

12/7/79

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD

In the Matter of)
FLORIDA POWER & LIGHT COMPANY)
(St. Lucie Nuclear Power Plant,)
Unit No. 2))

DOCKET NO. 50-389

FLORIDA POWER & LIGHT COMPANY'S
ANSWERS TO
INTERVENORS' INTERROGATORIES TO
FLORIDA POWER & LIGHT COMPANY

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1. How may system wide power failures or major electrical blackouts have occurred in the FPL system during the past 10 years? For purposes of evaluation, please list any electric system disruptions that were either system wide, were considered major outages, consisted of so many scattered blackouts in close time sequence that constituted a substantial system disruption, involved tripping off line of one or more power generating stations in the FPL system or resulted in the failure of on site power to any FPL generating plant. Please provide the date of the occurrence or sequence of occurrences, the duration of the outage and the location of the affected areas.

The following is a summary of major disturbances on the FPL system during the past ten years:

<u>Date</u>	<u>Duration</u>	<u>FPL Load Shed</u>	<u>Area Affected</u>
1/28/69	1 hr. 08 min.	255 MW	SW (system wide)
8/05/69	5 hr. 22 min.	568 MW	SF (South Florida)
8/18/71	17 min.	131 MW	SF
4/03/73	6 hr. 33 min.	1230 MW	SF
4/04/73	3 hr. 36 min.	1330 MW	SF
6/23/73	1 hr. 45 min.	2190 MW	SW
12/08/73	2 hr. 22 min.	216 MW	SF
3/01/74	2 hr. 04 min.	197 MW	SW
4/25/74	1 hr. 39 min.	850 MW	SW
6/28/74	56 min.	2250 MW	SF
5/16/77	4 hr. 36 min.	1544 MW	SF
5/14/78	8 min.	180 MW	SF
3/17/79	20 min.	105 MW	SW
4/04/79	20 min.	470 MW	SW
5/04/79	43 min.	250 MW	SW
6/21/79	17 min.	128 MW	SF
8/03/79	18 min.	240 MW	SW

2. (Interrogatory #2 treats off site power failures with emphases on their effect on FPL power generating plants.) Please list all electric blackouts or power failures in the past ten years that caused an interruption in the flow of offsite power to any FPL electric generating plant site, whether operational at the time or under construction, repair, or in cold shutdown or standby condition. Identify with particularity, the date of the occurrence, the identity of the plant so affected, the duration of the outage and the scope of the power failure in the FPL system as related to outage at the other FPL plants.

The following is a list of the disturbances which resulted in the loss of off-site power to power plants together with the restoration times, in minutes, encountered in each instance.

<u>Power Plant</u>	<u>Disturbance</u>			
	<u>4/3/73</u>	<u>4/4/73</u>	<u>5/16/77</u>	<u>5/14/78</u>
Cutler	30	40	--	--
Ft. Lauderdale	17	13	31 & 9 & 20	--
Pt. Everglades	22	43	15 & 17	--
Riviera	--	30	32 & 17	--
St. Lucie	--	--	1* & 17	8
Turkey Point	20*	23 & 43	53 & 77	--

*Restored off-site power to station bus though Plant Operator elected to remain on diesel power.

3. Please state, why, in its efforts to achieve greater system reliability the Florida Power and Light Company fails to provide a 500 kv intertie or greater to the Georgia Power Corporation and the eastern United States electrical grid system. Would such an intertie or system of interties provide greater system reliability in the FPL system? If not why not?

A 500 kV tie with Georgia is still in the planning stages. A 500 kV intertie or system of interties would not provide greater system reliability in the FPL system until additional transmission expansion now under way and planned is completed.

Transmission expansion now under way and scheduled for completion in 1980, includes a 230 kV tie to Georgia and 500 kV lines from Levee in the Miami area northerly through Andytown and Martin (the sites for two new fossil generators) to Midway. These 500 kV lines will closely tie the entire South Florida area from our St. Lucie Plant to Dade County into a strong, tightly integrated network with further improvement in system reliability.

A further expansion of the 500 kV grid in Florida is presently scheduled for completion in 1985. A new 500 kV line will tie our Midway station to a new 500 kV station to be built around Lake Poinsett.

4. Would provision of the 500 kv intertie to the Eastern U. S. electrical grid obviate the need for any additional generating capacity in the FPL system. If the answer is affirmative, in increments of 250 kv per interties, how many megawatts of base load generating capacity in the FPL system would be obviated or a 250 kv interties, a 500 kv interties, a 750 kv interties?

Objection. This question appears to relate to the issue of need for power, which has been previously decided in these proceedings and is not presently pending before the Board.

5. The testimony of NRC Staff witness R. Fitzpatrick indicates the startup record of auxiliary diesel generators to provide emergency on site power at the St. Lucie Unit 1 Power Plant is sub-standard. What reasons are known to the FPL Company for the existence of this sub-standard startup record. To what extent does the plants proximity to the oceanic marine environment affect the performance reliability of these diesel generators and what if any protective or remedial measures are being taken by the utility company?

The testimony of Robert G. Fitzpatrick does not indicate that the St. Lucie Unit 1 diesel generator startup record is "sub-standard". The testimony stated that the unavailability of the Unit 1 onsite systems had been greater than that considered acceptable by NRC staff guidelines which had been developed subsequent to the licensing review of Unit 1 (Fitzpatrick Affidavit June 12, 1978, P. 6).

Seven (7) failure to start incidents at St. Lucie Unit 1 are described in FPL prefiled testimony (Flugger P. 21).

The reasons for each of these incidents include a clogged air solenoid valve and air line, incorrect air valve alignment, turbocharger malfunctions (2), dirty fuel rack linkage, overspeed trip not reset by operator, and dirty tie breaker relay contacts.

There have been no performance problems with the Unit 1 diesels as a result of proximity to a marine environment. The same type of engine is routinely used in marine service.

6. While Hurricane David approached South Florida, Charles Scheer, FPL corporate spokesman is reported in the press to have stated "the Company would continue to operate the plants during a hurricane". (See Palm Beach Post, Thursday, August 30, 1979 P. C 2). Yet, during the pre-dawn hours as the hurricane approached, the Hutchinson Island site, FPL personnel decided to shut down the St. Lucie Unit 1 reactor. Why did this discrepancy in FPL point of view exist. Has the company changed or established policy such that it will shut down reactors during hurricanes? What is the FPL policy concerning reactor operation during passage of a major hurricane where landfall is projected to be in close proximity to the plant site? Specifically, why did the company shut down St. Lucie Unit 1 during the passage of Hurricane David?

FPL bases its decision on whether or not to operate its nuclear plants during a hurricane upon an evaluation of the storm's path and the forecasted grid load. Mr. Scheer's statement was reported on August 30, 1979, before the path of the storm had been evaluated. A subsequent evaluation indicated the desirability for low generating capacity with the flexibility to accept rapid load changes and that these requirements could be better met by the fossil plants. Therefore, the nuclear plants were placed in cold shutdown.

7. It is reported in the Palm Beach Post of September 1, 1979, that during the passage of Hurricane David at the St. Lucie site on Hutchinson Island, a construction crane segment toppled from the Unit 2 containment building and knocked out Unit 1's lead-in auxiliary transformer line. What are the implications of this event as relates to plant safety and availability of on site power?

On September 3, 1979 during the passage of Hurricane David, a cable from the Unit 2 construction crane fell across the lines between the "B" startup transformer and the switchyard. St. Lucie 1 is equipped with two startup transformers so offsite power was not lost.

At the time of these events the plant was in a cold shutdown condition (See response to question 6).

A sticking relay did not allow the "B" diesel generator to start automatically. An immediate manual start could have been effected but was not required. A conservative procedure was followed to place the "B" diesel back in service. The sticking relay was subsequently replaced.

Sufficient AC power was available onsite at all times via the "A" startup transformer. The "A" diesel generator was available but was not required to start since offsite power had not been lost.

8. Please provide the test results and performance records of the St. Lucie Unit 1 auxiliary diesel generators for startup reliability up to the present date. Please provide results originating from the first in-service date and notate all relevant date.

Objection. The terms "test results and performance records" are not defined. The information to which they apparently refer is reflected in a substantial amount of material, some maintained at the plant site and some in Miami. These include Licensee Event Reports, records of surveillance tests, and logbook entries. Provision of "test results and performance records", as requested, would therefore require the compilation of a substantial amount of material. Licensee Event Reports are available for inspection in the local Public Document Room.

FLORIDA POWER & LIGHT COMPANY

By Orin F. Pearson
Orin F. Pearson, Director
Licensing and Environmental
Planning

STATE OF FLORIDA)
COUNTY OF DADE) ss.

Orin F. Pearson, being first duly sworn, deposes and says:

That he is Director of Licensing and Environmental Planning of Florida Power & Light Company, the Permittee 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 Permittee.

Subscribed and sworn to before me this

7th day of December, 1979

Lois J. Marino

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

My commission expires: NOTARY PUBLIC STATE OF FLORIDA, LARGE, MY COMMISSION EXPIRES AUGUST 24, 1981, BONDED THRU MAYNARD BONDING AGENCY

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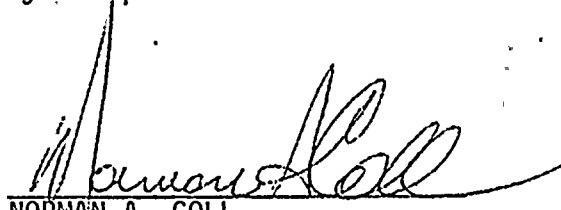
FLORIDA POWER & LIGHT COMPANY)

(St. Lucie Nuclear Power Plant,
Unit 2))

Docket No. 50-389

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that true and correct copies of the foregoing have been served this 7th day of December, 1979, on the persons shown on the attached service list by deposit in the United States mail, properly stamped and addressed.



NORMAN A. COLL

STEEL HECTOR & DAVIS
1400 S.E. First National
Bank Building
Miami, Florida 33131

Telephone: (305) 577-2863

December 7, 1979

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SERVICE LIST

Mr. C. R. Stephens
Supervisor
Docketing and Service Section
Office of the Secretary
of the Commission
Nuclear Regulatory Commission
Washington, D. C. 20555

Edward Luton, Esquire
Chairman
Atomic Safety & Licensing
Board Panel
Nuclear Regulatory Commission
Washington, D. C. 20555

Michael C. Farrar, Esquire
Chairman
Atomic Safety & Licensing
Appeal Board
Nuclear Regulatory Commission
Washington, D. C. 20555

Michael Glaser, Esquire
Alternate Chairman
Atomic Safety & Licensing Board
1150 17th Street, NW
Washington, D. C. 20036

Dr. W. Reed Johnson
Atomic Safety & Licensing
Appeal Board
Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Marvin M. Mann
Technical Advisor
Atomic Safety & Licensing Board
Nuclear Regulatory Commission
Washington, D. C. 20555

Richard S. Salzman, Esquire
Atomic Safety & Licensing
Appeal Board
Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. David L. Hetrick
Professor of Nuclear Engineering
University of Arizona
Tucson, AZ 85721

Alan S. Rosenthal, Esquire
Chairman
Atomic Safety & Licensing
Appeal Panel
Nuclear Regulatory Commission
Washington, D. C. 20555

Dr. Frank F. Hooper
Chairman
Resource Ecology Program
School of Natural Resources
University of Michigan
Ann Arbor, MI 48104

Mr. Angelo Giambusso
Deputy Director for Reactor
Projects
Nuclear Regulatory Commission
Washington, D. C. 20555

William D. Paton, Esquire
Counsel for NRC Regulatory
Staff
Nuclear Regulatory Commission
Washington, D. C. 20555

Martin Harold Hodder, Esquire
1130 NE 86 Street
Miami, FL 33138

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

William J. Olmstead, Esquire
Nuclear Regulatory Commission
Washington, D. C. 20555

Local Public Document Room
Indian River Junior College
Library
3209 Virginia Avenue
Ft. Pierce, FL 33450

James R. Tourtellotte
Counsel for NRC Regulatory
Staff
Nuclear Regulatory Commission
Washington, D. C. 20555