

ACCELERATED DOCUMENT DISTRIBUTION SYSTEM

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9310210174 DOC. DATE: 93/10/15 NOTARIZED: NO DOCKET #
 FACIL: 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co. 05000389
 AUTH. NAME AUTHOR AFFILIATION
 SAGER, D.A. Florida Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION
 Document Control Branch (Document Control Desk)

SUBJECT: Requests approval of second insp interval Relief Request 18 re sys pressure test requirements.

DISTRIBUTION CODE: A047D COPIES RECEIVED: LTR ENCL SIZE: 10
 TITLE: OR Submittal: Inservice/Testing/Relief from ASME Code

NOTES:

	RECIPIENT ID CODE/NAME	COPIES	LTR	ENCL	RECIPIENT ID CODE/NAME	COPIES	LTR	ENCL
	PD2-2 LA	1		0	PD2-2 PD	1		1
	NORRIS, J	2		2				
INTERNAL:	ACRS	6		6	AEOD/DSP/ROAB	1		1
	NRR/DE/EMEB	1		1	NRR/EMCB	1		1
	NUDOCS-ABSTRACT	1		1	OC/LEDCEB	1		0
	OGC/HDS3	1		0	<u>REG FILE</u> 01	1		1
	RES/DSIR/EIB	1		1				
EXTERNAL:	EG&G BROWN, B	1		1	EG&G RANSOME, C	1		1
	NRC PDR	1		1	NSIC	1		1

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK,
 ROOM P1-37 (EXT. 504-2065) TO ELIMINATE YOUR NAME FROM DISTRIBUTION
 LISTS FOR DOCUMENTS YOU DON'T NEED!

TOTAL NUMBER OF COPIES REQUIRED: LTR 22 ENCL 19

MAY

R
I
D
S
/
A
D
D
S
/
A
D
D
S



P.O. Box 128, Ft. Pierce, FL 34954-0128

October 15, 1993

L-93-254
10 CFR 50.4
10 CFR 50.55a

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

RE: St. Lucie Unit 2
Docket No. 50-389
In-Service-Inspection Plan
Second Ten-Year Interval
Relief Request 18 - System Pressure Testing Requirements

Pursuant to 10 CFR 50.55a(a)(3), 10 CFR 50.55a(g)(5)(iii) and 10 CFR 50.55a(g)(5)(iv), Florida Power and Light Company (FPL) requests approval of relief request 18 - System Pressure Test Requirements. FPL has determined pursuant to 10 CFR 50.55a (a)(3) that the proposed alternatives would provide an acceptable level of quality and safety, and that compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Attachment 1 is Relief Request 18. Attachment 2 is a copy of Code Interpretations XI-1-92-01 and XI-1-92-03 which are referenced in the relief request.

Please contact us if there are any questions about this submittal.

Very truly yours,

D. A. Sager
Vice President
St. Lucie Plant

DAS/GRM/kw

Attachments (2)

cc: Stewart D. Ebnetter, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

DAS/PSL #1000-93

210053
an FPL Group company

9310210174 931015
PDR ADOCK 05000389
G PDR

A047
111

1000-1115

St. Lucie Unit 2
Docket No. 50-389
In-Service-Inspection Plan
Second Ten-Year Interval
Relief Request 18 - System Pressure Testing Requirements

ATTACHMENT 1

ST. LUCIE UNIT 2

SECOND INSPECTION INTERVAL

RELIEF REQUEST NUMBER 18

**ST. LUCIE UNIT 2
SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBER 18**

A. COMPONENT IDENTIFICATION:

Class: 1, 2, and 3

Pressure Retaining Components

Pressure Retaining Bolted Connections

B. EXAMINATION REQUIREMENTS:

1. IWA-5242(a) For systems bolated for the purpose of controlling reactivity, insulation shall be removed from pressure retaining bolted connections for visual examination VT-2.
2. IWA-5250(a)(2) If leakage occurs at a bolted connection, the bolting shall be removed, VT-3 visually examined for corrosion, and evaluated in accordance with IWA-3100.
3. IWA-5261 Any pressure measuring instrument or sensor, analog or digital, including the pressure measuring instrument of the normal operating system instrumentation (such as control room instruments), may be used, provided the requirements of IWA-5260 are met.

C. RELIEF REQUESTED:

Pursuant to 10 CFR 50.55a(a)(3), 10 CFR 50.55a(g)(5)(iii) and 10 CFR 50.55a(g)(5)(iv), Florida Power and Light Company (FPL) requests relief from certain Code requirements in the ASME Boiler and Pressure vessel Code, Section XI, 1989 Edition. FPL has determined the following requirements to be impractical:

1. The removal of insulation from pressure retaining bolted connections for the sole purpose of visual examination VT-2 during system pressure testing.
2. The removal of all pressure retaining bolting from a bolted connection, when leakage is observed during a system pressure test.

**ST. LUCIE UNIT 2
SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBER 18**

3. The performance of a visual examination VT-3 for corrosion, when pressure retaining bolting is removed due to leakage of a bolted connection during a system pressure test.
4. The imposition of IWA-5260 requirements on normal operating system instrumentation (such as control room instruments) when used for system pressure testing.

D. BASIS FOR RELIEF:

1. For systems borated for the purpose of controlling reactivity, the requirement to remove insulation from pressure retaining bolted connections for visual examination VT-2, assumes that the only time these systems are examined is during a Code required pressure test.

The IWA-5242 requirement does not take into consideration any additional, and more frequent visual examinations, such as (1) Technical Specification surveillance requirements; (2) preventative maintenance activities; (3) system walkdowns; and (4) repairs and/or replacement activities, for which, the majority of these additional visual examinations are performed. To a large extent, these additional visual examinations are performed when the system is in-service.

IWA-5242 (a), (b), and (c) provide enough direction for performing visual examinations on insulated components, whether the pressure retaining bolted connection is located in a borated line or not.

In addition to the above requirements, FPL is implementing ASME Code Case N-498 for all Class 1 and 2 pressure retaining components. This code case allows in lieu of the hydrostatic pressure test, the use of a system leakage test at or near the end of the inspection interval. As a condition to the use of this code case, the hold time for insulated components is upgraded from essentially no hold time to a four hour hold time.

FPL feels that the four hour hold time will be more than adequate for the examination of insulated components, and substantially increase the assurance of identifying leakage during the conduct of a system pressure test without the removal of insulation.

IWA-5250 (a) also requires FPL to locate the source of leakage detected during the conduct of a system pressure test. Locating the source of leakage will in most cases require the removal of the insulation.



**ST. LUCIE UNIT 2
SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBER 18**

The removal of insulation on each pressure retaining bolted connection will require a significant expenditure of manpower for the erection of scaffolding, the removal and the reinstallation of insulation following performance of the pressure test and examination.

This additional manpower, not to mention, the increase in radiation exposure (man/rem), will contribute significantly to the operations and maintenance costs without any substantial compensating increase in the quality or safety of the unit.

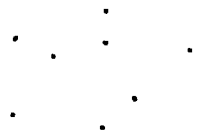
2. The removal of all pressure retaining bolting from a bolted connection solely because leakage was observed during a system pressure test is impractical. This requirement does not take into consideration (1) the type and location of leakage; (2) historical leakage; (3) construction material of the leaking component; (4) corrosiveness of process fluid; and (5) the bolting material degradation history due to corrosion in a similar environment.

In addition to the considerations (1) through (5) above, this requirement does not take into account the results of previous inspections, examinations, tests, and/or previous corrective actions taken. This requirement restricts FPL from performing an evaluation of the condition(s) based on actual facts/data, and to implement corrective action based on the actual severity of the evaluation as allowed under Section XI.

Reference: Code Interpretation XI-1-92-03

IWA-5250 (a)(2) was changed in the 1992 Edition of Section XI, to require only one of the bolts to be removed, if leakage occurs at a bolted connection.

3. The performance of a visual examination VT-3 for evidence of corrosion on pressure retaining bolting is impractical, since Section XI consistently references the visual examination VT-1 for pressure retaining bolting. FPL procedures were written to use the acceptance criteria for VT-1 examinations of bolting. The VT-3 examination does not provide adequate acceptance criteria for pressure retaining bolting. The additional cost of revising the test, visual examination, and inspection procedures solely for the purpose of changing the VT-1 examination to VT-3 is impractical.
4. The additional instrumentation requirements for accuracy, calibration, range, and location, defined in IWA-5260 are intended for hydrostatic pressure tests, where the pressures and temperatures could, without proper controls, encroach on specific design criteria. To invoke these



ST. LUCIE UNIT 2
SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBER 18

requirements on normal operating system pressure and temperature instrumentation (such as control room instruments) is impractical.

The 1992 Edition of Section XI corrected this requirement, by changing the title of IWA-5260 to "Instruments for System Hydrostatic Tests."

5. The additional costs, manpower expenditures, and radiation exposure (man/rem), required to satisfy items 1 through 4 above, do not provide any compensating increase in the quality of the examination/test, nor in the safety of the unit.

E. ALTERNATIVE EXAMINATIONS OR TESTS:

As an alternative to the above requirements, FPL proposes to perform the following:

1. For borated systems, insulation shall be removed from pressure retaining bolted connections, when determined by evaluation that the removal of insulation is warranted, or when leakage is identified during a system pressure test that requires the source of the leakage to be identified in accordance with IWA-5250. The decision to remove insulation during the evaluation process may be based on (a) type and location of leakage; (b) historical leakage; (c) construction materials of the leaking component; (d) visual evidence of corrosion; (e) corrosiveness of process fluid; and (f) the bolt material degradation history due to corrosion in a similar environment.
2. If the evaluation process indicates that the pressure retaining bolting is not susceptible to corrosion, removal of bolting will not be required.

Note: Removal of bolting that was either installed as new bolting or has received a VT-3 and/or VT-1 examination prior to installation, and has not been in-service, will not be required.

Reference: Code Interpretation XI-1-92-01

3. If the evaluation process indicates that the pressure retaining bolting may be susceptible to corrosion and requires removal, the bolt closest to the source of leakage shall be removed.
4. A visual examination VT-1 shall be performed in accordance with IWA-2211, in lieu of the visual examination VT-3. The results of the examination shall be compared against the acceptance criteria of IWB-3517.1.

**ST. LUCIE UNIT 2
SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBER 18**

5. When the visual examination VT-1 is required and leakage is identified on a pressure retaining bolted connection that is in service, and the evaluation justifies continued service, the removal of a pressure retaining bolt for visual examination VT-1 may be deferred to the next time the system is out of service, but no later than the next refueling outage.
6. When the degradation of a removed pressure retaining bolt exceeds FPL acceptance criteria and the evaluation determines that the bolting is susceptible to corrosion, all remaining pressure retaining bolting shall be removed. A visual examination VT-1 shall be performed and the results of the examination shall be compared against the acceptance criteria of IWB-3517.1.
7. The evaluation and the visual examination VT-1 documentation shall be traceable to the visual examination VT-2 record.

The extent of examination required and the proposed alternatives, coupled with the system pressure test and the surveillance requirement being performed, provide assurance of an acceptable level of quality and safety.

8. The authorized nuclear in-service inspector for St. Lucie concurs with this alternative approach.

F. IMPLEMENTATION SCHEDULE:

Second Inservice Inspection Interval
August 8, 1993 to August 8, 2003

G. ATTACHMENTS TO THE RELIEF:

Applicable Examination Categories Tables

Code Interpretation XI-1-92-01 Bolting

Code Interpretation XI-1-92-03 IWA-5250

**ST. LUCIE UNIT 2
SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBER 18**

APPLICABLE EXAMINATION CATEGORIES				
CODE CATEGORY	DESCRIPTION	CODE ITEM NUMBER	PARTS EXAMINED	TEST REQUIRED
B-P	Pressure Retaining Components	B15.10	Reactor Vessel	IWB-5221
		B15.11		IWB-5222
		B15.20	Pressurizer	IWB-5221
		B15.21		IWB-5222
		B15.30	Steam Generator	IWB-5221
		B15.31		IWB-5222
		B15.40	Heat Exchanger	IWB-5221
		B14.41		IWB-5222
		B15.50	Piping	IWB-5221
		B15.51		IWB-5222
		B15.60	Pumps	IWB-5221
		B15.61		IWB-5222
		B15.70	Valves	IWB-5221
		B15.71		IWB-5222
IWB-5221 - System Leakage Test IWB-5222 - System Hydrostatic Test				
C-H	Pressure Retaining Components	C7.10	Pressure Vessel	IWC-5221
		C7.20		IWC-5222
		C7.30	Piping	IWC-5221
		C7.40		IWC-5222
		C7.50	Pumps	IWC-5221
		C7.60		IWC-5222
		C7.70	Valves	IWC-5221
		C7.80		IWC-5222
IWC-5221 - System Functional Test or System Inservice Test IWC-5222 - System Hydrostatic Test				
D-A	Systems in support of Reactor Shutdown Function	D1.10	Pressure Retaining Components	IWD-5221 IWD-5223
D-B	Systems in Support of ECCS, CHR, AC, RRHR	D2.10	Pressure Retaining Components	IWD-5222 IWD-5223
D-C	Systems in Support of RHR from SFSP	D3.10	Pressure Retaining Components	IWD-5221 IWD-5223
IWD-5221 - System Inservice Test IWD-5222 - System Functional Test IWD-5223 - System Hydrostatic Test				

St. Lucie Unit 2
Docket No. 50-389
In-Service-Inspection Plan
Second Ten-Year Interval
Relief Request 18 - System Pressure Testing Requirements

ATTACHMENT 2
ST. LUCIE UNIT 2
SECOND INSPECTION INTERVAL
CODE INTERPRETATIONS

Interpretation: XI-1-92-01

Subject: Section XI, IWA-5250; Corrective Measures — Bolting (1983 Edition With Winter 1984 Addenda, and Later Editions and Addenda Through the 1990 Addenda)

Date Issued: September 10, 1991

File: IN90-023

Question: Do the requirements of Section XI, IWA-5250(a)(2) apply to bolting that either was installed as new bolting or has received a VT-3 examination prior to installation, and has not been in service?

Reply: No.

Interpretation: XI-1-92-02

Subject: Section XI, IWA-1400 and IWA-6000; Changes to Inspection Plan — Requirements (1977 Edition With Winter 1977 Addenda, and Later Editions and Addenda Through the 1990 Addenda)

Date Issued: September 10, 1991

File: IN91-012

Question: Is it a requirement of Section XI that changes to the inservice inspection plan of IWA-1400, resulting from changes to plant configuration during an outage, be issued prior to signing the NIS-1 form and submittal of the outage summary report?

Reply: No.

Interpretation: XI-1-92-03

Subject: Section XI, IWA-5250; Corrective Action — Applicability (1989 Edition With the 1990 Addenda)

Date Issued: September 10, 1991

File: IN91-017

Question: Do the provisions of Section XI, IWA-5250 apply to leakage found at times other than during a system pressure test?

Reply: No.