



OCT 08 2001

L-2001-220  
10 CFR 50.55a

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

Re: Turkey Point Units 3 and 4  
Docket Nos. 50-250 and 50-251  
Alternative Examination for Reactor Pressure Vessel Nozzle Inner Radius  
Resubmittal of Relief Request No. 25, Revision 2

Pursuant to 10 CFR 50.55a (a)(3)(i), relief is requested to implement an alternative to the ultrasonic examination requirement of ASME Section XI Table IWB-2500-1, Examination Category B-D, Item B3.100. FPL proposes to perform a VT-1, Visual Examination, as an alternative method for the inspection of Reactor Pressure Vessel Nozzle Inner Radius.

By letter L-2001-203, dated September 5, 2001, Florida Power & Light Company (FPL) responded to the Staff's Request for Additional Information, dated August 2, 2001. As a result of telephone conversations between FPL and NRC staff, Relief Request No. 25 has been revised and is resubmitted herein. The revised Relief Request states that the proposed alternative examination method is similar to the examination alternative proposed in ASME Section XI Code Case N-648. FPL requests approval of the attached Relief Request No. 25, Revision 2.

Please contact Steve Franzone at (305) 246-6228, if there are any questions about this submittal.

Sincerely,

A handwritten signature in cursive script that reads "John P. McElwain".

John P. McElwain  
Vice President  
Turkey Point Plant

Attachment

cc: Regional Administrator, Region II, USNRC  
Senior Resident Inspector, USNRC, Turkey Point Plant  
Florida Department of Health and Rehabilitative Services

A047

**Relief Request No. 25**  
**Alternative Examination for Reactor Pressure Vessel Nozzle Inner Radius**  
**(Revision 2)**

**I. COMPONENT IDENTIFICATION:**

ASME Section XI, Class 1, Examination category B-D, Item B3.100 Reactor Pressure Vessel (RPV) Nozzle Inner Radius Section examined at Turkey Point Units 3 and 4.

**II. EXAMINATION REQUIREMENTS:**

Rules for Inservice Inspection of Nuclear Power Plant Components, ASME Section XI, 1989 Edition, Table IWB-2500-1, Examination Category B-D for Full Penetration Welds of Nozzles in pressure vessels, Code Item B3.100, Figure IWB-2500-7 (a) through (d).

The following table identifies the inner radii examinations for which relief is requested.

Unit 3	Unit 4
3-DI-A-IRS - Inlet Nozzle Inner Radius	4-DI-A-IRS - Inlet Nozzle Inner Radius
3-DO-A-IRS - Outlet Nozzle Inner Radius	4-DO-A-IRS - Outlet Nozzle Inner Radius
3-DI-B-IRS - Inlet Nozzle Inner Radius	4-DI-B-IRS - Inlet Nozzle Inner Radius
3-DO-B-IRS - Outlet Nozzle Inner Radius	4-DO-B-IRS - Outlet Nozzle Inner Radius
3-DI-C-IRS - Inlet Nozzle Inner Radius	4-DI-C-IRS - Inlet Nozzle Inner Radius
3-DO-C-IRS - Outlet Nozzle Inner Radius	4-DO-C-IRS - Outlet Nozzle Inner Radius

Since examinations of the required areas are performed after removal of the core barrel (during the 10-year ISI), FPL anticipates that essentially 100% of the surface area will be examined.

**III. RELIEF REQUESTED:**

Pursuant to 10 CFR 50.55a (a)(3)(i), relief is requested from the Ultrasonic (UT) examination requirement of ASME Section XI Table IWB-2500-1, Examination Category B-D, Item B3.100 to implement an alternative examination method. This relief request is applicable to Turkey Point Units 3 and 4. FPL proposes to perform a VT-1, Visual Examination, as an alternative method for the inspection of RPV Nozzle Inner Radii identified in the table above. This option is similar to the examination alternative proposed in ASME Section XI Code Case N-648. This alternative examination method will be performed during the third inspection interval.

**IV. BASIS FOR RELIEF:**

A "White Paper – ISI-99-26" was submitted to the NRC staff by the ASME, Boiler & Pressure Vessel Code, Subcommittee In-service Inspection, - Section XI for the elimination of RPV Nozzle Inside Radius examinations. The Westinghouse Owners Group developed this study and presented the results to the NRC staff in the May 9, 2000 meeting. According to the NRC's summary of the meeting, the staff indicated that an UT examination could be replaced by VT-1 visual examination for the proposed RPV nozzle inspections on the basis that surveillance is maintained and a VT-1 visual examination is performed, which is superior to the current requirement of the VT-3.

The requirement for the UT examination of the nozzle inner radius regions has been in effect for inspections for many years. However, there have been no inspection findings in any of the reactor vessel nozzles. The original requirement was included because of a cracking event in a non-nuclear vessel, which occurred near the time when the ASME Section XI inspection requirements were being established. As per the "White Paper-ISI-99-26", the failure probability is extremely low under the plant operating conditions and elimination of the RPV nozzle inner radius inspection is not expected to result in a significant increase in risk.

The original requirement, as instituted in the early 1970's, was based on very limited experience in operating nuclear plants. After more than 25 years of operation (over 1000 reactor years), no cracking incidents of any kind have been found in these vessel nozzle inner radius regions. The "White Paper-ISI-99-26" concluded that it is advisable therefore to eliminate this (UT examination) requirement.

The implementation of this relief request will provide to FPL the additional benefits of:

- reducing the personnel radiation exposure consistent with FPL' ALARA program, and
- reducing the on-vessel examination time by as much as 6 hours, which will result in significant cost savings.

#### **V. ALTERNATIVE EXAMINATIONS:**

1. In lieu of the UT examination requirements of ASME Section XI Table IWB-2500-1, Examination Category B-D, Item B3.100, a VT-1 visual examination shall be performed. FPL will utilize the acceptance criteria of Table IWB-3510-3 of the 1998 Edition of Section XI for the examination.
2. Periodic System Pressure Tests per Category B-P, Table IWB-2500-1

#### **VI. IMPLEMENTATION SCHEDULE:**

Third Inservice Inspection Interval

#### **VII. REFERENCES:**

1. Nuclear Regulatory Commission Federal Register Part II, Vol. 64, No. 183, Wednesday September 22, 1999, 10 CFR Part 50 Industry Codes and Standards; Amended Requirements; Final Rule.
2. ASME Section XI, 1989 Edition, No Addenda, "Rules For Inservice Inspections of Nuclear Power Plant Components."
- 3.. ASME Section XI, 1995 Edition, 1996 Addenda, "Rules For Inservice Inspections of Nuclear Power Plant Components."
4. White Paper – ISI-99-26 "Technical Basis for Elimination of Reactor Vessel Nozzle Inner Radius Inspections."

#### **VIII. ATTACHMENT**

None