



August 4, 1994

L-94-201
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 1
Docket No. 50-335
In-Service-Inspection Plan
Second Ten-Year Intervals
Relief Request 15A - Supplemental Information

The Attachment to this letter revises St. Lucie Unit 1 In-Service Inspection Plan, Relief Request 15A to incorporate the information requested by the NRC. The clarification was requested during a conference call between Florida Power and Light Company (FPL) and Messrs. Norris and Naujock of the NRC on August 3, 1994.

This information supports the relief requested pursuant to 10 CFR 50.55a (a)(3). FPL requested approval of Relief Request 15A for use in the repair or replacement of valve V-3480. Approval of Relief Request 15 was requested by September 30, 1994, to support its use during the upcoming St. Lucie Unit 1 refueling outage scheduled to begin on October 31, 1994.

This relief request provides an alternative to the hydrostatic pressure test required by IWA-4000 for welded repairs or installation of replacement items by welding. FPL has determined pursuant to 10 CFR 50.55a (a)(3) that the proposed alternative system leakage test and examinations would provide an acceptable level of quality and safety. Compliance with the specified hydrostatic pressure test requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Use of the Relief Request will be documented on the NIS-2 Form for the replacement.

A revised copy of Relief Request 15A is attached. 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

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

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**ST. LUCIE UNIT 1
SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBER 15A**

A. COMPONENT IDENTIFICATION:

CODE CLASS:	1
COMPONENT IDENTIFICATION:	V-3480
COMPONENT DESCRIPTION:	10 inch Gate Valve
SYSTEM DESCRIPTION:	Safety Injection System

B. EXAMINATION REQUIREMENTS:

EXAMINATION CATEGORY	EXAMINATION ITEM NUMBER	EXAMINATION REQUIREMENTS
B-J	B9.11	Surface and Volumetric Examination of essentially 100% of Weld Length
B-M-2	B12.50	Visual VT-3 of Internal Surface
B-P	B15.51 B15.71	System Hydrostatic Test (IWB-5222)

C. RELIEF REQUESTED:

Relief is requested from conducting a hydrostatic pressure test (IWA-4700) following the installation of a replacement valve by welding to the pressure retaining boundary.

D. BASIS FOR RELIEF:

The Code of Federal Regulations, allows the use of proposed alternatives to Code requirements provided it can be demonstrated that (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements of the section would result in hardship or unusual difficulties without a compensating increase in the level of quality or safety. The following information demonstrates that this relief request meets both criteria:

1. Performance of a hydrostatic test at a pressure greater than the nominal system operating pressure is of little benefit with respect to assuring system integrity, therefore, performance of the test does not provide a compensating increase in quality or safety. This has been recognized by the ASME Code Committee through issuance of several ASME Code Cases (Examples: N-416-0, N-498 and N-416-1).

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2. It is not practical to isolate the replacement valve and installation welds from the reactor pressure boundary.
3. In order to perform a hydrostatic pressure test of the installation welds following the valve replacement, it would be necessary to conduct two (2) separate hydrostatic pressure tests: (1) on the downstream side of valve V-3400 (shutdown cooling side); and, (2) on the upstream side of valve V-3480 (safety injection side).

In order to perform the hydrostatic pressure tests, as discussed above, a freeze seal must be installed between valve V-3480 and the main reactor coolant, loop A hot leg. In the event of leakage, loss of this freeze seal during the hydrostatic pressure test could cause loss of RCS inventory.

4. The structural integrity of the replacement welds can best be assured by the conduct of nondestructive examinations. (Volumetric and Surface examination methods)
5. Performance of a special reactor coolant system hydrostatic pressure test during the 1994 refueling outage for the sole purpose of replacing valve V-3480 and the installation welds would result in undue hardship in that performance of the test would result in a) significant cost; b) extend the outage schedule by as much as two days; and 3) increase the ALARA impact on plant personnel (approx. 55 manrem), without a compensating increase in the quality or safety of the plant.
6. A hydrostatic pressure test of valve V-3480 will be conducted in the shop at a pressure of 5675 psi.

E. ALTERNATIVE EXAMINATIONS OR TESTS:

As an alternate to the hydrostatic pressure testing requirements, FPL proposes to conduct the following examinations and tests:

1. Nondestructive examinations (radiography and surface) shall be performed in accordance with the methods and acceptance criteria of Subsection NB-5000 of the 1980 Edition through Winter 1980 Addenda of Section III.
2. Valve V-3480 is located in the shutdown cooling return line. Following installation of the replacement valve, and prior returning the valve to service, the shutdown cooling return line would receive an in-service

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pressure test based on nominal operating pressure of 257 to 267 psia and at a temperature $< 325^{\circ}\text{F}$.

3. Prior to or immediately upon return to service, a visual examination (VT-2) shall be performed in conjunction with a system leakage test, using the 1983 Edition through the Summer 1983 Addenda of Section XI, in accordance with IWA-5000, based on the nominal operating pressure of 2250 psia and temperature. The system pressure testing hold times shall be 4 hours for insulated components and 10 minutes for uninsulated components.
3. Use of this Relief Request shall be documented on an NIS-2 Form.
4. In addition to the nondestructive examination requirements of Section III, FPL will also conduct preservice nondestructive examinations as required by the ASME Code Section XI, 1983 Edition through the Summer 1983 Addenda.
5. As required by the In-Service Test (pump and valve) Program, FPL shall conduct preservice tests (leak rate and stroke) prior to the unit being placed into service.

The extent of nondestructive examination and testing required, coupled with the system leakage test provides assurance of an acceptable level of quality and safety.

F. IMPLEMENTATION SCHEDULE:

The refueling outage is currently scheduled to begin on October 31, 1994. NRC staff review and approval of this request for relief is required prior to September 30, 1994 to allow time to revise outage planning should the staff not concur.

This relief is required through February 10, 1998, the end of inspection interval.

G. ATTACHMENTS TO THE RELIEF:

None