2105 MS-016

MAY 3 1 1984

Docket No. 50-335

Vice President

P. O. Box 14000

Mr. J. W. Williams, Jr.

Nuclear Energy Department

Juno Beach, Florida 33408

Florida Power & Light Company

**DISTRIBUTION:** Docket File NRC PDR L PDR ORB#3 Rdq DEisenhut OELD EJordan **JNGrace** ACRS-10 Grav File **PMKreutzer** 

Dear Mr. Williams:

SUBJECT: ASYMMETRIC LOCA LOADS OPERATING REACTOR LICENSING ACTIONS -SUMMARY OF CONCERNS OF INDEPENDENT PLANT SAFETY EVALUATIONS

Re: St. Lucie Plant, Unit No. 1

8406140271 840531 ADDCK 05000335

PDR

PDR ADOCK

Generic Letter 84-04, dated February 1, 1984 subject "Safety Evaluation of Westinghouse Topical Reports Dealing With Eliminating of Postulated Pipe Breaks in PWR Primary Main Loops" indicated an acceptable technical basis has been provided for the 16 Westinghouse Owners Group plants so that the asymmetric blowdown loads resulting from double ended pipe breaks in the main coolant loop piping need not be considered as a design basis provided certain specified conditions are met.

However, as you are one of several independently represented nuclear plant facilities currently under review for their ability to withstand asymmetric loadings from postulated loss-of-coolant accident (LOCA), we are transmitting this request for additional information in order to complete our Safety Evaluations which are scheduled for completion in the fourth quarter of fiscal 84. Under review are the plant-specific LOCA analysis submitted by the independent utilities for the following plants: Salem Unit 1, Trojan, Beaver Valley Unit 1, Prairie Island Unit 1 and 2, Kewaunee, Maine Yankee and St. Lucie Unit 1.

The asymmetric LOCA load submittals reviewed to date are referenced at the end of the enclosed summary. All submittals were evaluated with the guidelines set forth by NUREG-0609 and the summary lists the major areas of concern that have not met these established guidelines. Detailed guestions and requests have previously been submitted in the form of initial reviews and additional requests for information. It is our understanding that a substantial portion of the information which would resolve these concerns is available with the NSSS vendors.

<sup>· 1</sup> 1

Mr. Williams

Please respond to the concerns identified in the enclosure in time for the staff to complete the Safety Evaluation as scheduled above, i.e., by July 31, 1984.

- 2 -

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Original Signed by J. R. Miller

James R. Miller, Chief Operating Reactors Branch #3 Division of Licensing

Enclosure: As stated

cc w/enclosure: See next page

ORB#3:DL DSells/dn

5/31/84

ORB#3:DL JMiller 5/3 /84

કોઈ છે. આ પાંચ તેનું પ્રચાર કરે જેટલાં આવ્યું છે. આ પ્રચાર કેર કરવા કરવા આ પ્રચ્ આ ગામમાં દુધના ગામમાં આ ગામમાં આ જેલ્લા કે પ્રચાર કેર પ્રચાર કે પ્રચાર કે પ્રચ્યા છે. આ ગામમાં આ જેલ્લા કે બાહાર કે આ

ચેર, તે પ્રાપ્ત કે કુલ્ટ સાહુ પ્રાપ્ત કે કુલ્ટ પ્રાપ્ત કે કુલ્ટ કુલ્ટ કુલ્ટ કુલ્ટ કુલ્ટ કુલ્ટ કુલ્ટ કુલ્ટ કુલ્ વર્ષક મિન્ટ્ર ફાઇટ કુટ્મન કે ટ્રોક કુટ્ટેટ કે કુટ્ટેટ કુલ્ટેટ ડ્રોટ કે કુટ્ટે કુલ્ટ કુલ્ટે કે કુટ્ટે કુલ્ટે કુ દેવાદી હ

and the second second

n and the second s

• •

#### Florida Power & Light Company

cc: Harold F. Reis, Esquire Newman & Holtzinger 1025 Connecticut Avenue, NW Washington, DC 20036

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

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, NE Atlanta, Georgia 30308

Mr. Charles B. Brinkman Manager - Washington Nuclear Operations C-E Power Systems Combustion Engineering, Inc. 7910 Woodmont Avenue Bethesda, Maryland 20014

Regional Administrator Nuclear Regulatory Commission Region II Office of Executive Director for Operations 101 Marietta Street, Suite 2900 Atlanta, Georgia 30303 Mr. Jack Schreve Office of the Public Counsel Room 4, Holland Building Tallahassee, Florida 32304

Resident Inspector c/o U.S. NRC Senior Resident Inspector 7585 S. Hwy A1A Jensen Beach, Florida 33457

State Planning & Development Clearinghouse Office of Planning & Budget Executive Office of the Governor The Capitol Building Tallahassee, Florida 32301

# REQUEST FOR ADDITIONAL INFORMATION

6. ST. LUCIE 1<sup>7,8</sup>

DOCKET NO. 50-335

# A. Cavity Pressurization Analysis

- A sensitivity study is required to demonstrate conservatism of the nodalization used in the RELAP-3 analysis of the reactor vessel cavity.
- 2. A discussion is required about the vent areas that become available as a result of fluid flow or pressurization effects after initiation of the accident. The areas must be justified analytically or experimentally.
- 3. The calculated forces and moments acting on the reactor vessel and shield wall, resulting from the reactor vessel cavity analysis, are required in quantitative form.
- 4. A complete description is required of the derivation and quantitative data for the cavity pressure loads used to evaluate the St. Lucie internals and fuel. Application to the St. Lucie plant must be demonstrated.
- 5. The CONTEMPT input listing and description used in the steam generator subcompartment analysis is required.
- 6. A description of the method used for determing the blowdown data utilized in the steam generator subcompartment analysis is required.

## B. Thermal Hydraulics Analysis

 The postulated pipe break locations, break size, and break opening times are required for the analyses performed using RELAP-4.

- 2. Additional nodalization and modeling details are required for the RELAP-4 models, identifying the various components and dimensional details.
- 3. A list of RELAP-4 thermal hydraulic input parameters is required for each break analyzed.
- 4. The resulting absolute and differential pressure transients across the core barrel are required for each break analyzed.
- 5. References and documentation of the CEFLASH-4B analyses performed are required to show their application to the St. Lucie plant for the evaluation of the fuel and internals.

## C. Structural Analysis

- 1. The following information is required to clarify the primary coolant system model:
  - a. detailed schematics which exhibit all of the structural elements and nodalization
  - b. A description of how system support stiffnesses were determined and implemented in the model
- A more detailed and substantial justification is required to demonstrate the adequacy of the four steam generator sliding base holddown bolts that exceed the design loads.
- 3. A more substantial justification is required to demonstrate the adequacy of the overstressed reactor coolant pump discharge nozzle, especially considering the 7.78 ft<sup>2</sup> break loadings.

. . · ,

۰ ۲

- 4. A complete LOCA analysis adhering to the criteria outlined in NUREG-0609 is required for the primary shield wall and steam generator subcompartment walls.
- 5. A description is required of the differences and similarities between the internals and fuel components of the generic analysis and the St. Lucie 1 plant.

"Reactor Coolant System Asymmetric LOCA Loads Evaluation", Revision 1, Enclosure to letter L-80-263, Florida Power and Light Company, August 8, 1980.

St. Lucie Unit No. 1 Final Safety Analysis Report, Amendment No. 36, Docket No. 50-335, December 20, 1974.