



JUN 08 2015

L-2015-100
10 CFR 50.55a

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

RE: Florida Power and Light Company
Turkey Point Units 3 and 4
Docket Nos. 50-250 and 50-251
Fifth Ten-Year Inservice Inspection (ISI) Interval Relief Request No. 2

Pursuant to 10 CFR 50.55a(z)(1), Florida Power & Light Company (FPL) requests approval of the attached Relief Request 2 for the Fifth Ten-Year Inservice Inspection (ISI) Interval Program for Turkey Points Units 3 and 4. The American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Rules for Inservice Inspection of Nuclear Power Plant Components, Section XI, 2007 Edition with Addenda through 2008 as amended by 10CFR50.55a, is the code of record for the Turkey Point units 3 and 4, 5th 10-year interval.

Relief is requested from the Code required examinations on the Regenerative Heat Exchanger shell welds, support welds, and component supports. Regenerative Heat Exchangers are located in locked high radiation areas with limited accessibility to examination areas due to close proximity of the adjacent wall and floor, and limited work area due to cubicle walls built to shield personnel in adjacent areas, as well as interference from other lines and supports in the immediate area. FPL proposes to perform a VT-2 visual examination at the beginning of the outage for leakage and boric acid accumulation and a VT-2 visual examination at startup during the system leakage test.

FPL concluded that the use of the proposed alternative visual examinations provides an acceptable level of quality and safety.

If you have any questions or require additional information, please contact Mr. Mitch Guth, Licensing Manager, at (305) 246-6698.

Sincerely,

Michael Kiley
Site Vice President
Turkey Point Nuclear Plant

Attachment

cc: Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, Turkey Point Plant

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ATTACHMENT

TURKEY POINT UNITS 3 AND 4

FIFTH TEN-YEAR ISI INTERVAL

RELIEF REQUEST No. 2

**TURKEY POINT UNITS 3 & 4
FIFTH INSERVICE INSPECTION INTERVAL
RELIEF REQUEST NO. 2**

ALTERNATIVE EXAMINATION FOR THE REGENERATIVE HEAT EXCHANGER

**Proposed Alternative
In Accordance with 10 CFR 50.55a(z)(1)**

--Alternative Provides Acceptable Level of Quality and Safety--

1. ASME Code Component(s) Affected

Class 1 Regenerative Heat Exchangers at Florida Power & Light (FPL) Turkey Point Nuclear Plants, Units 3 & 4.

Weld Description	Weld Numbers (Same for Both Units)
Head to Shell	RGX I – 1 RGX II – 1 RGX III - 1
Shell to Tube Sheet – Primary	RGX I – 2 RGX II – 2 RGX III - 2
Tube Sheet to Shell – Secondary	RGX I – 3 RGX II – 3 RGX III - 3
Channel Head Weld Secondary	RGX I – 4 RGX II – 4 RGX III - 4
Shell I Nozzle Welds	RGX I – 9 RGX I – 10 RGX I – 11 RGX I – 12
Shell II Nozzle Welds	RGX II – 9 RGX II – 10 RGX II – 11 RGX II – 12
Shell III Nozzle Welds	RGX III – 9 RGX III – 10 RGX III – 11 RGX III – 12
Integrally Welded Supports	RGX I – LUG RGX II – LUG RGX III – LUG
Clamp Restraint	RGX I – CR RGX II – CR RGX III – CR

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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 with the 2008 Addenda as required by 10CFR50.55a.

3. Applicable Code Requirement

Exam Category	Item Number	Examination Requirements
B-B	B2.51 B2.80	Volumetric examination, to include 100% of the length of circumferential tube sheet to shell welds and head to shell welds
B-D	B3.150 B3.160	Volumetric examination, to include 100% of each nozzle to vessel weld and nozzle inside radius area
B-K	B10.10	Volumetric or surface examination to include 100% of each integrally welded attachments of one exchanger.
F-A	F1.40	Examine welds, mechanical connections, clearances, alignment, sliding surfaces, and assembly of the supports.

4. Reason for Request

Pursuant to 10CFR 50.55a (z)(1), FPL requests relief from the Code required examinations on the Regenerative Heat Exchanger shell welds, support welds, and component supports. Refer to Figure 1 and 2 for Regenerative Heat Exchanger components and examination limitations.

Item Number	Examination Areas	Turkey Point Unit 3	Turkey Point Unit 4
B2.51	Head to Shell circumferential Welds	6 Welds	6 Welds
B2.80	Shell to Tubesheet Welds	6 Welds	6 Welds
B3.150	Nozzle to Shell Welds	12 Welds	12 Welds
B3.160	Nozzle Inside Radius Section	12 Areas	12 Areas
B10.10	Welded Attachments	3 Welds	3 Welds
F1.40	Supports	3 Supports	3 Supports

Regenerative Heat Exchangers are located in locked high radiation areas. These areas typically have a general radiation field of 2 Rem/hr and are highly contaminated. Other conditions include limited accessibility to examination areas due to close proximity of the adjacent wall and floor, limited work area due to cubicle walls built to shield personnel in adjacent areas, and interference from other lines and supports in the immediate area.

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During construction of Turkey Point Units 3 and 4, asbestos insulation was used extensively. Asbestos insulation is present in the area of the Regenerative Heat Exchangers. Additional protection is required for personnel entering these areas to avoid possible spreading and ingestion of this hazardous material (i.e., an extra layer of protective clothing, tenting, HEPA filters.)

Performing Code required examinations would require large expenditures of man-hours and accumulated Man-Rem dose. These welds must be uninsulated for examination and also require installation of temporary shielding and scaffold. Effective shielding reduces accessibility to the examination areas. Proper surface conditioning required to perform surface and volumetric examinations adds additional time and exposure. These areas must be tented to avoid spreading of asbestos fibers found in the insulation.

Estimated Time and Man-Rem for Regenerative Heat Exchanger Weld Examinations			
Job Description	Dose Rate Rem/Hr.	Man Hours	Estimated Man-Rem
Tenting and HEPA Filter Installation	0.7	8.0	5.600
Insulation Removal (Asbestos)	2.0	8.0	16.000
Scaffold Installation	0.7	3.0	2.100
Lead Installation	2.0	5.0	10.000
Surface Preparation for Examination	2.5	16.0	40.000
ISI Examination	2.5	5.5	13.750
Install Insulation	2.0	12.5	25.000
Remove Scaffold	0.7	1.5	1.050
Remove Tent and HEPA Filter	0.7	2.5	1.750
Temporary Services	0.7	0.5	0.350
Lead Removal	2.0	2.0	4.000
Clean Up	1.0	2.0	2.000

Note: These estimates are valid for both units.

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5. Proposed Alternative and Basis for Use

Proposed Alternative

FPL will perform a VT-2 visual examination at the beginning of the outage for leakage and boric acid accumulation and a VT-2 visual examination at startup during the system leakage test.

Basis for Use

FPL has performed examinations on the Regenerative Heat Exchangers for both Turkey Point Units 3 and 4 during the first inspection interval (approximately early 1972 through late 1983) before the original relief request was approved. This experience showed that the design arrangement and accessibility are not conducive to meaningful examinations. The configuration, limited accessibility, high radiation levels, and interference from supports, walls, and the floor do not support Code required examination coverage for volumetric and/or surface examinations.

Since 1985, FPL has performed VT-2 examinations on the items listed in this relief request. These examinations were performed in accordance with the previous approved relief request, which required FPL to look for evidence of leakage around the Regenerative Heat Exchanger just after shutdown for a refueling outage and a second time during the system pressure test at plant startup. No evidence of leakage from the Regenerative Heat Exchanger or its attached piping has been noted in either unit during any of the previous examinations.

FPL concluded that the proposed alternative visual examinations at the stated frequency provides an acceptable level of quality and safety to the Code required examinations conducted once per interval.

6. Duration for the Proposed Alternative

This relief is requested for the duration of the Fifth Inservice Inspection Interval, which begun on February 22, 2014 for Turkey Point Unit 3, and on April 15, 2014 for Turkey Point Unit 4.

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7. Precedents

USNRC letter to Mr. J. W. Williams, Jr., Vice president, Florida Power & Light, dated February 4, 1985 granting relief from ASME Section XI Requirements, TAC Nos. 49133, 49936, 54677, 54678, 54973, and 54974.

USNRC letter to Mr. J. H. Goldberg, President Nuclear Division, Florida Power & Light, dated March 31, 1995 granting relief from ASME Section XI Requirements, TAC Nos. M87725 and M87726).

USNRC letter to Mr. J. A. Stall, President, Nuclear and Chief Nuclear Officer, Florida Power & Light, dated March 3, 2005 granting relief from ASME Section XI Requirements, TAC Nos. MC2420 and MC2421, ADAMS Accession No. ML050350363.

8. Figures

Figure 1:	Examination Area Limitations
Figure 2:	Drawing of Unit 3 & 4 Regenerative Heat Exchanger

**Turkey Point Units 3 & 4
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**Figure 1
Examination Area Limitations**

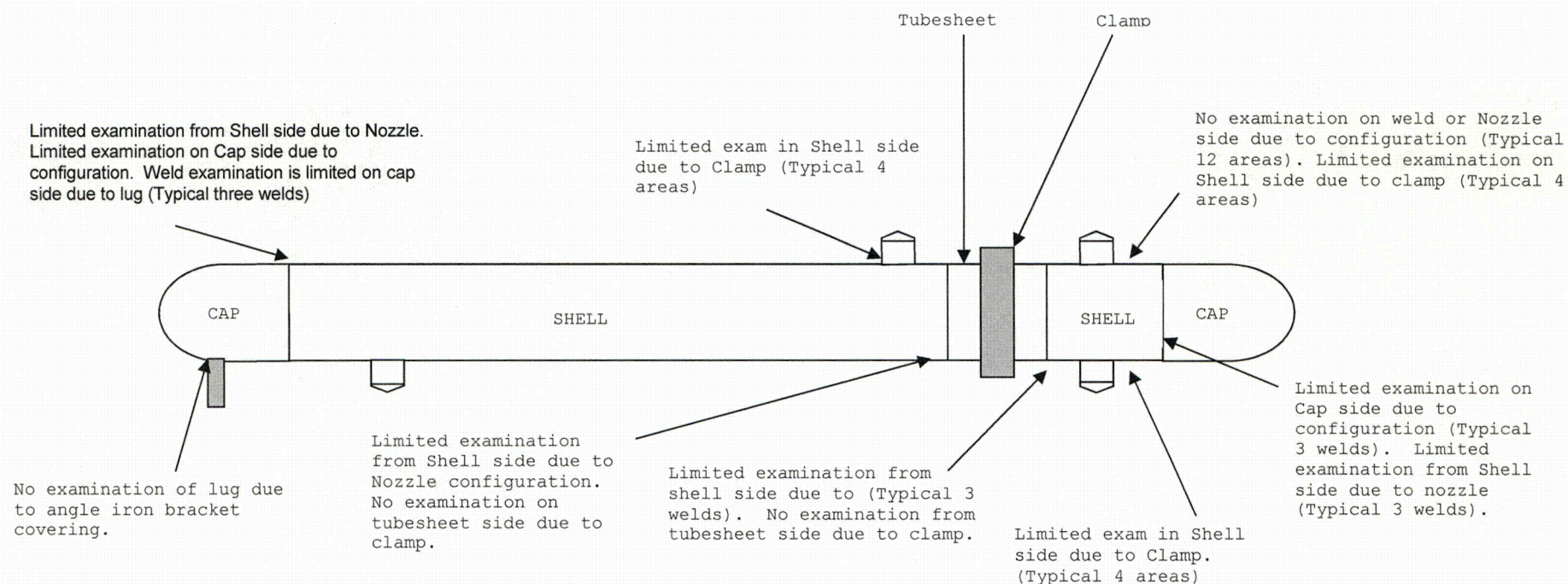


Diagram illustrating the layout of three horizontal cylindrical vessels (SHELL I, II, III) and their associated components and connections.

Components and Connections:

- SHELL I:**
 - Left CAP: RGX-I-1, RGX-I-LUG (Lug Resting on Angle iron bracket).
 - Right CAP: RGX-I-4, RGX-I-10.
 - Central Vertical Support: RGX-I-2, RGX-I-3, RGX-I-CR.
 - Bottom Connections: RGX-I-11, RGX-I-9, 2"-CH-1402, 2"-CH-1302.
- SHELL II:**
 - Left CAP: RGX-II-1, RGX-II-LUG.
 - Right CAP: RGX-II-4, RGX-II-10.
 - Central Vertical Support: RGX-II-2, RGX-II-3, RGX-II-CR.
 - Bottom Connections: RGX-II-11, RGX-II-9, 2"-CH-1401, 2"-CH-1301.
- SHELL III:**
 - Left CAP: RGX-III-1, RGX-III-LUG.
 - Right CAP: RGX-III-4, RGX-III-10.
 - Central Vertical Support: RGX-III-2, RGX-III-3, RGX-III-CR.
 - Bottom Connections: RGX-III-11, RGX-III-9, 3"-CH-1401, 3"-CH-1301.