



JUN 11 2001

L-2001-108
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 Requirements of RPV Nozzle-to-Vessel Welds
Relief Request No. 23

Florida Power & Light Company (FPL) requests approval of the attached Relief Request No. 23.

Pursuant to 10 CFR 50.55a (a)(3)(i), relief is requested to implement an alternative to the requirements of ASME Section XI Figures IWB-2500-7 (a) and IWB-2500-7 (b).

Approval of the above IWB Relief Request is requested by October 1, 2001 to support planning for the next Turkey Point Unit 4 refueling outage scheduled for Spring 2002. Please contact Steve Franzone at (305) 246-6228, if there are any questions about this submittal.

Very truly yours,

A handwritten signature in black ink that reads "R. J. Howey".

R. J. Howey
Vice President
Turkey Point Plant

Attachments (1)

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

A047

Relief Request No. 23
Alternative Examination Requirements of RPV Nozzle-to-Vessel Welds

I. COMPONENT IDENTIFICATION:

ASME Section XI, Class 1, Examination Category B-D, Item B3.90 Reactor Pressure Vessel Pressure retaining Nozzle-to-Vessel welds at Turkey Point Units 3 and 4.

II. EXAMINATION REQUIREMENTS:

Rules for In-service Inspection of Nuclear Power Plant Components, Section XI, 1989 Edition, Examination Category B-D Full Penetration Welds of Nozzles in Vessels, Code Item B3.90, Figure IWB-2500-7 (a) & (b).

ASME Section V, 1989 Edition, Article 4, Paragraphs T-441.3.2.5 Angle Beam Scanning, T-3.2.6 Scanning for Reflectors Oriented Parallel to the Weld, and T-441.3.2.7 Scanning for Reflectors Oriented Transverse to the Weld.

III. RELIEF REQUESTED:

Pursuant to 10 CFR 50.55a(a)(3)(i), relief is requested to implement an alternative to the requirements of ASME Section XI Figures IWB-2500-7 (a) and IWB-2500-7 (b). These examinations will be performed during the third inspection interval. This relief request is applicable to Turkey Point Units 3 and 4.

IV. BASIS FOR RELIEF:

FPL is currently required to perform in-service examinations of selected welds in accordance with the requirements of 10 CFR 50.55a, plant technical specifications, and the 1989 Edition of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, Rules for Inservice Inspection of Nuclear Power Plant Components. This Code edition invokes the examination volume requirements of Figures IWB-2500-7 (a) and IWB-2500-7 (b). This Code edition also invokes the examination requirements of Appendix I, Article I-2000 which reference ASME Section V, Article 4 that essentially prescribes twenty (20) year old examination methodology. The Ultrasonic examination techniques utilized for this examination will have been qualified by demonstration for Appendix VIII Supplement 7 of the 1995 Edition 1996 Addenda of ASME by the Performance Demonstration Initiative (PDI) as amended by the September 1999 revision of 10CFR50.55a. The use of these qualified techniques further assures that the reactor vessel welds have remained free of service related flaws thus enhancing quality and ensuring plant safety and reliability.

The examination volume for the reactor pressure vessel nozzle-to-vessel welds extends far beyond the weld into the base metal, and is unnecessarily large. This extends the examination time significantly, and results in no net increase in safety, as the area being examined is a base metal region which is not prone to in-service cracking and has been extensively examined before the vessel was put into service and during the First and Second In-service examination.

The attached figures reduce the examination volume next to the widest part of the weld from half of the vessel wall thickness to one-half (1/2) inch. This removes examination from the base metal that was extensively examined during construction and pre-service inspection and is not in the high residual stress region associated with the weld. These high-stressed areas are contained in the volume that is defined by the attached figures and are subject to examination.

The implementation of this alternative is also expected to reduce the on-vessel examination time by as much as 5 hours, which translates to a significant reduction in personnel radiation exposure.

V. ALTERNATIVE EXAMINATIONS:

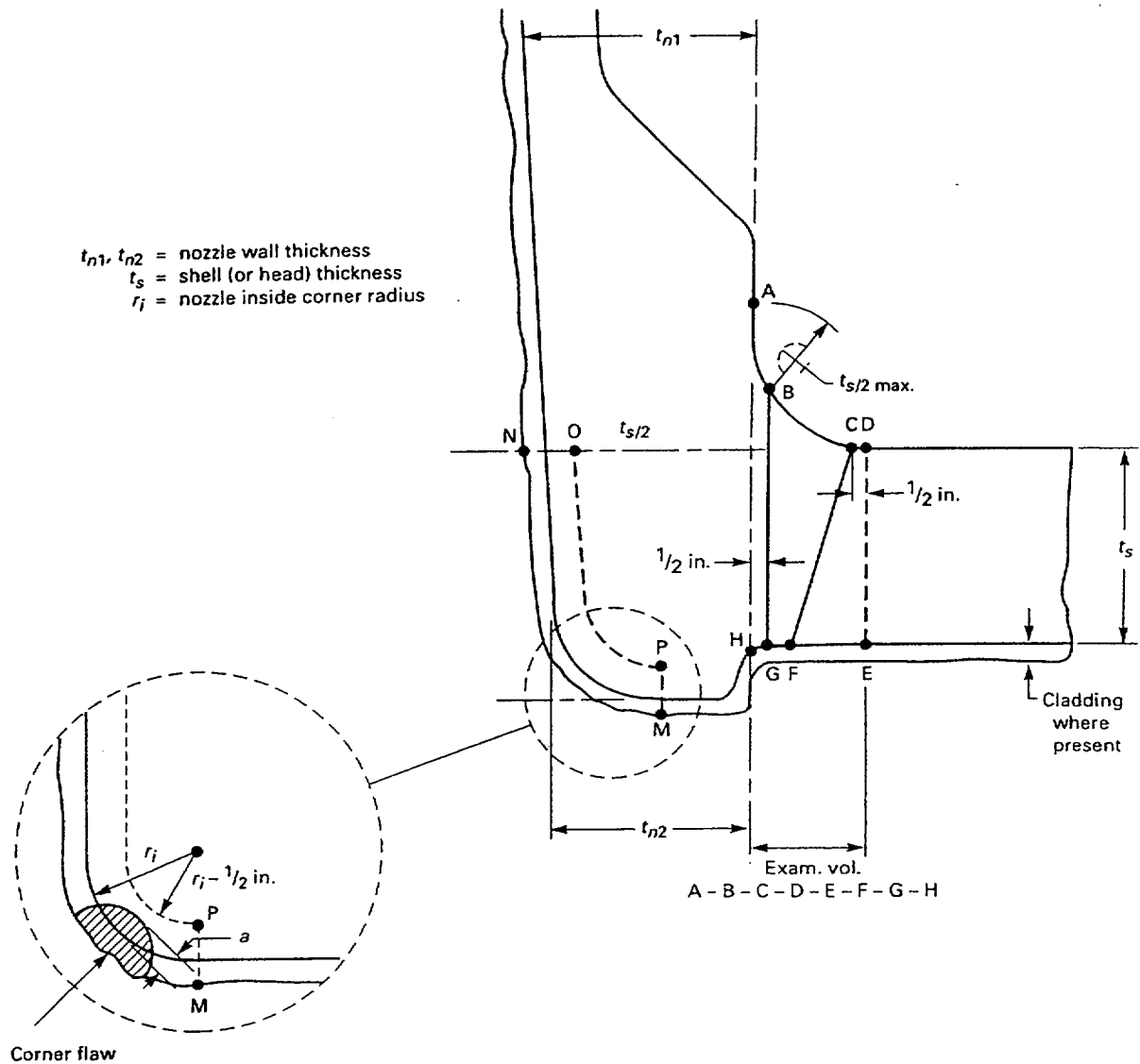
1. Perform examinations in accordance with the exam volume as defined in Figures 1 and 2.
2. Conduct Mechanized Ultrasonic Examinations of essentially 100% of all welds using Performance Demonstration Initiative (PDI) ASME Section XI, Appendix VIII qualified procedures and personnel. This will be accomplished in accordance with ASME Code, Section XI, Division 1, 1995 Edition, 1996 Addenda, Appendix VIII, Supplement 7 as modified by 10CFR50.55a.
3. Periodic System Pressure Tests per Category B-P, Table IWB-2500-1

VI. IMPLEMENTATION SCHEDULE:

Third In-Service Inspection Interval

VII. ATTACHMENTS:

Figures 1 and 2



EXAMINATION REGION [Note (1)]

- Shell (or head) adjoining region
- Attachment weld region
- Nozzle cylinder region
- Nozzle inside corner region

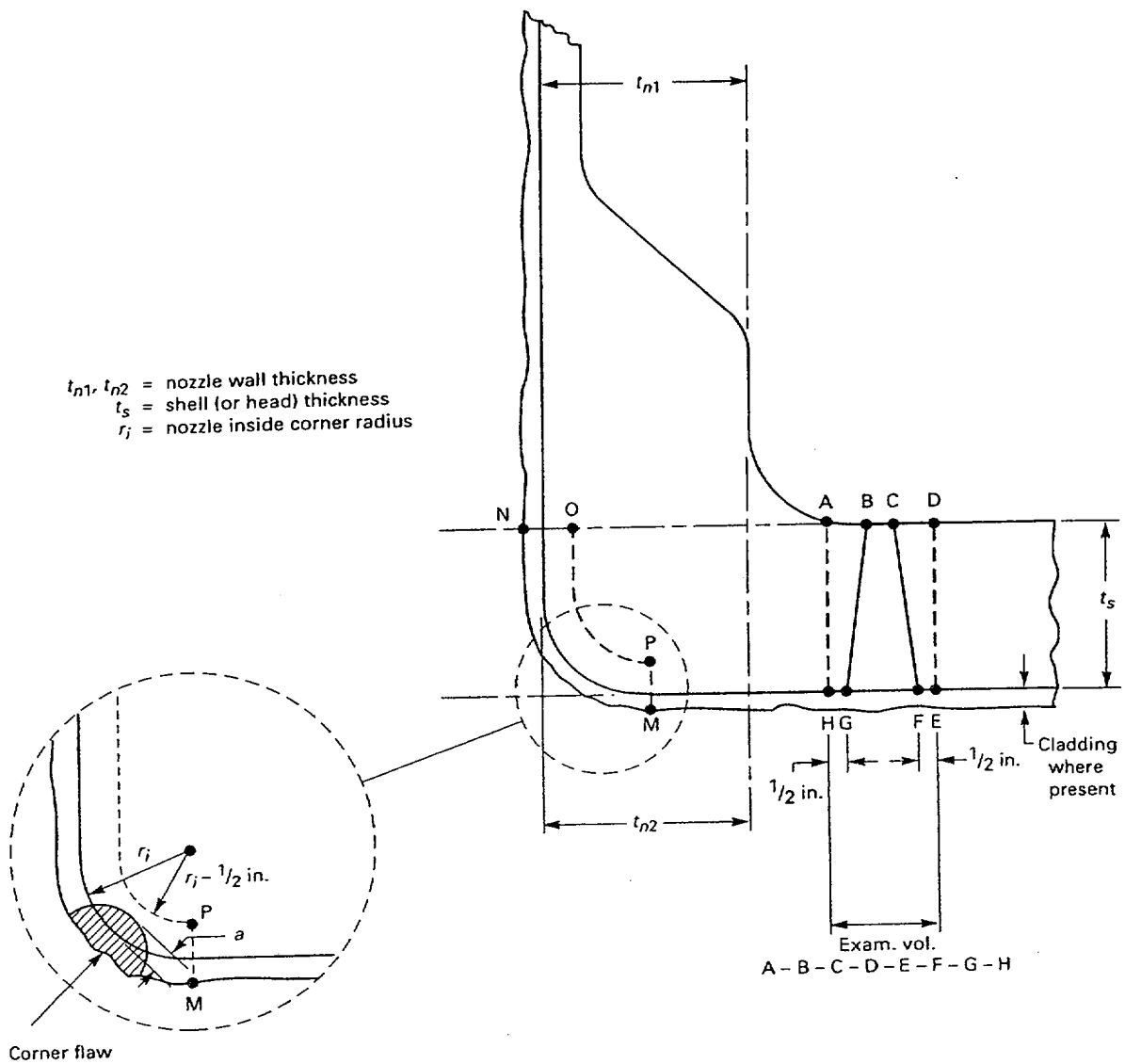
EXAMINATION VOLUME [Note (2)]

- C-D-E-F
- B-C-F-G
- A-B-G-H
- M-N-O-P

NOTES:

- (1) Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
- (2) Examination volumes may be determined either by direct measurements on the component or by measurements based on design drawings.

FIG. 1 NOZZLE IN SHELL OR HEAD
 (Examination Zones in Barrel Type Nozzles Joined by Full Penetration Corner Welds)



EXAMINATION REGION [Note (1)]

- Shell (or head) adjoining region
- Attachment weld region
- Nozzle cylinder region
- Nozzle inside corner region

EXAMINATION VOLUME [Note (2)]

- C - D - E - F
- B - C - F - G
- A - B - G - H
- M - N - O - P

NOTES:

- (1) Examination regions are identified for the purpose of differentiating the acceptance standards in IWB-3512.
- (2) Examination volumes may be determined either by direct measurements on the component or by measurements based on design drawings.

FIG. 2 NOZZLE IN SHELL OR HEAD
 (Examination Zones in Flange Type Nozzles Joined by Full Penetration Butt Welds)