

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:7908070395 DOC.DATE: 79/07/31 NOTARIZED: NO DOCKET #
 FACIL:50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
 AUTH.NAME AUTHOR AFFILIATION
 UHRIG,R.E. Florida Power & Light Co.
 RECIP.NAME RECIPIENT AFFILIATION
 STELLO,V. Division of Operating Reactors

SUBJECT: Forwards info re fabrication, insp & operating history of feedwater lines in further response to 790525 request.

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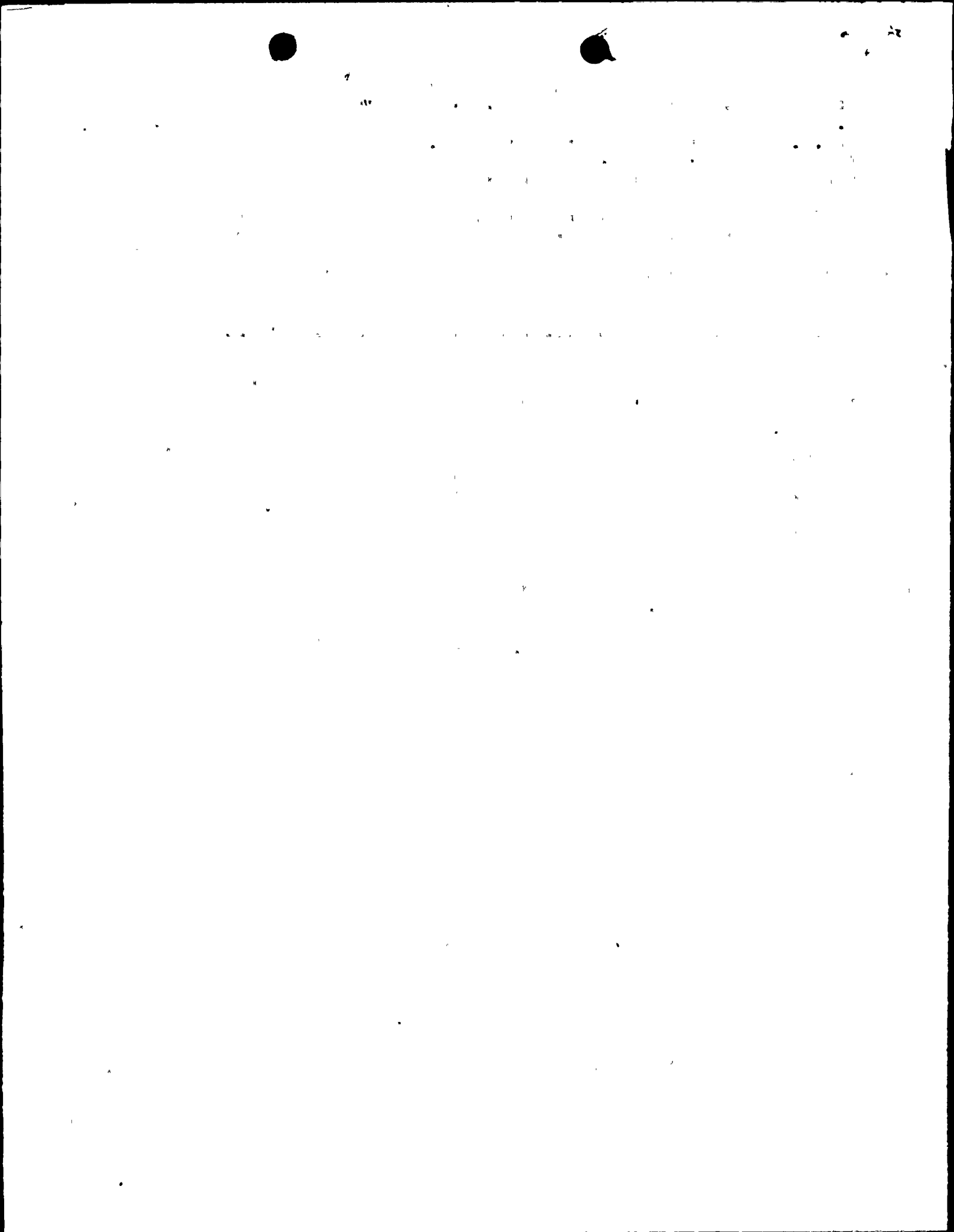
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July 31, 1979
L-79-205

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

REGULATORY DOCKET FILE COPY

Dear Mr. Stello:

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

Our letter of June 20, 1979 (L-79-170) responded in part to your May 25, 1979 request for information concerning PWR feedwater lines. The remaining information on fabrication, inspection, and operating history is attached.

Very truly yours,

Robert E. Uhrig
Vice President
Advanced Systems & Technology

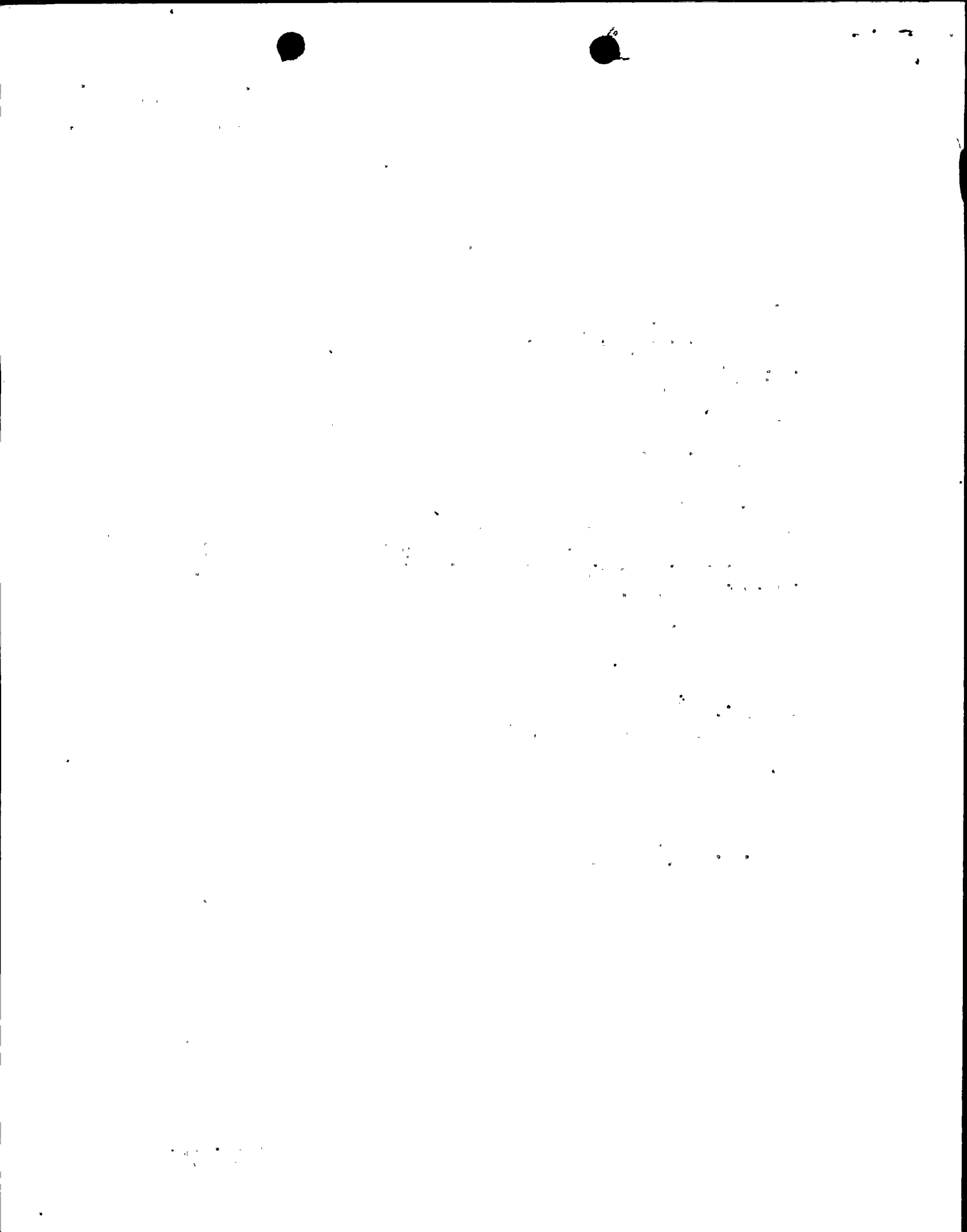
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Attachment

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

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PRESERVICE/INSERVICE INSPECTION AND OPERATING HISTORY

ITEM 1

REQUEST

State whether the feedwater system welds received a preservice inspection in accordance with ASME B&PV Code, Section XI.

RESPONSE

The St. Lucie Unit 1 feedwater system welds received a preservice inspection in accordance with the ASME B&PV Code, Section XI.

ITEM 2

REQUEST

Provide the extent of inservice inspection performed on the feedwater pipe to steam generator nozzle welds. Include the results of the examinations, any corrective actions taken and causes of any failures.

RESPONSE

Inservice inspection has not been performed on the St. Lucie Unit 1 feedwater pipe to steam generator nozzle welds. An inspection in accordance with IE Bulletin 79-13 is scheduled for late September or early October, 1979.

ITEM 3

REQUEST

Provide the schedule and extent of inservice inspection for the feedwater system for the next inspection interval.

RESPONSE

The feedwater system is a Class 2 system, therefore, inservice inspections are spread throughout the entire 40 year life of the plant. In accomplishing the routine Inservice Inspection Program, only a small portion of the feedwater system need be inspected during each period. However, all feedwater system welds inside containment, plus the connection to the auxiliary feedwater system outside containment, will be inspected in accordance with IE Bulletin 79-13.

FABRICATION HISTORY

ITEM 3

REQUEST

Provide the NDE performed during and after fabrication of the weld joints requested in question 2.

RESPONSE

The required NDE on the subject welds was 100% radiography, 100% magnetic particle or liquid penetrant, plus 100% visual examination.

ITEM 4

REQUEST

Provide the Code edition to which the feedwater piping system was fabricated.

RESPONSE

The feedwater piping system was fabricated in accordance with the ANSI B31.1 and B31.7 codes - 1967 Edition. All feedwater piping inside containment was fabricated in accordance with Safety Class II-ANSI B31.7 requirements.

ITEM 5

REQUEST

State the fracture toughness requirements, if any, for the feedwater piping system.

RESPONSE

No fracture toughness requirements existed nor were they imposed on the feedwater piping system.

ITEM 4

REQUEST

Provide any history of water hammer or vibration in the feedwater system and design changes and/or actions taken to prevent these occurrences.

RESPONSE

Preoperational test #0700080A was performed during initial power ascension testing in 1976 with no evidence of any feedwater hammer. During an extensive shutdown in the latter half of 1976 the plant was notified of a possible problem with one inch diameter standpipes then used to prevent draining of the feed rings. Due to standpipe fatigue failure caused by flow induced vibration, the standpipes were removed and replaced by "J" tubes on top of the feed rings (Plant Change/Modification 196-76).

Another preoperational test, entitled Steam Generator Feedwater Hammer Test (Test #0700080B) was conducted during power ascension testing in February 1977. The test results indicated the absence of any detectable water hammer in piping in the main feedwater or auxiliary feedwater systems and supported the prediction that none should be anticipated during operating plant transients. The test was witnessed by an NRC representative and a copy of the completed test report was transmitted to Mr. Dennis Ziemann, Chief of Operating Reactors Branch #2, Division of Operating Reactors, USNRC, by FP&L letter L-77-70, dated March 2, 1977.

Subsequently, no evidence of excessive vibration or water hammer has been detected in either the main feedwater or auxiliary systems during the operating history of the plant.

ITEM 5

REQUEST

Provide a description of feedwater chemistry controls and a summary of chemistry data.

RESPONSE

The following table outlines the feedwater system chemistry program used at the St. Lucie Plant.

<u>Parameter</u>	<u>Vendor Guidelines</u>	<u>Normal 100% Power</u>
1. Feedwater		
(a) pH	8.6 - 9.2	8.7 - 8.9
(b) Hydrazine	5 - 30 ppb	7 - 12 ppb
(c) Dissolved O ₂	<10 ppb	<5 ppb
(d) Copper	<10 ppb	5 - 15 ppb
Iron	<10 ppb	10 - 25 ppb
(e) Suspended Solids	< 1 ppm	50 - 100 ppb
2. Condensate		
(a) Dissolved O ₂	<100 ppb	<5 ppb
(b) Ammonia	<1 ppm	.2 - .3 ppm