



JAN 27 2020

L-2020-002  
10 CFR 50.55a

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington D C 20555-0001

RE: St. Lucie Units 1 and 2  
Docket Nos. 50-335 and 50-389  
Renewed Facility Operating Licenses DPR-67 and NPF-16

St. Lucie Unit 1 Fifth 10-Year Inservice Inspection (ISI) Interval Relief Request (RR) #2 and St. Lucie Unit 2 Fourth 10-Year ISI Interval RR #5, "Proposed Alternative for the Reactor Pressure Vessel (RPV) Bolting Examination Schedule Change Due to Sharing Between Unit 1 and Unit 2"

Pursuant to 10CFR50.55a(z)(1), Florida Power & Light Company (FPL) hereby requests relief from the American Society of Mechanical Engineers Section XI Code (ASME Section XI Code) for the St. Lucie Nuclear Plant Unit 1 (St. Lucie Unit 1) Fifth 10-Year Inservice Inspection (ISI) Interval and the St. Lucie Nuclear Plant Unit 2 (St. Lucie Unit 2) Fourth 10-Year ISI Interval, respectfully. Relief is requested from the schedule of reactor pressure vessel (RPV) bolting examinations specified in ASME Section XI Code, Table IWB-2500-1, Category B-G-1, and IWB-2420, in order to accommodate an additional set of reactor vessel closure studs, nuts, and washers that are shared between St. Lucie Units 1 and 2. On June 23, 2011, St. Lucie Unit 1 and St. Lucie Unit 2 were granted similar relief for the Fourth and Third 10-Year ISI Intervals, respectfully (ADAMS Accession No. ML11136A138).

The enclosure to this letter provides relief request (RR) #2 for St. Lucie Unit 1 and RR #5 for St. Lucie Unit 2. FPL requests the relief requests to be processed as a normal request on the basis that the proposed alternative would provide an acceptable level of quality and safety, with approval within one year of the submittal date.

Should you have any questions regarding this submittal, please contact Mr. Ken Frehafer, St. Lucie Licensing, at (772) 467-7748.

Sincerely,

Wyatt Godes, St. Lucie Licensing Manager  
Florida Power & Light

Enclosure  
Attachments

cc: USNRC Regional Administrator, Region II  
USNRC Project Manager, St. Lucie Nuclear Plant, Units 1 and 2  
USNRC Senior Resident Inspector, St. Lucie Nuclear Plant, Units 1 and 2

**UNIT 1 FIFTH 10-YEAR ISI INTERVAL RR #2; UNIT 2 FOURTH 10-YEAR ISI INTERVAL RR #5  
“PROPOSED ALTERNATIVE FOR THE RPV BOLTING EXAMINATION SCHEDULE  
CHANGE DUE TO SHARING BETWEEN PSL-1 AND PSL-2”**

**Proposed Alternative  
In Accordance with 10 CFR 50.55a(z)(1)  
-- Alternative Provides Acceptable Level of Quality and Safety --**

**1. ASME Code Components Affected**

Class 1 Reactor Pressure Vessel Bolting

Exam Cat.	Item No.	Examination Requirements
B-G-1	B6.10	Reactor Vessel Closure Head Nuts - Visual Examination, VT-1
	B6.20	Reactor Vessel Closure Studs - Volumetric Examination
	B6.50	Reactor Vessel Closure Washers, Bushings - Visual Examination, VT-1

**2. Applicable Code Edition and Addenda**

Inservice inspections (ISI) are performed per the requirements of the ASME Boiler and Pressure Vessel Code Section XI, 2007 Edition through the 2008 Addenda as required by 10CFR50.55a.

**3. Applicable Code Requirement**

Pursuant to 10CFR50.55a(z)(1), FPL requests to continue performing an alternative to the requirements of 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), Examination Category B-G-1 and IWB-2420 of ASME Section XI, 2007 Edition through the 2008 Addenda. This relief request is applicable to the reactor pressure vessel (RPV) bolting of both St. Lucie Units 1 and 2.

**4. Reason for Request**

ASME Section XI, Table IWB-2500-1, Category B-G-1, Extent and Frequency of Examination requires successive examinations of B-G-1 bolting will be the same as for the first interval, with nuts, studs, washers, and bushings allowed to be deferred to the end of the interval.

ASME Section XI IWB-2420(a) states, "The sequence of component examinations which was established during the first inspection interval shall be repeated during each successive inspection interval, to the extent practical."

In 1993, during the St. Lucie Unit 1 Second 10-Year ISI Interval and St. Lucie Unit 2 First 10-Year ISI 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

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the opposite unit, this same work is performed with the set of bolting that had been previously 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.

Because FPL maintains three sets of RPV bolting components that are rotated and used in two units, it is not feasible to maintain an inspection cycle which meets the requirements for successive examinations as stated in ASME Section XI, IWB-2420(a). 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.

**5. Proposed Alternatives and Basis for Use**

Proposed Alternative

FPL will continue to perform the ASME required nondestructive examinations (NDE) examinations of RPV bolting between scheduled refueling outages while the bolting is being cleaned and prepared for service in the opposite unit. Examinations will continue to be performed of all three sets of bolting during the St. Lucie Unit 1 Fifth Interval and the St. Lucie Unit 2 Fourth Interval in accordance with Code Category B-G-1 requirements and applicable relief requests. The bolting will continue 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.

Basis for Use

The requirement for bolting in the first interval at Unit 1 was to examine one-third of the bolting each period. The 1983 Edition with Summer 1983 Addenda was used for the Unit 1 Second Interval, and the 1980 Edition with Winter 1980 Addenda was used for the Unit 2 First Interval, of Section XI allowing deferral of the B-G-1 bolting examinations. This wording shows that the examination of RPV bolting was considered to be important, but they can all be performed at the same time. Additionally, later editions of ASME Section XI dropped the examination schedule requirement of one-third of the bolting each period.

The two St. Lucie units have inservice inspection intervals approximately 5 years apart with the RPV bolting sets moving from one unit to the other. FPL performs the required nondestructive examinations (NDE) of three complete sets of bolting instead of two.

Additionally, FPL performed the required NDE of all three sets of RPV bolting during the St. Lucie Unit 1 Third 10-Year ISI Interval and the St. Lucie Unit 2 Second 10-Year ISI Interval utilizing this alternative authorized by the NRC in a Safety Evaluation dated August 25, 2000, and again during the Fourth 10-Year ISI Interval for Unit 1 and the Third 10-Year ISI Interval for Unit 2 in a Safety Evaluation dated June 23, 2011.

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**6. Duration of Proposed Alternative**

FPL will continue to implement the alternative to the Code-required schedule of examinations on the RPV bolting during the St. Lucie Unit 1 Fifth 10-Year ISI Interval and the St. Lucie Unit 2 Fourth 10-Year ISI Interval which end February 2028 and August 2023, respectively.

**7. Precedents**

USNRC to Florida Power & Light Company letter, “St. Lucie Units 1 and 2 - Fourth 10-Year Interval Inservice Inspection Program Plan Relief Request No.4 and Third 10-Year Interval Inservice Inspection Program Plan Relief Request No. 11 (TAC NOS. ME5433 AND ME5434)” dated June 23, 2011 (ADAMS Accession No. ML11136A138)

USNRC to Florida Power & Light Company letter, “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)” dated August 25, 2000 (ADAMS Accession No. ML003744555)

**8. Attachments**

None