REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:8204270453 DOC.DATE: 82/04/21 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
CLARK,R.A. Operating Reactors Branch 3

SUBJECT: Forwards description of differences between current proposed inservice testing program & program previously submitted 770916 & supplemented 780908. Inservice test program revised to include check valves & relief requests.

DISTRIBUTION CODE: A001S COPIES RECEIVED:LTR 7 ENCL 1 SIZE: 13
TITLE: General Distribution for after Issuance of Operating License

NOTES:

	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME		COPIES LTTR	COPIES ENCL
	ORB #3 BC	01	7	7				
INTERNAL:	ELD		1	0	NRR/DHFS DEPY08		1	1
	NRR/DL DIR		1	1	NRR/DL/ORAB		1	0
	NRR/DSI/RAB		1	1	REG FILE	04	1	1
	RGN2		1	1				
EXTERNAL:	ACRS	09	10	10	LPDR	03	1	1
	NRC PDR	02	1	1	NSIC	05	1	1
	NTIS		1	1				

TOTAL NUMBER OF COPIES REQUIRED: LTTR 28 ENCL 26

FLORIDA POWER & LIGHT COMPANY

April 21, 1982
L-82-161

Office of Nuclear Reactor Regulation
Attention: Mr. Robert A. Clark, Chief
Operating Reactors Branch #3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Mr. Clark:

Re: St. Lucie Unit 1
Docket No. 50-335
Pump and Valve Test Program

Florida Power & Light has reviewed the NRC letter dated February 23, 1981 concerning the St. Lucie Unit 1 Pump and Valve Test Program. A description of the differences between our current proposed inservice testing program and our previously described program (submitted on September 16, 1977 and supplemented September 8, 1978) is contained in Attachment A.

The NRC concern that the cycling test for certain check valves did not provide for substantially free flow through the valve as specified in Article IWV-3520(b), Section XI, ASME Code was addressed by revising the Inservice Test (IST) Program (see FPL letter L-80-136 dated May 1, 1980) as follows:

1) The check valves of concern in the safety injection system and the containment spray system (Attachment B) will be tested during cold shutdown or refueling shutdown in order to provide a flow path that will verify substantially free flow through the valve.

2) Appropriate relief requests (Attachment C) were written to provide for testing the valves at test intervals greater than the minimum test interval specified in the Code.

We recognize that flow through the check valves using the recirculation flow path during associated pump tests may not be sufficient to verify the Code required disc movement. However, we have continued to provide for exercising these check valves during associated pump tests (ASME Code, Section XI IWP requirements) to verify that the check valve disc moves off its seat. This additional testing provides added confidence that the check valves will perform their function when required.

A001
S
1/1

8204270453

Re: St. Lucie Unit 1
Docket No. 50-335
Pump and Valve Test Program

As stated in your letter, the new program is applicable until December 20, 1986.

Should you have further questions on this subject, we would be happy to meet with you.

Very truly yours,

Robert E. Uhrig

Robert E. Uhrig
Vice President
Advanced Systems & Technology

REU/PLP/mbd

Attachment

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

ATTACHMENT A

Re: St. Lucie Unit 1
Docket No. 50-335
Pump and Valve Test Program

The In-service (IST) Program submitted September 8, 1978 was designed to reflect the results of agreements and understandings reached between FPL representatives and NRC Staff personnel during a series of meetings at FPL Corporate headquarters May 3, 4, and 5, 1978 and telephone conference calls in late May and early June, 1978.

A comparison of our most recent program to our previous program is as follows:

TABLE I "TESTS TO CODE"

September 8, 1978 program;

The IST Program test requirements specified in the ASME Boiler and Pressure Vessel Code, Section XI, Article IWV-3000 "TESTS REQUIREMENTS" are identified and tabulated for each valve listed in Table I. These tests are required to verify valve operational readiness.

The plant conditions and the test period (test frequency) when these IST tests wll be performed are identified and tabulated for each valve listed in Table I for each IST test required. However, the attached Relief Request Basis (RRB) were not referenced for any of the valves listed in Table I.

May 1, 1980 Program;

Table I was revised in May 1, 1980 submittal to transfer each valve with an attached (Attachment B) Relief Request Basis (RRB), even if the RRB was submitted to request relief because the valve test could not be performed within the minimum test interval (test frequency) specified in the Code. Accordingly, each valve listed in Table I will be tested to the requirements of Article IWV-3000 of the Code with the minimum test frequency specified in the Code.

NOTE: Program Changes, which were requested by the NRC staff, concerning the Containment Spray System have also been incorporated into the IST program.

TABLE II "EXCEPTIONS TO CODE" ("TESTS TO CODE AND RELIEF REQUEST")

September 8, 1978 Program;

The IST Program test requirements specified in the Code are identified and tabulated for each valve listed in Table II except as noted in the columns under the REMARKS SECTION of TABLE II. The matrix format of the "REMARKS SECTION" used a combination of definitions and generic relief requests. However, the attached specific relief request basis (RRB) and the matrix columns are inconsistent. The attached Relief Request Basis (RRB) were not referenced for any of the valves listed in Table II.

May 1, 1980 Program:

The title of Table II was changed at the request of NRC Staff to "Tests to Code and Relief Request". Each valve tabulated in Table II is tested to the IST Program test requirements listed and the specific RRB is referenced by system. In addition, the technical basis for each Relief Request Basis was reviewed and revised for clarification and to eliminate generic statements.

Remarks section, columns X, Y, and Z were deleted and replaced with column for Relief Request Basis (RRB).

"RELIEF REQUEST BASIS"

September 8, 1978 Program;

Relief Request Basis (RRB) have been prepared for each valve or groups of valves with similar function. However, the technical basis listed was unclear or generic in the judgment of the NRC Staff reviewers.

May 1, 1980 Program;

Generic Relief Requests were prepared at the request of the NRC Staff to address "PASSIVE" valve test requirements.

Relief Requests for Code Category C - Check Valves were prepared to clarify the IST Program tests to verify operational readiness as specified in Sub Article IWV-3520 of the Code. Relief Request Basis identified check valves that could not be tested within the minimum test interval specified in the Code because these valves were tested in the recirculation flow path. These check valves with RRBs were transferred to Table II.

A generic RRB was prepared to resolve conflicts between the Technical Specifications Administrative Procedures for Control of Locked Valves, and NUREG requirements for changes to Operating Procedures for accountability of Locked Valves. Later editions of the Code have eliminated valve Category "E" from the Code.

Combinations of valve category A, B, or C with Code Category "E" valves were assigned to Table I or Table II as applicable as Code category A, B, or C valves and tested accordingly.

Valves used only for maintenance and valves used either for operating convenience or test previously categorized as Code Category "E" were transferred to Table II in the IST Program.

A generic relief request was prepared to provide for performing the pump tests specified in Article IWP-3000 of the Code at quarterly (3 month) intervals. This is consistent with the quarterly interval specified in Article IWV-3000 of the Code for Inservice Testing of Valves.

ATTACHMENT B

(EXCERPT FROM [illegible] LETTER # L-80-136 DATED MAY 1[illegible]1980)

I. G. LIST OF CATEGORY (A-B-C): LEGEND FOR TABLE II - TESTING TO CODE REQUIREMENTS DETERMINED TO BE IMPRACTICAL AND RELIEF REQUESTED...PARAGRAPH 50.55a (g) 5 (iii).

LEGEND - The LEGEND in Sub-Section I. E. applies to this Table.

NOTES:

1) Notes 1, 2 and 3 of Sub-Section I. E. apply to this Table.

2) Each valve in Table II is either

a) Partially tested to code or,

b) Relief requested and supported by Relief Request Basis including Alternate Tests.

I.A. LIST OF DRAWINGS (CONT)

C-E DRAWINGS

E-19367-210-110 Rev 13	Reactor Coolant System
E-19367-210-111 Rev 08	Reactor Coolant Pump
E-19367-210-120 Rev 11	Chemical and Volume Control System
E-19367-210-121 Rev 11	Chemical and Volume Control System
E-19367-210-130 Rev 12	Safety Injection System
E-19367-210-131 Rev 12	Safety Injection System
E-19367-210-140 Rev 11	Fuel Pool System
E-19367-210-150 Rev 11	Sampling System
E-19367-210-160 Rev 11	Waste Management System Sheet 1
E-19367-210-163 Rev 11	Waste Management System Sheet 4

EBASCO DRAWINGS

8770-G-079 Rev 13	Main, Extraction, Auxiliary Steam and Air Evacuation Systems
8770-G-080 Rev 11	Feedwater, Condensate & Air Evacuation Systems
8770-G-082 Rev 10	Circulating and Intake Cooling Water System
8770-G-083 Rev 10	Component Cooling System
8770-G-084 Rev 10	Firewater, Domestic & Make-Up Systems
8770-G-085 Rev 9	Service & Instrument Air Systems Sheet 1 of 2
8770-G-085 Rev 4	Instrument Air System Sheet 2 of 2
8770-G-086 Rev 9	Miscellaneous Systems Sheet 1
8770-G-088 Rev 9	Containment Spray and Refueling Water Systems
8770-G-092 Rev 3	Miscellaneous Sampling Systems
8770-G-093 Rev 3	Miscellaneous Systems Sheet 3
8770-G-878 Rev 11	HVAC - Control Diagrams Sheet 1
3509-G-115 Rev 6	Steam Generator Blowdown Sheet 1 of 2
8770-G-862 Rev 10	HVAC Airflow Diagram

FLORIDA POWER & LIGHT COMPANY

VALVE NUMBER	SIZE	TYPE	ACTU.	CODE CL.	CODE CAT.	ACT/ PAS	NORM. POS.	FAIL-URE MODE	REM. POS. IND.	TEST PER.	ISI TESTS	RRB NO.	REMARKS
V-3405	3	S/CHK	S/A	2	C	A	NC	---	No	1	EF-3	1	
V-3414	3	S/CHK	S/A	2	C	A	NC	---	No	1	EF-3	1	
V-3427	3	S/CHK	S/A	2	C	A	NC	---	No	1	EF-3	1	
I-V07008	10	Globe	Man.	2	B	P	LO	FAI	No	1	OC-1	0	
FCV-3306	10	Globe	PO	2	B	P	LO	FO	Yes	1	OC-1	0	
HCV-3657	12	Globe	DO	2	B	P	LC	FC	Yes	1	OC-1	0	

SYSTEM TITLE Safety Injection System

CHART TITLE E-19367-210-130 Rev. 12

PROGRAM TITLE VALVE TEST PROGRAM

TABLE II
TO CODE AND
RELIEF REQUEST

FLORIDA POWER & LIGHT COMPANY

VALVE NUMBER	SIZE	TYPE	ACTU.	CODE CL.	CODE CAT.	ACT/ PAS	NORM. POS.	FAIL-URE MODE	REM. POS. IND.	TEST PERI.	ISI TESTS	RRB NO.	REMARKS
V-3106	10	Check	S/A	2	C	A	NC	--	No	3	EF-1	2	
V-3107	10	Check	S/A	2	C	A	NC	--	No	3	EF-1	2	
V-3401	6	Check	S/A	2	C	A	NC	--	No	3	EF-1	3	
V-3410	6	Check	S/A	2	C	A	NC	--	No	3	EF-1	3	
V-07000	14	Check.	S/A	2	C	A	NC	--	No	3	EF-1	4	
V-07001	14	Check	S/A	2	C	A	NC	--	No	3	EF-1	4	
V-3659	3	Gate	MO	2	B	A	LO	FAI	Yes	2 2	EF-2 EST-*	8 8	* ≤ 90 sec.
V-3660	3	Gate	MO	2	B	A	LO	FAI	Yes	2 2	EF-2 EST-*	8 8	* ≤ 90 sec.
V-3656	6	Gate	MO	2	B	P	LO	FAI	Yes	1	OC-1	0	
V-3654	6	Gate	MO	2	B	P	LO	FAI	Yes	1	OC-1	0	
V-3653	4	Gate	MO	2	B	P	LO	FAI	Yes	1	OC-1	0	
V-3655	4	Gate	MO	2	B	P	LC	FAI	Yes	1	OC-1	0	
I-V07009	2	Gate	Man.	2	A	P	LC	FAI	No	1 1	OC-1 SLT-1	0/10	
V-3463	2	Gate	Man.	2	A	P	LC	FAI	No	1 1	OC-1 SLT-1	0/10	

SYSTEM TITLE: Safety Injection System

CHART TITLE: E-19367-210-130 Rev. 12

PROGRAM TITLE: VALVE TEST PROGRAM

TABLE II
TO CODE AND
RELIEF REQUEST

FLORIDA POWER & LIGHT COMPANY

VALVE NUMBER	SIZE	TYPE	ACTU.	CODE CL.	CODE CAT.	ACT/ PAS	NORM. POS.	FAIL-URE MODE	REM. POS. IND.	TEST PERI.	ISI TESTS	RRB NO.	REMARKS
V-07192	12	Check	S/A	2	C	A	NC	---	No	----	----	1	
V-07193	12	Check	S/A	2	C	A	NC	---	No	----	----	1	
V-07129	12	Check	S/A	2	C	A	NC	---	No	----	----	1	
V-07143	12	Check	S/A	2	C	A	NC	---	No	----	----	1	
V-07174	24	Check	S/A	2	C	A	NC	---	No	----	----	5	
V-07172	24	Check	S/A	2	C	A	NC	---	No	----	----	5	
V-07119	24	Check	S/A	2	C	A	NC	---	No	2	EF-2	3	
V-07120	24	Check	S/A	2	C	A	NC	---	No	2	EF-2	3	
V-07256	2	Check	S/A	2	C	A	NC	---	No	2	EF-2	6	
V-07258	2	Check	S/A	2	C	A	NC	---	No	2	EF-2	6	

SYSTEM TITLE Containment Spray System

PROGRAM TITLE VALVE TEST PROGRAM

TABLE II TO CODE AND RELIEF REQUEST

CHART TITLE 8770 -G-088 Rev. 9

ATTACHMENT C

(EXCERPT FROM FPL LETTER # L-80-136 DATED MAY 1, 1980)

I.I. RELIEF REQUEST BASIS - ATTACHMENT A-1 CODE REQUIREMENTS DETERMINED TO BE IMPRACTICAL.....PARAGRAPH 50.55a (g) 5 (iii) AND RELIEF REQUESTED:

Reactor Coolant System	Pg. 1 to 2
Chemical Volume and Control	Pg. 1 to 6
Safety Injection System	Pg. 1 to 6
Containment Spray System	Pg. 1 to 3
Component Cooling Water System	Pg. 1 to 3
Sampling System	Pg. 1 to 2
Waste Management System	Pg. 1 to 2
Main Steam System	Pg. 1 to 1
Feedwater and Condensate System	Pg. 1 to 3
Steam Generator Blowdown System	Pg. 1 to 1
Service and Instrument Air System	Pg. 1 to 1
Intake Cooling Water System	Pg. 1 to 2
Hydrogen Sampling System	Pg. 1 to 1
ILRT Instrument and Test System	Pg. 1 to 2
Primary Water System	Pg. 1 to 1
HVAC (Air Flow) System	Pg. 1 to 3
Misc. Systems (Diesel Oil)	Pg. 1 to 1
Various Systems ("Passive Valves")	Pg. 1 to 1
Various Systems (Category E Valves)	Pg. 1 to 1

RELIEF REQUEST BASIS

SYSTEM: Safety Injection

1. Valve: V3405, V3414, and V3427
   Category: C
   Class: 2

   Function: Prevents reverse flow from the High Pressure Safety Injection System Supply Header to a non-operating High Pressure Safety Injection Pump.

   Test Requirement: IWV-3520

   Basis for Relief: These valves cannot be tested during plant operation because the High Pressure Safety Injection System Pumps do not develop sufficient discharge head to establish a flow path to the Reactor Coolant System.

   Further, testing these valves during cold shutdowns is impractical since it could subject the Reactor Coolant System to conditions exceeding pressure-temperature limits.

   Alternate Testing: These check valves will be exercised during refueling shutdowns.

2. Valve: V3106 and V3107
   Category: C
   Class: 2

   Function: Prevents reverse flow from the Low Pressure Safety Injection System Supply Header to a non-operating Low Pressure Safety Injection Pump.

   Test Requirement: IWV-3520

   Basis for Relief: These valves cannot be tested during plant operation because the Low Pressure Safety Injection System Pumps do not develop sufficient discharge head to establish a flow path to the Reactor Coolant System.

   Alternate Testing: These check valve will be exercised during cold shutdowns.

RELIEF REQUEST BASIS

SYSTEM: Safety Injection

3. Valve: V3401 and V3410
   Category: C
   Class: 2

Function: Prevents reverse flow from a non-operating High Pressure Safety Injection Pump to the Refueling Water Tank Supply Header.

Test Requirement: IWV-3520

Basis for Relief: These valves cannot be tested during plant operation because the High Pressure Safety Injection System Pumps do not develop sufficient discharge head to establish a flow path to the Reactor Coolant System.

Further, testing these valves during cold shutdowns is impractical since it could subject the Reactor Coolant System to conditions exceeding pressure-temperature limits.

Alternate Testing: These check valves will be exercised during refueling shutdowns.

Additional Testing: These check valves will be exercised quarterly during the performance of associated pump tests.

4. Valve: I-V07000 and I-V07001
   Category: C
   Class: 2

Function: Prevents reverse flow from a non-operating Low Pressure Safety Injection Pump to the Refueling Water Tank Supply Header.

Test Requirement: IWV-3520

Basis for Relief: These valves cannot be tested during plant operation because the Low Pressure Safety Injection Pumps do not develop sufficient discharge head to establish a flow path to the Reactor Coolant System.

Alternate Testing: These check valves will be exercised during cold shutdowns.

Additional Testing: These check valves will be exercised quarterly during the performance of associated pump tests.

RELIEF REQUEST BASIS

SYSTEM: Containment Spray

3. Valve: V-07120 and V-07119
   Category: C
   Class: 2

   Function: Prevents reverse flow to the Refueling Water Tank.

   Test Requirement: IWV-3520

   Basis for Relief: These valves cannot be tested during plant operation because neither the Refueling Water Tank, the High Pressure Safety Injection Pumps, nor the Low Pressure Safety Injection Pumps develop sufficient discharge head to establish a flow path to the reactor coolant system.

   Alternate Testing: These check valves will be exercised during cold shutdowns.

   Additional Testing: These check valves will be exercised quarterly during the performance of Safety Injection System pump tests.

4. Valve: V-07206, V-07189, V-07170, and V-07188
   Category: AE
   Class: 2

   Function: Provides supply and return flow path from the refueling cavity to the fuel pool system ion exchangers.

   Test Requirement: IWV-3410

   Basis for Relief: These "Passive Valves" are not required to change position to either safely shut down the reactor or mitigate the consequences of an accident. Therefore, exercising these valves is not required.

   Alternate Testing: None