which we believe adequately bounds the region of concern. Additional inspections performed outside this zone, including other rows which are located at an intersection of batwing supports, have revealed no further indications. In conclusion, we find the inspection program implemented during the Cycle 5 refueling outage to meet the intent of the TS and to be acceptable. Therefore, we conclude that the requested change to the plant TS is acceptable.

#### Environmental Consideration

We have determined that the amendment does 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 amendment involves 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 this amendment.

#### Conclusion

We have concluded, based on the considerations discussed above, that: (1) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and does not involve a significant decrease in a safety margin, the amendment does not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Date:

Principle Reviewers:

Emmett Murphy: MtEB, DE, NRR

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-335FLORIDA POWER & LIGHT COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO  
FACILITY OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 47 to Facility Operating License No. DPR-67, issued to Florida Power & Light Company (the licensee), which revised the Technical Specifications for operation of the St. Lucie Plant, Unit No. 1 (the facility), located in St. Lucie County, Florida. The amendment is effective as of the date of issuance.

This amendment changes the Technical Specifications to permit resumption of operation after the Cycle 5 refueling outage with less than 100% inspection of all steam generator tubes in each steam generator.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of this amendment was not required since the amendment does not involve a significant hazards consideration.

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR 51.5(d)(4) an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated November 10, 1981, (2) Amendment No. 47 to License No. DPR-67, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D. C. and at the Indian River Junior College Library, 3209 Virginia Avenue, Ft. Pierce, Florida. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland this 16th day of November, 1981.

FOR THE NUCLEAR REGULATORY COMMISSION



Robert A. Clark, Chief  
Operating Reactors Branch #3  
Division of Licensing