

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 7906220309 DOC. DATE: 79/06/20 NOTARIZED: NO DOCKET #
 FACIL: 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
 AUTH. NAME: UHRIG, R. E. AUTHOR AFFILIATION: Florida Power & Light Co.
 RECIP. NAME: STELLO, V. RECIPIENT AFFILIATION: Division of Operating Reactors

SUBJECT: Forwards requested info re feedwater line design & fabrication history.

DISTRIBUTION CODE: A001S COPIES RECEIVED: LTR 3 ENCL 1 SIZE: 7
 TITLE: GENERAL DISTRIBUTION FOR AFTER ISSUANCE OF OPERATING LIC

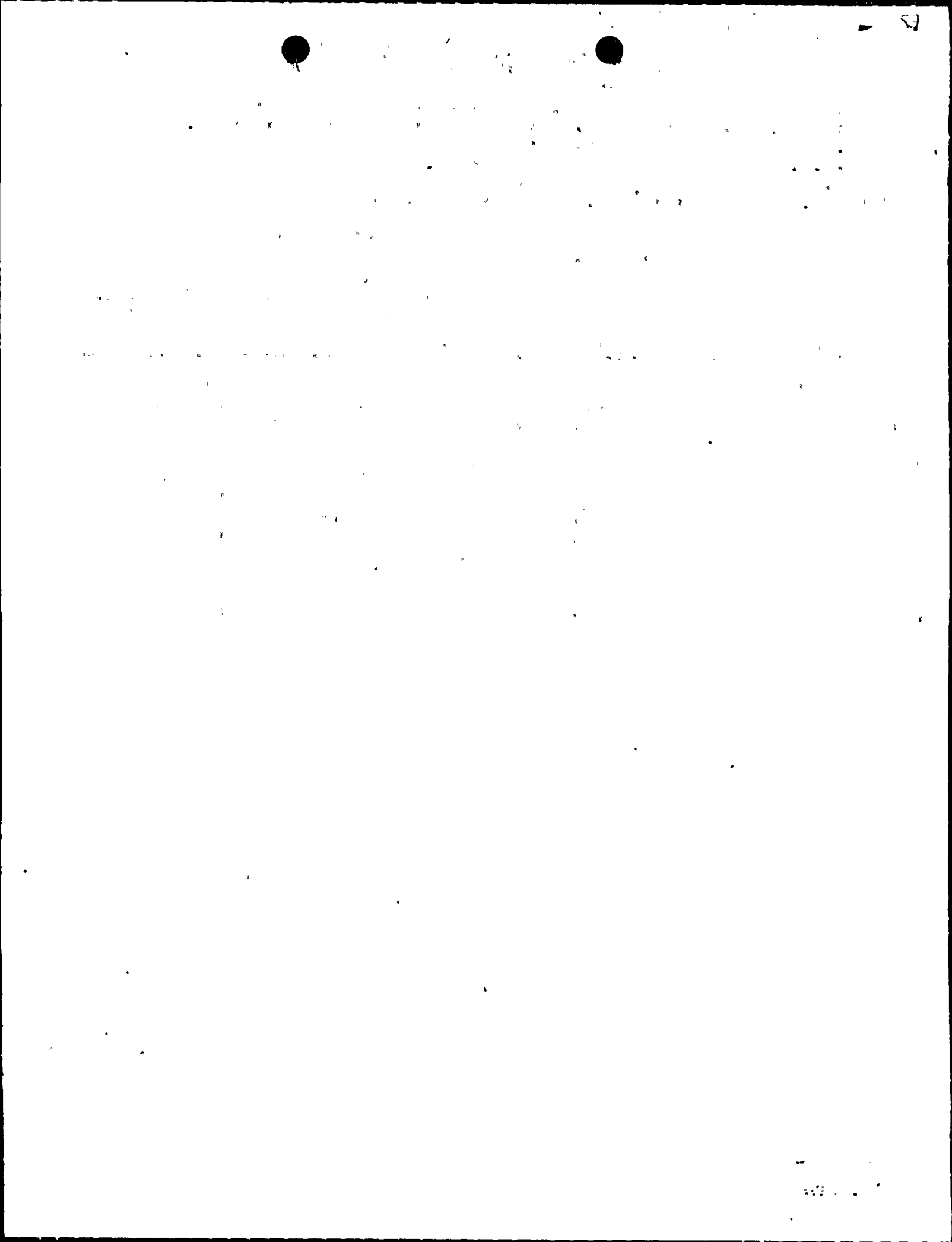
NOTES: ENCLS ADVANCED TO ERICKSON

ACTION:	RECIPIENT	COPIES		RECIPIENT	COPIES	
	ID CODE/NAME	L	T	ID CODE/NAME	L	T
	05 BC ORB #4	7	7			
INTERNAL:	01 REG FILE	1	1	02 NRC PDR	1	1
	12 I&E	2	2	14 TA/EDO	1	1
	15 CORE PERF BR	1	1	16 AD SYS/PROJ	1	1
	17 ENGR BR	1	1	18 REAC SFTY BR	1	1
	19 PLANT SYS BR	1	1	20 EEB	1	1
	21 EFLT TRT SYS	1	1	22 BRINKMAN	1	1
	OELD	1	0			
EXTERNAL:	03 LPDR	1	1	04 NSIC	1	1
	23 ACRS	16	16			

JUN 25 1979

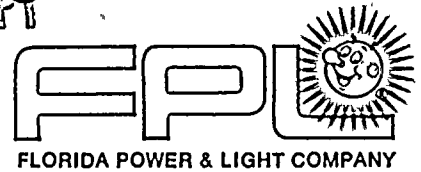
MA 4
 GD

TOTAL NUMBER OF COPIES REQUIRED: LTR 39 ENCL 38



REGULATORY DOCKET FILE COPY

P. O. Box 529100
Miami, Florida 33152



June 20, 1979
L-79-170

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

Dear Mr. Stello:

Re: St. Lucie Unit 1
Docket No. 50-335
Feedwater Line Information

Enclosed for your information and use is Florida Power & Light Company's response for St. Lucie Unit 1 to the information on feedwater line design and fabrication history requested in your letter of May 25, 1979. Due to the amount of material and the short time period required to respond, we are providing one copy of the attached information. Please advise us if additional copies are necessary for your review.

The remaining information requested in your May 25, 1979 letter will be forwarded to you by July 30, 1979.

Very truly yours,

A handwritten signature in cursive script that reads "Robert E. Uhrig".

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU:TCG:cf
Enclosure

cc: J. P. O'Reilly, Region II
Harold F. Reis, Esquire

*Note: Encls
Advanced to [redacted]
Aool
5 3/1
Erickson*

7908220 309

DESIGN

ITEM 1

Request

"Provide as-built piping or isometric drawings of the feedwater line to steam generator sparger within containment. Show details of the design such as dimensions, pipe schedule, support type and locations, pipe restraints, and valve(s)."

Response

- a. As-built piping isometrics are shown in Ebasco drawing No. 8770-3596 (Attachment 1).
- b. Feedwater pipes inside containment as shown in above drawings are 20" and 18" schedule 80 Carbon Steel ASTM A-106 Grade B. There is only one valve (check valve) located below the Steam Generator Nozzle for each Feedwater line.
- c. Piping restraints and support location are indicated in the stress isometric drawings BF-147-1 and BF-147-4 provided in Attachment 2. Piping Support locations and types are provided in Attachment 1.

ITEM 2

Request

"Provide the results of any stress or fatigue analyses which was performed for this system."

Response

The stress analysis results for the feedwater piping inside containment are given in the summary table provided in Attachment 2. The stress analysis detail calculation and results are also given in Attachment 2.

FABRICATION HISTORY

ITEM 1

Request

"Supply a list of the materials for the steam generator sparger, steam generator feedwater nozzels and feedwater piping inside containment."

Response

The requested materials are as follows:

- a. Feedwater ring assembly (See attachment 4 for details).
 - Feedwater ring - 12", schedule 40, Carbon steel, SA-106-Grade B.
 - Feedwater sleeve - 16", schedule 30, carbon steel, SA-106-Grade B.
- b. Feedwater nozzle assembly. (See attachment 4 for details).
 - Nozzle forging - alloy steel, SA-508, Class II.
 - Safe end - carbon steel, SA-508, Class I.
- c. Feedwater piping - seamless pipe, schedule 80, carbon steel, ASTM-A-106, Grade B.

ITEM 2

Request

"Provide the details of the welding process(es) used to make the nozzle-to-pipe, pipe to sparger and piping welds. Include details of welding such as preheat, joint configuration (include with our without backing ring), and post weld heat treatment."

Response

- Feedwater piping and nozzle-to-pipe welds.

Welding of feedwater piping inside containment including nozzle-to-pipe welds was performed in accordance with welding Procedures WP-24 and WP-39 which are included in Attachment 3. The steps followed in the welding process are given below:

1. Welding joint configuration was prepared per Ebasco Design Guide M4-4 for consumable insert or open root welding.
2. Gas Tungsten arc welding process was used for first 2 weld layers (SFA 5.18, E70S-2 filler metal). Remainder of weld joints were welded using manual shielded metal arc welding process with SFA 5.1, E7018 electrodes.

FABRICATION HISTORY (Continued)

3. Preheat temperature requirement was 250°F Min.
 4. Postweld heat treatment was specified at 1150-1250°F for one hour per inch of thickness.
 5. Required NDE was 100% radiography, 100% magnetic particle or liquid penetrant plus 100% visual examination.
- Pipe-to-sparger welding - refer to attachment 4 for details.