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SUBJECT: Requests approval of second insp interval Relief Request 15 ASME Code Case N-416-1 for use in repair or replacement of valve V-3480.Approval requested by 940930.Relief Request 15 & Code Case N-416-1 encl.

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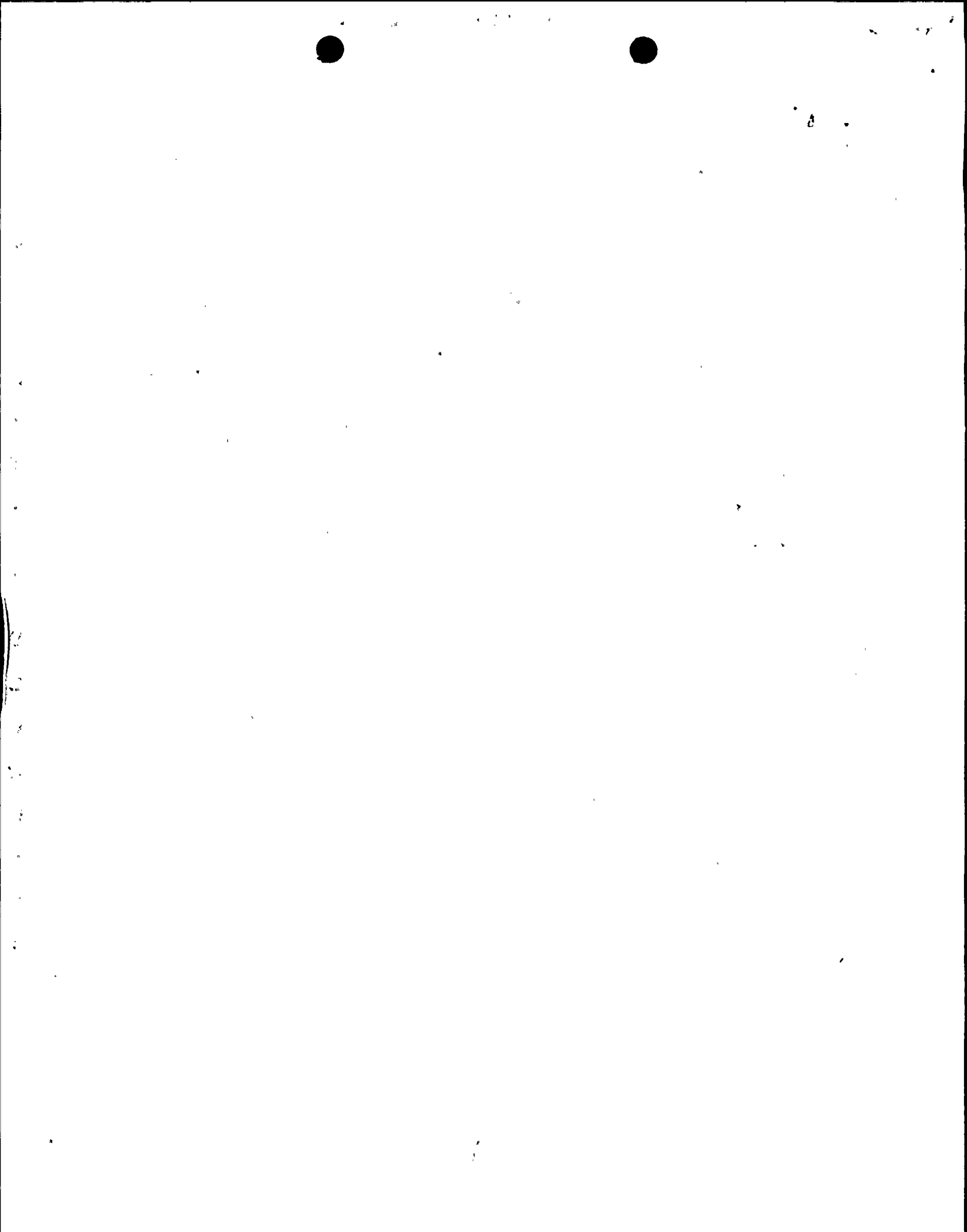
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July 15, 1994

L-94-165
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 15 ASME Code Case N-416-1 Use

Pursuant to 10 CFR 50.55a (a)(3), Florida Power and Light Company (FPL) requests approval of Relief Request 15 for use in the repair or replacement of valve V-3480. Approval of Relief Request 15 is requested by September 30, 1994, to support its use during the upcoming St. Lucie Unit 1 refueling outage scheduled to begin on October 30, 1994.

Code Case N-416-1, *Alternative Pressure Test Requirements for Welded Repairs or Installation of replacement Items by Welding, Class 1, 2, and 3, Section XI, Division 1*, was approved for use by the ASME on February 15, 1994. Earlier revisions of the Code Case were approved and listed in Regulatory Guide 1.147, Revision 10, dated July 1993. This Code Case Revision, which expands the applicability to Class 1 items, 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 alternative Code Case requirements would provide an acceptable level of quality and safety. Compliance with the specified IWA-4000 requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. Use of the Code Case will be documented on an NIS-2 Form.

A copy of Relief Request 15 is attached. We have included a copy of Code Case N-416-1 for your information. Please contact us if there are any questions about this submittal.

Very truly yours,

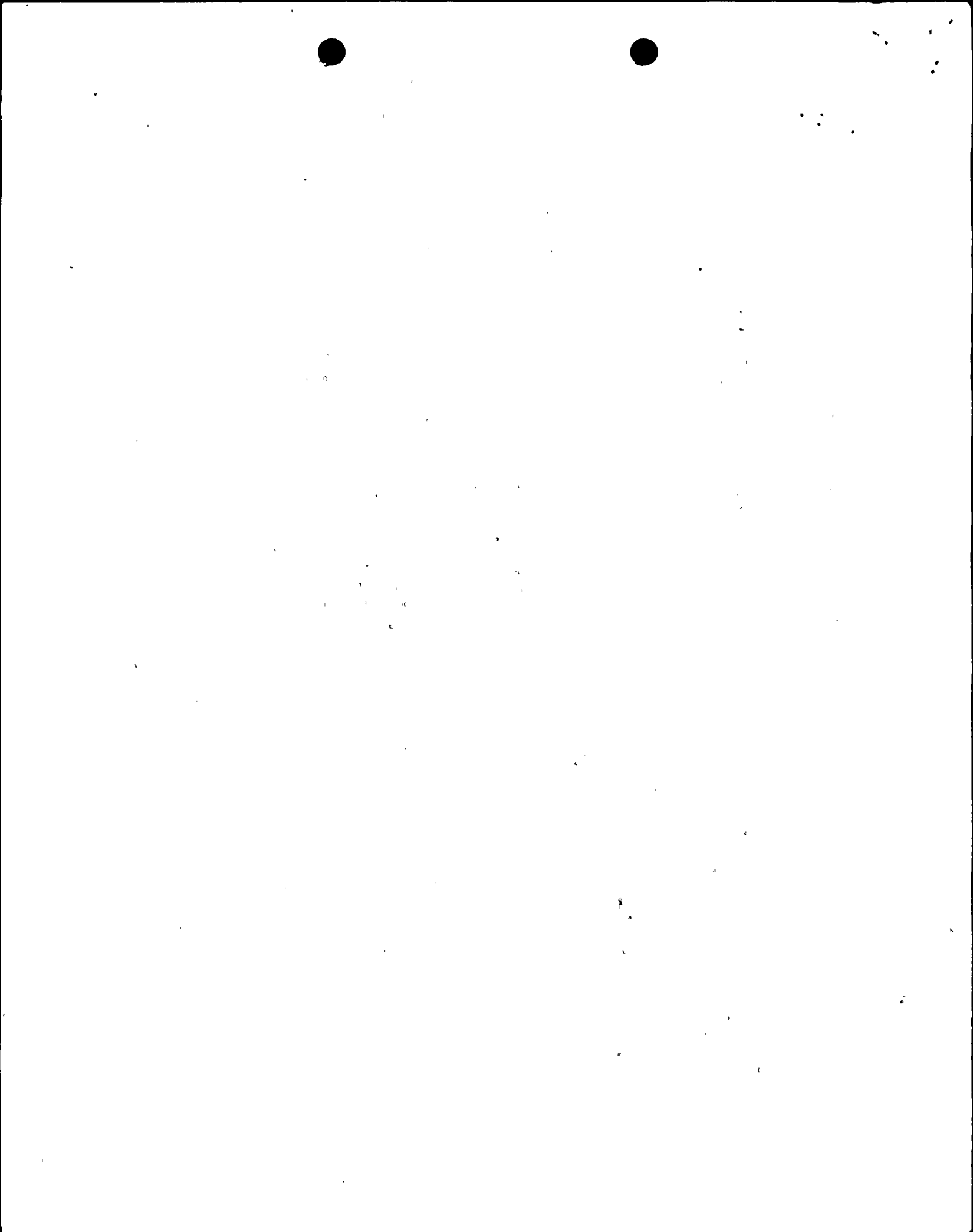
C. L. Sager for
D. A. Sager
Vice President
St. Lucie Plant

DAS/GRM/kw

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

DAS/PSL #1159-94
200000

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

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).

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

2. It is not feasible 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 pressurize the reactor vessel and a large portion of the reactor pressure boundary.
4. The structural integrity of the replacement welds can only 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 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 examinations and tests in accordance with the rules of ASME Code Case N-416-1 (Alternate Pressure Test Requirement for Welded Repairs or Installation of Replacement Items by Welding, Class 1, 2, and 3) as follows:

1. Nondestructive examinations (radiography and surface) shall be performed in accordance with the methods and acceptance criteria of Subsection NB-5000 of the 1992 Edition of Section III.
2. 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 1992 Edition of Section XI, in accordance with IWA-5000. at nominal operating pressure and temperature.
3. Use of Code Case N-416-1 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.

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5. As required by the In-Service Test (pump and valve) Program, FPL shall conduct preservice tests (leak rate and stroke) prior to the valve placement 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 30, 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.

G. ATTACHMENTS TO THE RELIEF:

None

CASES OF ASME BOILER AND PRESSURE VESSEL CODE

Approval Date: February 18, 1984

See Numeric Index for expiration
and any reaffirmation dates.

Case N-416-1
Alternative Pressure Test Requirement for Welded
Repairs or Installation of Replacement Items by
Welding, Class 1, 2 and 3
Section XI, Division 1

Inquiry: What alternative pressure test may be performed in lieu of the hydrostatic pressure test required by para. IWA-4000 for welded repairs or installation of replacement items by welding?

Reply: It is the opinion of the Committee that in lieu of performing the hydrostatic pressure test required by para. IWA-4000 for welded repairs or installation of re-

placement items by welding, a system leakage test may be used provided the following requirements are met:

- (a) NDE shall be performed in accordance with the methods and acceptance criteria of the applicable Subsection of the 1992 Edition of Section III.
- (b) 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 1992 Edition of Section XI, in accordance with para. IWA-5000, at nominal operating pressure and temperature.
- (c) Use of this Case shall be documented on an NIS-2 Form.

If the previous version of this case were used to defer a Class 2 hydrostatic test, the deferred test may be eliminated when the requirements of this revision are met.

