Florida Power & Light Company, 6351 S. Ocean Drive, Jensen Beach, FL 34957

March 6, 2000

L-2000-47
10 CFR 50.4
10 CFR 50.55a

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

Re: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
Inservice-Inspection Plan
Unit 1 Revised Relief Requests 8 and 10
Unit 2 Relief Request 28

The third ten-year inservice inspection (ISI) interval for St. Lucie Unit 1 began on February 11, 1998. Florida Power & Light Company (FPL) submitted the planned ISI program including the third interval relief requests (R/R) by letter L-98-14 on February 2, 1998. In a telephone conference on May 26, 1999, the NRC project manager for St. Lucie notified FPL that several of the R/Rs (4, 5, 8, 10, 11, 13, and 16) require additional information and therefore were not being approved as submitted. R/Rs 4, 11, and 13 were subsequently approved by NRC safety evaluation (SE) dated August 10, 1999. R/R 5 was supplemented and approved by NRC SE dated October 12, 1999. R/R 16 was withdrawn by FPL letter L-99-188 dated August 26, 1999.

The last two remaining open items from the NRC SE dated June 18, 1999 are R/Rs 8 and 10. The purpose of this letter is to supplement R/R 8 and R/R 10 as requested by the NRC. R/R 8 alters the sequence of successive inspections to improve ALARA, personnel safety, and manpower costs. R/R 8 implements for Unit 1 an inspection philosophy that is the same as Unit 2 second ISI interval R/R 14 approved by NRC SE dated August 2, 1999 (TAC NO. MA4305). R/R 10 is being submitted as a dual unit R/R and is also designated Unit 2 second ISI interval R/R 28. St. Lucie has three sets of reactor pressure vessel bolts that are rotated between the two units. This submittal reinforces the applicability of the R/R 10 to address the reactor pressure vessel bolting inspection schedule for both units.

Please contact us should you require any additional clarifications.

Very truly yours,

Rajiv S. Kundalkar

Rajiv S. Kundalkar
Vice President
St. Lucie Plant

RSK/GRM

Enclosures (2)

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

A047

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A. COMPONENT IDENTIFICATION:

Class:	Component Identification:
1	Reactor Pressure Vessel and Closure Head Steam Generator - Primary Side Pressurizer Pressure Retaining Welds Integral Attachments
2	Steam Generator - Secondary Side Shutdown Cooling Water Heat Exchanger Pressure Retaining Welds Supports

B. EXAMINATION REQUIREMENTS:

1. Quality Group A, B, and C, ASME Code Class 1, 2, and 3.

Exam Cat.	Title
B-A	Pressure Retaining Welds In Reactor Vessel
B-D	Full Penetration Welds Of Nozzles In Vessels
B-F	Pressure Retaining Dissimilar Metal Welds
B-J	Pressure Retaining Welds In Piping
B-K*	Integral Attachments For Class 1 Vessels, Piping, Pumps, and Valves
C-A	Pressure Retaining Welds in Pressure Vessels
C-B	Pressure Retaining Nozzle Welds In Vessels
C-F-1	Pressure Retaining Welds In Austenitic Stainless Steel Or High Alloy Piping
C-F-2	Pressure Retaining Welds In Carbon Or Low Alloy Steel Piping
F-A**	Supports

* - Category and item numbers as defined through implementation of Code Case N-509.
** - Category and item numbers as defined through implementation of Code Case N-491-1.

2. Table IWB-2412-1 and IWC-2412-1

With the exception of the examinations that may be deferred until the end of an inspection interval as specified in Table IWB-2500-1, the required examinations in each examination category shall be completed during successive inspection interval in accordance with Table IWB-2412-1 and IWC-2412-1.

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Inspection Interval	Inspection Period, Calendar Years of Plant Service	Minimum Examinations Completed, %	Maximum Examinations Credited, % [Note (1)]
3rd	23 - 2001	16	34
	27 - 2005	50	67
	30 - 2008	100	100
Notes: (1) Except as noted in Table IWB-2500-1, B1.30			

3. **Successive Inspections**

IWB-2420(a), IWC-2420(a) and IWF-2420(a) - The sequence of component examinations established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical.

Category B-J NOTE (2) The initially selected welds shall be reexamined during each inspection interval.

C. RELIEF REQUESTED:

Pursuant to 10CFR 50.55a (a)(3)(i), FPL requests relief from repeating the sequence of component examinations established in the first inspection interval, allow an alternative to the requirements contained within Tables IWB-2412-1 and IWC-2412-1, and to substitute like examinations on the same or similar lines when radiation dose rates can be lowered significantly. Substitutions to the extent practical will be in accordance with normal scheduling criteria.

D. BASIS FOR RELIEF:

Since FPL began performing inservice examinations, the rules for radiation exposure, safety, and the selection and scheduling of inservice examinations have changed significantly. Examinations on Class 1 systems during the first period of the first interval in accordance with the 1970 Edition with Addenda through Winter 1970 of Section XI. During the second and third periods, examinations were performed in accordance with the 1974 Edition with Addenda through Summer 1975 on all Code classes (pro-rated for the Interval). With this schedule, the sequence of examinations was not established for about one-half of the areas until the second interval.

St. Lucie has now gone through several outages with a form of this altered scheduling criteria. The second interval inservice inspection plan was scheduled with this philosophy to the extent practical within the guidelines of 83S83 Edition of Section XI. A 40% to 45% dose reduction has been achieved from previous outages. This is approximately 10 to 15 man-rem of exposure per outage.

Modifying the sequence of examinations reduces the need for personnel to prepare and examine components in essentially the same area several times. The radiation exposure, time, and manpower required to perform these tasks can be significantly reduced by changing the sequence of examinations.

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St. Lucie has not had any problems with piping and components, so modifying the ISI schedule would have no effect on the safe operation of the plant.

Rescheduling ISI activities has lowered radiation exposure, manpower, and costs associated with the preparation, examination, and recovery of the selected areas. This also reduced radiation exposure to other workers in the areas by eliminating barriers caused by scaffold and removed insulation, decreasing the amount of time required to perform a task.

FPL realizes that the objective of the Code selection method is to examine components in all parts of the plant and to repeat those examinations on a regular basis to determine if changes are occurring. This philosophy was used when the selection and scheduling of Class 1 components was performed.

For Class 2 and Class 3 systems, all piping welds and components selected for examination will be performed in the same or an earlier period as the previous interval. Class 1 systems will have examination schedules altered to achieve radiation exposure and cost reductions.

Vessels, unlike piping systems, are unique in that examination areas include several Examination Categories, Examination Item Numbers, and, in the case of steam generators, two Code Classes (Class 1 and Class 2). Equal distribution of examinations over three inspection periods on individual vessels (Steam Generators, Pressurizer, etc.), is complicated due to their unique size, reduction in required examination items and multiple Examination Categories. Equal distribution imposes an undue hardship in the areas of radiation exposure, personnel access, multiple job interference, and adds additional cost without providing a significant increase in the quality and safety of the plant.

Previous Examination Results - The St. Lucie previous nondestructive examination (NDE) results performed on these same components during the first and second inspection interval have not identified any flaws that exceeded the acceptance criteria of Section XI, or identify results that would warrant consideration of not adjusting the sequence of the examinations, therefore modifying the ISI schedule would have no effect on the safe operation of the plant.

Radiation - 10 CFR 20.1101(b) mandates FPL to reduce radiation exposure to as low as reasonably achievable. In order to satisfy this requirement and other new regulations, FPL must re-evaluate every aspect of every job. Adjusting the sequence of examinations will allow FPL to minimize the amount of work being conducted in radiation areas, meet safety requirements, ALARA requirements, and still meet the intent of Section XI.

Adjusting the sequence of examinations reduce the need for personnel to prepare and examine components in essentially the same areas several times. The radiation exposure, time, and manpower required to perform these tasks can be significantly reduced by changing the sequence of examinations and the areas to be examined.

St. Lucie has completed the first outage of the first period of the third inservice inspection interval. None of the examinations performed to date is addressed within this request for relief.

Insulation - Vessel insulation is of a size and shape that the removal process of examination area insulation usually requires a substantial amount of additional insulation to be removed. Adhering to the sequence of examinations that was established during the second interval, would require FPL to remove and reinstall the same insulation on two or more occasions. Removal, storage and reinstallation of the insulation greatly increases the chances of insulation damage and includes additional man-rem and costs associated with the need for personnel to prepare and examine components in essentially the same area

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several times. The radiation exposure, time, and manpower required to perform these tasks can be significantly reduced by changing the sequence of examinations and changing the areas to be examined.

Cost Reduction - The cost associated with preparing vessels for selected examinations on the same component, within each inspection period in order to specifically satisfy the percentage requirements of Section XI, is an economic hardship, without a substantial compensating increase in the quality or safety of the unit.

Examination Schedules - While it is desirable to have examination schedules move forward in the interval (less than 10 years between successive examinations), the wording of Inspection Program B makes this difficult. A review of Inspection Program B requirements show that it is weighted toward moving examinations to the end of the interval (opposite from USNRC desires). The maximum examinations that is allowed for credit during the first period is 34%. If the minimum examinations were performed during the first period (16%) and the maximum examined during the second period (67%), then 51% of the interval exams could be performed during the second period. This same thought process can be applied to the third period. When a sample size in a category is small, Inspection Program B requires examinations to be scheduled later in the interval. Since St. Lucie ISI examinations were originally scheduled one-third each period, it is not possible to move examination schedules forward without scheduling others later in the interval.

Inspection Program B allows up to 50% of the ten-year examinations to be performed during the second or third periods. Allowing this same latitude during the first period would enable FPL to perform examinations with a more efficient schedule, reduce radiation exposure and costs, and meet USNRC desires to have the time frame between successive examinations not exceed ten-year intervals.

Substitutions - Examination items scheduled may be substituted for items not previously scheduled in order to reduce the radiation levels. All substitutions will meet the selection criteria of the applicable Examination Category, (i.e. terminal ends, high stress welds, etc.), and shall meet the percentage requirements of Inspection Program B. Such changes will be noted in the summary report submittal.

Tables 8-1 through 8-10 provide listings of items selected to be adjusted in their examination schedule by Examination Category and provide specific percentages to be achieved during the inspection interval and within each inspection period. Only Code Categories and Item numbers that are to be adjusted in their schedule are shown within the tables. If items are not included within the tables, they will be examined in accordance with the schedule established during the second inspection interval.

E. ALTERNATIVE EXAMINATIONS OR TESTS:

FPL proposes to follow the sequence of examinations established during the second inspection interval with the exception of those items listed in Tables 8-1 through 8-10 that have been altered to reduce radiation exposure and expense, and allow the examination, preparation of areas, and the recovery process to be minimized. Within those tables, FPL also proposes to adjust the sequence of examinations established within the second inspection interval on the Pressurizer and Shutdown Cooling Water Heat Exchanger, such that all major examinations are performed at one time within a specified inspection period. Where practical, FPL has adjusted the sequence of examinations, (additional items) within the same examination category in order to minimize the variation in the percentage requirements of Inspection Program B.

Items scheduled for examination in the third interval may be substituted for items not previously scheduled in order to reduce the radiation levels. When items are substituted, they will be similar in configuration to those originally scheduled and on the same or similar line, if possible. The number of

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examinations performed will meet or exceed the minimum number required by each category. The number of welds and components examined will meet the percentage requirements as shown in the table in paragraph B.2.

FPL proposes the following alternatives:

Reactor Pressure Vessel - All required examinations will be performed in the third inspection period, in conjunction with the automated examination activity, with the exception of the shell to flange weld from the seal side and the threads in base material which will be conducted in the first period.

Reactor Pressure Vessel Closure Head - All required examinations would be performed in the first inspection period, which will minimize the percentage requirements over the inspection interval.

Steam Generator (primary and secondary sides) - These components were installed in 1997 (third period of the second interval). All required examinations will be performed on Steam Generator A in the first and third inspection periods.

Pressurizer - All required examinations will be performed in the second inspection period.

Shutdown Cooling Water Heat Exchanger - All required examinations would be performed in the second inspection period.

The readjusted schedule proposed and the system pressure test will provide continued assurance of an acceptable level of quality and safety.

In lieu of the percentage requirements of IWB-2412-1 and IWC-2412-1, FPL proposes the following variations. The minor variations (shaded boxes) between Inspection Program B and the percentages defined below will not significantly affect the health and safety of the general public.

Examination Category	1st Period 16% - 34%	2nd Period 50% - 67%	3rd Period 100% -100%
B-A * (27) total	7 = 26%	+ 0 = 26%	+ 20 = 100%
B-K **(5) total	0 = 0%	+ 3 = 60%	+ 2 = 100%
C-A (4) total	0 = 0%	+ 2 = 50%	+ 2 = 100%
C-B (5) total	2 = 40%	+ 2 = 80%	+ 1 = 100%
F-A (F1.40) (8) total	4 = 50%	+ 3 = 87%	+ 1 = 100%

Note: Shaded blocks identify variations to the percentage requirements of Section XI.

* Deferral of inspection to the end of interval permissible by IWB-2500-1

** Later Editions of XI allow less than 3 items in a category to be examined in any two periods. Implementation of Code Case N-509 changes Category B-H Item numbers B8.20 & B8.30 to Category B-K item number 10.10

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F. IMPLEMENTATION SCHEDULE

The Third Inservice Inspection Interval February 11, 1998 to February 10, 2008

G. ATTACHMENTS TO THE RELIEF:

8-1	Examination Category B-A
8-2	Examination Category B-D
8-3	Examination Category B-F
8-4	Examination Category B-J
8-5	Examination Category B-K
8-6	Examination Category C-A
8-7	Examination Category C-B
8-8	Examination Category C-F-1
8-9	Examination Category C-F-2
8.10	Examination Category F-A (F1.40)

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EXAMINATION CATEGORY B-A Table 8-1				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule (Note 3)
209-03F-Peel Segment @ 0	B-A	B1.22	2nd (period) Note 1	1st (period)
209-03A-Peel Segment @ 60	B-A	B1.22	1st Note 1	1st
209-03B-Peel Segment @ 120	B-A	B1.22	Note 1	1st
209-03C-Peel Segment @ 180	B-A	B1.22	2nd Note 1	1st
209-03D-Peel Segment @ 240	B-A	B1.22	Note 1	1st
209-03E-Peel Segment @ 300	B-A	B1.22	Note 1	1st
209-02- Head – Flange Weld	B-A	B1.40	1st & 2nd & 3rd Note 2	1st

Notes:

Note 1- 1983 with Summer 1983 Addenda only required 1 weld be examined in successive inspection intervals.

Note 2- Examination of 1/3 of the weld per period as was performed in the first interval.

Note 3- Examinations performed in this Category will be in accordance with Section XI, Table IWB-2500-1, the St. Lucie ISI Program, and applicable USNRC approved requests for relief. All required examinations will be performed in the third inspection period, in conjunction with the automated examination activity, with the exception of the shell to flange weld from the seal side and the threads in base material, and welds associated with the closure head which will be conducted in the first period.

Result:

2 Items will be examined during an earlier period (includes Head to flange which was equally distributed between 3 periods).
0 Items will be examined during a later period.
5 Items did not require examination in the second interval (peel segment welds).
20 Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	**# of Items Required**	**1st period Items % 16% - 34%**	**2nd Period Items % 50% - 67%**	**3rd Period Items % 100% - 100%**
RPV	**27**	**27**	**7=26%**	**+0=26%**	**+20=100%**

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EXAMINATION CATEGORY B-D Table 8-2				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule
PRZ-3-415A	B-D	B3.110	1	2
PRZ-SV-A-IRS	B-D	B3.120	1	2

Notes:

Reactor Pressure Vessel - Examination Category B-D nozzles and inner radius examinations are addressed in USNRC approved Unit 2 request relief 14.

Steam Generators – These components were installed in 1997 (third period of the second interval). Examinations are scheduled of Steam Generator A during the first and third periods.

Pressurizer - Examination Category B-D examinations on the pressurizer during the first inspection interval were distributed between the first and second inspection periods. The pressurizer is contained within the pressurizer cubical with limited access on both the top and bottom heads. The pressurizer includes such items as lifting lugs, manways, safety, relief and spray nozzles (top head) which are in close proximity of each other that makes distributing them equally over the interval impractical. Optimization of examination schedule would allow FPL to remove insulation once during the second period in conjunction with the Category B-F nozzle to flange/safe end examinations. FPL is not currently tracking any previously recorded indications within the Category B-D or B-F examinations.

Result:

6	Items will be examined during an earlier period (New welds associated with Steam Generators that were installed in 1997).
2	Items will be examined during a later period.
28	Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	# of Items Required	1st period Items % 16% - 34%	2nd Period Items % 50% - 67%	3rd Period Items % 100% - 100%
RPV	**12**	**12**	**0=0%**	**+0=0%**	**+12=100%**
Pressurizer	**12**	**12**	**2=17%**	**+10=100%**	**+0=100%**
SG	**12**	**12**	**6=50%**	**+0=50%**	**+6=100%**
Totals	**36**	**36**	**8=22%**	**+10=50%**	**+18=100%**

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EXAMINATION CATEGORY B-F Table 8-3				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule
PRZ-3-A	B-F	B5.40	1	2
PRZ-3-C	B-F	B5.40	3	2
15-405	B-F	B5.40	1	2
19-405	B-F	B5.40	3	2

Notes:

Pressurizer - Examination Category B-F examinations on the Pressurizer nozzle to flange/safe ends during the first inspection interval were distributed between the first, second, and third inspection periods. The Pressurizer is contained within the Pressurizer cubical with limited access to the top head. The Pressurizer includes such items as lifting lugs, manways, safety, relief and spray nozzles (top head) which are in close proximity of each other that makes distributing them equally over the interval impractical. Optimization of examination schedule would allow FPL to remove insulation once during the second period in conjunction with the Category B-D nozzle examinations. FPL is not currently tracking any previously recorded indications within the Category B-D or B-F examinations.

Result:

2 Items will be examined during an earlier period.
2 Items will be examined during a later period.
26 Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	**# of Items Required**	**1st period Items % 16% - 34%**	**2nd Period Items % 50% - 67%**	**3rd Period Items % 100% - 100%**
Pressurizer	**6**	**6**	**1=17%**	**+5=100%**	**+0=100%**
OTHER	**24**	**24**	**7=29%**	**+6=54%**	**+11=100%**
Totals	**30**	**30**	**8=27%**	**+11=63%**	**+11=100%**

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EXAMINATION CATEGORY B-J Table 8-4				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule
SI-112-2-SW-2	B-J	B9.11	2	1
1-SGA-W18 (new weld associated with Steam Generators that were installed in 1997).	B-J	B9.11	3	1
1-SGA-W17 (new weld associated with Steam Generators that were installed in 1997).	B-J	B9.11	3	1
RC-115-FW-2000 (new weld associated with Steam Generators that were installed in 1997).	B-J	B9.11	3	1
RC-115-3-503-LS-A (longitudinal weld adjacent to RC-115-FW-2000 above- see notes)	B-J	B9.12	3	1
RC-115-3-503-LS-B (longitudinal weld adjacent to RC-115-FW-2000 above - see notes)	B-J	B9.12	3	1
RC-115-4-508	B-J	B9.31	1	2
RC-149-FW-2	B-J	B9.40	3	2
CH-147-SW-30	B-J	B9.40	3	2
RC-142-FW-5	B-J	B9.40	2	1

Notes:

Longitudinal welds examined in accordance with Code Case N-524

SI-112-2-SW-2- Proposed to be scheduled early with other items in close proximity that are not being adjusted in their examination schedule.

RC-115-4-508- Proposed to be scheduled later to optimize insulation removal during exams of two pump to pipe (zone 6) and nozzle to safe end items (zone 22 that are not being adjusted in their examination schedule.

RC-149-FW-2- Propose to be scheduled early with other B-D & B-F pressurizer cubicle examination items that are not being adjusted in their examination schedule.

CH-147-SW-30- Proposed to be scheduled early with other items in close proximity that are not being adjusted in their examination schedule.

RC-142-FW-5- Proposed to be scheduled early with other items in close proximity that are not being adjusted in their examination schedule.

There are 641 circumferential welds and 64 longitudinal welds within this Examination Category for a total of 705 items. Minimum circumferential examinations required (641 x .25 = 160.25) or (161 circumferential weld items required to be examined during this inspection interval). Currently, 165 circumferential weld examinations are scheduled.

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Category B-J (continued)

Result:

7	Items will be examined during an earlier period (includes 3 new welds associated with Steam Generators that were installed in 1997).
1	Items will be examined during a later period.
157	Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	# of Items Required	1st period Items % 16% - 34%	2nd Period Items % 50% - 67%	3rd Period Items % 100% - 100%
Circ Welds	**641**	**165**	**55=33%**	**+56=67%**	**+54=100%**
Long Welds	**64**	**34**	**8=24%**	**+4=35%**	**+22=100%**
Totals	**705**	**199**	**63=32%**	**+60=62%**	**+76=100%**

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EXAMINATION CATEGORY B-K* Table 8-5				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule

Notes:

(1) No items are being changed in their schedule of examinations.

(2) Later Code Editions allows Categories with less than 3 items to be examined in any two inspection periods in lieu of the percentage requirements of Table IWB-2412-1.

*Implementation of Code Case N-509 changes Category B-H Item numbers B8.20 & B8.30 to Category B-K Item number 10.10.

Result:

0 Items will be examined during an earlier period.
0 Items will be examined during a later period.
5 Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	# of Items Required	1st period Items % 16% - 34%	2nd Period Items % 50% - 67%	3rd Period Items % 100% - 100%
Pressurizer(10.10)	**1**	**1**	**0=0%**	**+1=100%**	**+0=100%**
SG A&B(10.10)	**2**	**1**	**0=0%**	**+0=0%**	**+1=100%**
Piping(10.10)	**5**	**1**	**0=0%**	**+0=0%**	**+1=100%**
Pumps(10.30)	**16**	**2**	**0=0%**	**+2=100%**	**+0=100%**
Totals	**24**	**5**	**0=0%**	**+3=60%**	**+2=100%**

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EXAMINATION CATEGORY C-A Table 8-6				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule
2-2701	C-A	C1.10	3	2

Notes:

Steam Generators - Steam Generators were installed in 1997. Examinations will be conducted on Steam Generator A. Section XI allows performance of all examinations on one vessel among a group of vessels.

Shutdown Cooling Water Heat Exchanger – One of the two items in the Shutdown Cooling Heat Exchanger were moved to the second inspection period, in order to reduce the number of times insulation would require removal to once.

Result:

1 Item will be examined during an earlier period.
0 Items will be examined during a later period
3 Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	# of Items Required	1st period Items % 16% - 34%	2nd Period Items % 50% - 67%	3rd Period Items % 100% - 100%
SG	4	2	0=0%	+0=0%	+2=100%
SCHx	4	2	0=0%	+2=100%	+0=100%
Totals	8	4	0=0%	+2=50%	+2=100%

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EXAMINATION CATEGORY C-B Table 8-7				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule
2-2741-1	C-B	C2.21	3	2
1-SGA-W169 (new weld associated with Steam Generators that were installed in 1997)	C-B	C2.21	3	1
1-SGA-FW-IRS (new item associated with Steam Generators that were installed in 1997)	C-B	C2.22	3	1

Note:

2-2741-1- Proposed one of the two C-B items associated with the Shutdown Cooling Heat Exchanger be moved to the second inspection period to coincide with the 2 category C-A items scheduled in the second period in order to reduce the number of times insulation would require removal to once.

Result:

3 Items will be examined during an earlier period (total includes 2 new welds associated with Steam Generators that were installed in 1997).

0 Items will be examined during a later period.

2 Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	# of Items Required	1st period Items % 16% - 34%	2nd Period Items % 50% - 67%	3rd Period Items % 100% - 100%
SG	**6**	**3**	**2=66%**	**+0=66%**	**+1=100%**
SCHx	**4**	**2**	**0=0%**	**+2=100%**	**+0=100%**
Totals	**10**	**5**	**2=40%**	**+2=80%**	**+1=100%**

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EXAMINATION CATEGORY C-F-1 Table 8-8				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule
SI-113-FW-9	C-F-1	C5.11	3	2
1-SGA-W256 (new weld associated with Steam Generators that were installed in 1997)	C-F-1	C5.11	3	1
1-SGA-W284 (new weld associated with Steam Generators that were installed in 1997)	C-F-1	C5.11	3	1
1-SGB-W256 (new weld associated with Steam Generators that were installed in 1997)	C-F-1	C5.11	3	2
1-SGB-W284 (new weld associated with Steam Generators that were installed in 1997)	C-F-1	C5.11	3	2
SI-211-FW-12	C-F-1	C5.21	3	2
SI-126-FW-2002 (new weld associated with Steam Generators that were installed in 1997)	C-F-1	C5.30	3	2
SI-105-1-SW-3	C-F-1	C5.41	3	2

Notes:

SI-113-FW-9 - Proposed to be scheduled early with other items in close proximity that are not being adjusted in their examination schedule.
SI-211-FW-12 - Proposed to be scheduled early with other items in close proximity that are not being adjusted in their examination schedule.

There are 301 circumferential welds within Examination Category C-F-1 and an additional 618 exempt welds for a total of 919 items. Minimum circumferential examinations required (919 x .075 = 68.92) or (69 circumferential weld items required to be examined during this inspection interval). Currently, 74 circumferential weld examinations are scheduled.

Result:

8 Items will be examined during an earlier period (total includes 5 new welds associated with Steam Generators that were installed in 1997).
0 Items will be examined during a later period.
66 Items will be examined during the same period as second interval.

THIRD INSPECTION INTERVAL
RELIEF REQUEST NUMBER 8

Category C-F-1 (continued)

Examination Schedule:

	# of Items	# of Items Required	1st period Items % 16% - 34%	2nd Period Items % 50% - 67%	3rd Period Items % 100% - 100%
Piping Welds	113	37	9=24%	+14=62%	+14=100%
Socket Welds	177	31	4=13%	+10=41%	+17=100%
Branch Connections	11	6	1=17%	+1=33%	+4=100%
Exempt items included in population	618				
Totals	919	74	14=19%	+25=53%	+35=100%

THIRD INSPECTION INTERVAL
RELIEF REQUEST NUMBER 8

EXAMINATION CATEGORY C-F-2 Table 8-9				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule
BF-51-FW-2000 (new weld in 1997)	C-F-2	C5.51	3	1
BF-52-FW-2000 (new weld in 1997)	C-F-2	C5.51	3	2

Note:

There are 124 circumferential welds within Examination Category C-F-1. Minimum circumferential examinations required (124 x .075 = 9.3) or (Table IWC-2500-1 Note 2 requires not less than 28 weld items required to be examined during this inspection interval). Currently, 31 circumferential weld examinations are scheduled.

Result:

2 Items will be examined during an earlier period (both items installed in 1997).
0 Items will be examined during a later period.
29 Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	# of Items Required	1st period Items % 16% - 34%	2nd Period Items % 50% - 67%	3rd Period Items % 100% - 100%
Piping Welds	**101**	**29**	**9=31%**	**+9=62%**	**+11=100%**
Branch Connections	**23**	**2**	**1=50%**	**+1=100%**	**+0=100%**
Totals	**124**	**31**	**10=32%**	**+10=65%**	**+11=100%**

THIRD INSPECTION INTERVAL
RELIEF REQUEST NUMBER 8

EXAMINATION CATEGORY F-A Category F1.40 Table 8-10				
Item Identification	Code Category	Code Item Number	2nd Interval Schedule	3rd Interval Schedule

Note:

No items are being changed in their schedule of examinations.

Result:

0 Items will be examined during an earlier period.
0 Items will be examined during a later period.
8 Items will be examined during the same period as second interval.

Examination Schedule:

	# of Items	# of Items Required	1st period Items % 16% - 34%	2nd Period Items % 50% - 67%	3rd Period Items % 100% - 100%
Steam Generator	**2**	**1**	**0=0%**	**+0=0%**	**+1=100%**
Reactor Coolant Pumps	**16**	**4**	**4=100%**	**+0=100%**	**+0=100%**
LPSI Pumps	**4**	**2**	**0=0%**	**+2=100%**	**+0=100%**
Pressurizer	**1**	**1**	**0=0%**	**+1=100%**	**+0=100%**
Totals	**23**	**8**	**4=50%**	**+3=87%**	**+1=100%**

ST. LUCIE UNITS 1 & 2
UNIT 1THIRD INSPECTION INTERVAL
UNIT 2 SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBERS, UNIT 1-#10, UNIT 2-#28

A. COMPONENT IDENTIFICATION:

St. Lucie Units 1 & 2

Reactor Pressure Vessel (RPV)

Class 1 Reactor Pressure Vessel Bolting

B. CODE REQUIREMENT:

Rules for Inservice-Inspection of Nuclear Power Plant Components, Section XI, 1989 Edition

Exam Cat.	Item no.	Examination Requirements
B-G-1	B6.10	Reactor Vessel Closure Head Nuts-Surface Examination
	B6.20	Reactor Vessel Closure Studs, in place-Volumetric Examination
	B6.30	Reactor Vessel Closure Studs, when removed-Surface and Volumetric Examination
	B6.50	Reactor Vessel Closure Washers, Bushings -Visual Examination, VT-1

Successive examinations of the bolting will be the same as for the first interval, with studs allowed to be deferred to the end of the interval, if removed.

C. RELIEF REQUESTED:

Pursuant to 10 CFR 50.55a (a)(3)(i), FPL requests an alternative to the requirements to the Code required schedule of examinations of the reactor vessel closure head studs, nuts, and washers as specified in Table IWB-2500-1 (successive inspection intervals), Category B-G-1 and IWB-2420 of the 1989 Edition of ASME Section XI. This relief request is applicable to the RPV bolting of both St. Lucie Units 1 and 2.

D. BASIS FOR RELIEF:

In 1993, during the St. Lucie Unit 1 Second Inspection Interval and St. Lucie Unit 2 First Inspection Interval, FPL purchased an additional set of reactor vessel closure studs, nuts and washers. With the addition, FPL currently has three complete sets of RPV bolting which are shared between the two units. The 3 sets have been identified with three designations "A", "B", and "C" to preclude intermixing. While in storage between outages, a set is cleaned and prepared for service. During a refueling outage in a specific unit, one complete set of RPV bolting (studs, nuts, and washers) is removed and placed into storage. The set that had been in storage is then placed into service. In between outages, the set that had been in service is cleaned, visually examined and prepared for service in accordance with FPL maintenance procedures. During the next refueling outage on the opposite unit, this same work is performed, with the set of bolting that had previously been in one unit, being placed into service in the sister unit. This swapping of the bolting has resulted in examinations being performed in one unit now being credited for the other.

ST. LUCIE UNITS 1 & 2
UNIT 1THIRD INSPECTION INTERVAL
UNIT 2 SECOND INSPECTION INTERVAL
RELIEF REQUEST NUMBERS, UNIT 1-#10, UNIT 2-#28

The two St. Lucie units have ISI intervals approximately 5 years apart with the RPV bolting sets moving from one unit to the other. FPL performs the required nondestructive examinations (NDE) on three complete sets of bolting instead of two. In addition, the bolting sets have been mixed on one occasion due to an unremovable stud (which has since been removed and placed with its original group).

FPL performed the required NDE of all three sets of RPV bolting in 1994, except on the one stud. This was done to preclude missing any examinations due to the swapping of sets of bolting from one unit to the other.

Footnote (5) of Code Category B-G-1, which applies to all Code item numbers, states deferral of examinations is permissible except when the detected leakage of borated water requires a visual VT-1 in accordance with IWA-5250(a)(2). IWB-2420(a) states, "The sequence of examinations established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical." The requirement for bolting in the first interval at Unit 1 was to examine one-third of the bolting each period. The 1983 with Summer 83 addenda, which was used for the Unit 1 Second Interval, and the 1980 with Winter 80 addenda, which was used for the Unit 2 first interval, of Section XI allow deferral of examinations of B-G-1 bolting. This wording shows that the examination of RPV bolting was considered to be important, but that they can all be performed at the same time. Additionally, the later editions of ASME Section XI have dropped the examination schedule requirement of one-third of the bolting each period.

Simplifying the examination schedule for the three sets of RPV studs will ensure that FPL meets the intent of ASME Section XI, which is to examine all bolting for flaws. No RPV bolting will be installed for use that has not been examined at least once during the interval. FPL will perform the examinations during the second period (the equivalent third period of St. Lucie Unit 2). This will mean the scheduled examinations for one third of the bolting will be accelerated. The time period between examinations will not exceed 10 Code years.

E. PROPOSED ALTERNATIVE:

FPL will perform the ASME required NDE examinations of RPV bolting between scheduled refueling outages while the bolting is being cleaned and prepared for service in the opposite unit. The schedule of required NDE examinations will be during the second period for Unit 1(2/11/2001 – 2/10/2005), which coincides with the third period for Unit 2 (8/8/2000-8/7/2003). Examinations will be performed on all three sets of bolting, and will be in accordance with Code category B-G-1 requirements and applicable relief requests. The bolting will then be placed on a ten-year schedule for examination.

Additionally, as part of the preparation for service process, FPL will continue to perform visual examinations of each bolting set in accordance with maintenance procedures.

F. IMPLEMENTATION SCHEDULE:

FPL will implement the alternative to the Code required schedule of examinations on the RPV bolting during the St. Lucie Unit 1 third Inservice-inspection interval, and the St. Lucie Unit 2 second inservice inspection interval.

G. ATTACHMENTS TO THE RELIEF:

None.