August 25, 2000

Mr. Thomas F. Plunkett
President - Nuclear Division
Florida Power and Light Company
P.O. Box 14000
Juno Beach, Florida 33408-0420

SUBJECT: ST. LUCIE, UNITS 1 AND 2 - SECOND AND THIRD 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN REQUESTS FOR RELIEF NOS. 8 AND 10 (UNIT 1), AND 28 (UNIT 2) (TAC NOS. MA8376 AND MA8377)

Dear Mr. Plunkett:

The U.S. Nuclear Regulatory Commission staff, with the technical assistance from its contractor, the Idaho National Engineering and Environmental Laboratory (INEEL) has reviewed and evaluated the information provided by Florida Power and Light Company (licensee or FPL) in its letter dated March 6, 2000. FPL proposed Relief Requests (RRs) 8 and 10 for Unit 1 third 10-Year Interval Inservice Inspection (ISI) Program and RR 28 for Unit 2 second 10-Year Interval ISI Program. The staff found your RRs acceptable. The staff's evaluation and conclusions are contained in the staff's safety evaluation provided in the Enclosure. The Enclosure also lists each RR and the status of approval, including the Idaho National Engineering and Environment Laboratory Technical Letter Report.

The staff concludes that the alternatives contained in RRs 10 for Unit 1, and 28 for Unit 2, provide an acceptable level of quality and safety. Therefore, the proposed alternatives are authorized pursuant to Title 10, Code of Federal Regulations (10 CFR) Section 50.55a(a)(3)(i) for the second Unit 2, and third Unit 1 ISI Intervals for St. Lucie, Units 1 and 2.

Regarding RR 8 for Unit 1, the staff concludes that the licensee's compliance with the Code requirements would result in a hardship or unusual difficulty without a compensating increase in quality or safety. Furthermore, the licensee's proposed alternative provides reasonable assurance of structural integrity of the subject component. Therefore, the licensee's proposed

alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the third 10-Year ISI Interval for St. Lucie Unit 1.

A copy of the Safety Evaluation and the Technical Letter Report are enclosed.

Sincerely,

/RA/

Richard P. Correia, Chief, Section 2
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket Nos. 50-335 and 50-389

Enclosure: Safety Evaluation w/Technical Letter Report

cc w/encls: See next page

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SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

FOR

SECOND AND THIRD 10-YEAR INTERVAL INSERVICE INSPECTION

REQUESTS FOR RELIEF 8, 10, AND 28

FOR

ST. LUCIE, UNITS 1 AND 2

FLORIDA POWER AND LIGHT COMPANY

DOCKET NOS. 50-335 AND 50-389

1.0 INTRODUCTION

Inservice inspection (ISI) of the American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components is performed in accordance with Section XI of the ASME Boiler and Pressure Vessel (B&PV) Code and applicable addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). In 10 CFR 50.55a(a)(3), it states that alternatives to the requirements of paragraph (g) may be used, when authorized by the U.S. Nuclear Regulatory Commission (NRC), if (i) the proposed alternatives would provide an acceptable level of quality and safety or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first 10-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The Code of record for the St. Lucie, Units 1 and 2, second (Unit 2) and third (Unit 1) 10-year ISI interval is the 1989 Edition of the ASME B&PV Code.

Enclosure

2.0 EVALUATION

The staff, with technical assistance from Idaho National Engineering and Environmental Laboratory (INEEL), has reviewed the information concerning Inservice Inspection Program RRs 8 and 10 for St. Lucie Unit 1 second 10-Year Interval, and RR 28 for Unit 2 second 10-year interval in Florida Power and Light Company (the licensee) letter dated March 6, 2000.

The staff adopts the evaluations and recommendations for authorizing alternatives contained in the Technical Letter Report (TLR), prepared by INEEL Attachment 1. Attachment 2 is a table that lists, among other things, each RR and the status of disposition of the request.

For St. Lucie, Units 1 and 2, the staff has determined whether the proposed alternatives provide an acceptable level of quality and safety, or whether compliance would result in a hardship or unusual difficulty without a compensating increase in quality or safety.

3.0 CONCLUSION

The staff concludes that the alternatives contained in RR 10 for Unit 1 and RR 28 for Unit 2 provide an acceptable level of quality and safety. Therefore, the licensee's proposed alternatives are authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the third St. Lucie Unit 1 and the second Unit 2 inspection intervals.

Regarding RR 8 for Unit 1, the staff concludes that the licensee's compliance with the Code requirements would result in a hardship or unusual difficulty without a compensating increase in quality or safety. Furthermore, the licensee's proposed alternative provides reasonable assurance of structural integrity of the subject component. Therefore, the licensee's proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for third 10-year inspection ISI interval for St. Lucie Unit 1.

Principal Contributor: Thomas K. McLellan, NRR

Date: August 25, 2000

Attachments: 1. INEEL TLR
2. Summary Chart

TECHNICAL LETTER REPORT
ON
THE SECOND AND THIRD 10-YEAR INTERVAL INSERVICE INSPECTION
REQUESTS FOR RELIEF NO. 8, 10 AND 28
FOR
FLORIDA POWER AND LIGHT COMPANY
ST. LUCIE UNITS 1 AND 2
DOCKET NUMBER: 50-335 AND 50-389

1. INTRODUCTION

By letter dated March 6, 2000, the licensee, Florida Power and Light Company, submitted Requests for Relief Nos. 8, 10 and 28, from the requirements of the ASME Code, Section XI, for St. Lucie Unit 1 and Unit 2. These relief requests are for the second and third 10-year inservice inspection (ISI) interval (Unit 2 and Unit 1, respectively). The Idaho National Engineering and Environmental Laboratory (INEEL) staff's evaluation of the subject requests for relief are in the following section.

2. EVALUATION

The information provided by Florida Power and Light Company in support of the requests for relief from Code requirements has been evaluated and the bases for disposition are documented below. The Code of record for St. Lucie Unit 1 third 10-year ISI interval, which began February 11, 1998, and Unit 2, second 10-year ISI interval, which began August 8, 1993, is the 1989 Edition of Section XI of the ASME Boiler and Pressure Vessel Code.

2.1 Request for Relief No. 8 (Unit 1), IWB-2412 and IWC-2412, Inspection Program B Percentage Requirements, IWB-2420 and IWC-2420, Sequence of Component Examinations Established During the First Inspection Interval

Code Requirement: IWB-2412 and IWC-2412 specify the minimum/maximum percent of examinations that may be completed/credited each period. IWB-2420 and IWC-2420 require that the sequence of component examinations established during the first inspection interval be repeated during each successive inspection interval, to the extent practical.

Licensee's Proposed Alternative: In accordance with 10 CFR 50.55a(a)(3), the licensee proposed to alter the examination sequence required in IWB-2420 and IWC-2420. The licensee stated:

"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.

“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 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 alternative:

“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-D (36) total	8=22%	+10=50%	+18=100%
B-F (30) total	8=27%	+11=63%	+11=100%
B-J (199) total	63=32%	+60=62%	+76=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%
C-F-1 (74) total	14=19%	+25=53%	+35=100%
C-F-2 (31) total	10=32%	+10=65%	+11=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

Licensee's Basis for Proposed Alternative (as stated):

"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 [were performed] 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. 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 Class1 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 examinations 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 several times. The radiation exposure, time, and manpower required to perform these tasks can be significantly reduced by changing the sequence and changing the areas to be examined.

“Examination Schedules - While it is desirable to have examinations 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 24%. 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 examinations 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[1] 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.

Evaluation: The Code requires that the sequence of component examinations established during the first inspection interval be repeated during each successive inspection interval to the extent practical. In addition, the Code requires a distribution of examinations in accordance with IWX-2400, Inspection Schedule. The licensee has proposed rescheduling examination areas for the third inspection interval to reduce the radiation exposure and burden associated with distributing the examinations of major components by inspection period. This approach is intended to focus on one component or zone at a time to minimize repeated insulation removal during the inspection interval. In addition, if scheduled welds are in areas of excessive radiation the licensee has proposed to substitute these welds with similar welds in order to reduce radiation exposure.

The Code scheduling philosophy requires periodic examination of selected component areas to assure continued system structural and leakage integrity. Modifying the schedule of examination areas for the third 10-year interval provides the licensee a means of reducing radiation exposure while enhancing the overall efficiency of the inservice inspection program. ISI program changes that will reduce radiation exposure without compromising quality and safety are considered prudent.

There are two technical considerations associated with this request. The first is the time duration between examinations, which are performed at intervals of approximately 10 years. This aspect is controlled by the successive examination requirements of the Code (IWX-2420). The second consideration is the distribution of examinations within the inspection interval, which is governed by IWX-2412 (Inspection Program B) for the St. Lucie plant. IWX-2412 specifies the minimum required, and maximum credited, examination percentages to be performed during each period.

The licensee states that by adhering to the sequence of examinations established during the first 10-year interval, insulation on certain components would have to be removed two or more times during each inspection interval, causing additional radiation exposure to plant personnel. As a result, imposition of the Code scheduling and sequencing requirements would create an undue burden on the licensee.

At St. Lucie, the licensee has proposed an alternative to the Code requirements that will allow them to group the examinations of certain components within a single period to reduce radiation exposure. To accomplish this, the licensee will alter the sequence of examinations established during the first 10-year interval. The licensee has provided tables summarizing the rescheduling of examinations by Code Examination Category for

1. Tables provided with the licensees submittal are not included in this evaluation.

the third 10-year interval. These tables indicate that a majority of the components will be examined during the same period as during the first interval. For those areas where the schedule was adjusted, the number of components examined later in the interval is offset by those examined earlier. Although the time between examinations will exceed 10 years for some components, the deferred examination of these components will be offset by the examination of other components for which the duration is less than 10 years. This will result in a new sequence of examinations that allows the licensee to achieve its goal of reducing radiation exposure without compromising the level of quality and safety.

To reschedule the examination of components while minimizing the duration between examinations, the licensee will modify the distribution of examinations among inspection periods for major components. For example, the licensee has scheduled the examination of the RPV, including 12 Examination Category B-D welds, during the third period. The staff has found the deferral of RPV welds to the end of an interval to be an acceptable alternative to reduce the burden of staging the automated tool more than once in a given interval. However, examination of two pressurizer Category B-D nozzle welds will be deferred to a later period to coincide with insulation removal of Category B-F nozzle to flange/safe end examinations. Although this results in a slight variation in the scheduling requirements of Inspection Program B of the Code, the alternative distribution provided by the licensee is adequate for detecting patterns of degradation that may occur.

It is concluded that the licensee's proposed alternative will provide reasonable assurance of the structural integrity of the affected systems, and that imposing the scheduling and sequencing requirements of the Code would cause an undue hardship without a compensating increase in the level of quality and safety. Therefore, it is recommended that the licensee's proposed alternative be authorized pursuant to 10 CFR 50.55a(a)(3)(ii).

2.2 Request for Relief No. 10 (Unit 1), and No. 28 (Unit 2), Examination Category B-G-1, Pressure Retaining Bolting, Greater Than 2 inches in Diameter

Code Requirement: IWB-2420 requires that the sequence of component examinations established during the first inspection interval be repeated during each successive inspection interval, to the extent practical. In addition, Table IWB-2412-1 requires the following examination percentages each period for Examination Category B-G-1, Item Numbers B6.10, B6.20, B6.30 and B6.50 components.

Inspection Interval	Inspection Period	Minimum Examination % Completed	Maximum Examinations Credited
1, 2, 3	1 2 3	16 50 100	34 67 100

Licensee's Proposed Alternative: In accordance with 10 CFR 50.55a(a)(3)(i), the

licensee proposed to perform the required examination on the subject B-G-1 components at one time rather than distributing the examinations over the interval. The licensee stated:

"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. "

Licensee's Basis for Proposed Alternative (as stated):

"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. 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.

Evaluation: IWB-2420 requires that the sequence of component examinations established during the first inspection interval be repeated during each successive inspection interval, to the extent practical. In addition, Table IWB-2412-1 requires that approximately one-third of the subject Examination Category B-G-1, Item Numbers B6.10, B6.20, B6.30 and B6.50 components be examined each period.

In 1993 the licensee purchased an additional set of RPV closure head nuts, studs and washers. With the purchase of this set, the licensee now has three sets of nuts, studs and washers for use in two units. The licensee rotates the sets of bolting components between the units each refueling outage. This allows the licensee to perform service, including cleaning and visual examinations, on a set of these components between outages.

Due to the fact that the three sets of bolting components are rotated and used in two units, it is not feasible to maintain an inspection cycle which corresponds with the periodic requirements of table IWB-2412 for each unit. The required examinations were last performed on all the subject components with the exception of one stud[2] in 1994. The licensee has proposed that all three sets of bolting components be examined during the Unit 1 third 10-year interval, second period (coinciding with the Unit 2 second 10-year interval, third period). The licensee has stated that the time period between examinations will not exceed 10 years for all of the subject components. While this schedule does not comply with the requirements of the 1989 Edition of ASME Section XI (i.e., one third of total performed each period), later editions of the Code (1995), which have been approved for use by the NRC, allow deferring all subject B-G-1 examinations to the end of the interval. Therefore, allowing 10 years to elapse between examinations of the subject components has been found acceptable by the staff.

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2. Stud was unremovable, however has since been removed and placed back in corresponding set of components.

The INEEL concludes that the licensees approach of rotating a third set of RPV bolting components between two operating units provides a favorable mechanism for inservice inspection activities. Having a set of bolting in storage off-line allows the licensee to perform the required examinations in a less critical, non-outage condition, thereby strengthening the quality of the examinations and likely reducing radiation exposure. In addition, considering that later editions of the Code allow for examinations to be deferred to the end of the interval, it is determined that the licensee's proposed alternative will provide an acceptable level of quality and safety. Therefore, it is recommended that the licensee's proposed alternative be authorized pursuant to 10 CFR 50.55a(a)(3)(i).

3. CONCLUSION

The INEEL staff evaluated the licensee's submittal and concluded that certain inservice examinations cannot be performed to the extent required by the Code at St. Lucie, Units 1 and 2.
For Unit 1, Request for Relief No. 8, the licensee has demonstrated that the Code scheduling requirements would result in a burden without a compensating increase in the level of quality and safety; therefore, it is recommended that the licensee's proposed alternative be authorized pursuant to 10 CFR 50.55a(a)(3)(ii) for the third ISI interval.

For Unit 1, Request for Relief No. 10, and Unit 2, Request for Relief No. 28, the INEEL staff concludes that the licensee's proposed alternative will provide an acceptable level of quality and safety, and should be authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the Unit 1 third, and Unit 2 second, ISI intervals.

ST. LUCIE UNIT 1 and 2
Second and Third 10-Year ISI Intervals

SUMMARY OF RELIEF REQUESTS

Relief Request Number	INEEL TLR Sec.	System or Component	Exam Category	Item No.	Volume or Area to be Examined	Required Method	Licensee Alter
8 (Unit 1)	2.1	Multiple	IWB-2412 IWC-2412	Multiple	Sequence of Examinations	All methods	Alter exami sequence
10 (Unit 1) 28 (Unit 2)	2.2	Reactor Pressure Vessel	B-G-1	B6.10 B6.20 B6.30 B6.50	RPV Bolting Components	Volumetric and/or Surface	Defer exam

Attachment 2

Mr. T. F. Plunkett
Florida Power and Light Company

ST. LUCIE PLANT

cc:
Senior Resident Inspector
St. Lucie Plant
U.S. Nuclear Regulatory Commission
P.O. Box 6090
Jensen Beach, Florida 34957

Mr. R. G. West
Plant General Manager
St. Lucie Nuclear Plant
6351 South Ocean Drive
Jensen Beach, Florida 34957

Joe Myers, Director
Division of Emergency Preparedness
Department of Community Affairs
2740 Centerview Drive

E. J. Weinkam
Licensing Manager
St. Lucie Nuclear Plant
6351 South Ocean Drive

Tallahassee, Florida 32399-2100

M. S. Ross, Attorney
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Mr. Douglas Anderson
County Administrator
St. Lucie County
2300 Virginia Avenue
Fort Pierce, Florida 34982

Mr. William A. Passetti, Chief
Department of Health
Bureau of Radiation Control
2020 Capital Circle, SE, Bin #C21
Tallahassee, Florida 32399-1741

Mr. Rajiv S. Kundalkar
Vice President
St. Lucie Nuclear Plant
6351 South Ocean Drive
Jensen Beach, Florida 34957

Jensen Beach, Florida 34957

Mr. John Gianfrancesco
Manager, Administrative Support
and Special Projects
P.O. Box 14000
Juno Beach, FL 33408-0420

Mr. J. A. Stall
Vice President - Nuclear Engineering
Florida Power & Light Company
P.O. Box 14000
Juno Beach, FL 33408-0420

Mr. J. Kammel
Radiological Emergency
Planning Administrator
Department of Public Safety
6000 SE. Tower Drive
Stuart, Florida 34997