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SEP 09 1988

10CFR50.55a(g)

Docket No. 50-348

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

Gentlemen:

Joseph M. Farley Nuclear Plant - Unit 1
Second Ten-Year Interval Inservice Inspection Program
for ASME Code Class 1, 2 and 3 Components

Alabama Power Company previously submitted Revision 0 of the subject Inservice Inspection (ISI) Program to the NRC by letter dated November 23, 1987. By letter dated December 10, 1987, the NRC granted interim approval for the relief requests submitted with Revision 0 of the ISI Program. Following the implementation of this program on December 1, 1987, two additional relief requests requiring NRC approval and numerous additional changes have been identified. These are being incorporated in Revisions 1 and 2 to the subject program and are included as Enclosures 1 and 2, respectively. The cover sheet for each enclosure summarizes the changes.

Revision 1 is being submitted for information purposes as it was previously issued and contains only editorial changes which clarify the application of the ASME Code requirements to the Farley Nuclear Plant ISI Program. Revision 2 also contains editorial changes as well as revisions to relief requests RR-1, RR-26, RR-30 and RR-34. These changes incorporate a component description, line number and several subscripts which were previously omitted. Finally, Revision 2 adds two new relief requests concerning the performance of hydrostatic tests.

Relief request RR-45 concerns the hydrostatic test pressure required by the ASME Code for certain Class 2 and 3 low pressure components which have a significant change in elevation. Section XI, IWC-5222(a) and IWD-5223(a) specify the minimum hydrostatic test pressure for Class 2 and 3 systems, respectively. IWA-5265(b) requires that the imposed pressure on any component, including static head, not exceed 106% of the specified system test pressure. In certain low pressure systems which have significant elevation changes, setting the system test pressure at the highest point of the system equal to the minimum code required test pressure will cause the pressure at the lowest point in the system to exceed 106% of the system test pressure due to static head. Since this is an unnecessary challenge to component integrity, the system test pressure will be set to approximately 106% at the lowest point in the system to meet the

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requirement of IWA-5265(b). Therefore, the system test pressure actually achieved in the higher elevations of the system may not in all cases meet the minimum test pressures required by IWC-5222(a) and IWD-5223(b). The actual test pressure achieved will, however, be in excess of the normal operating pressure. This will permit verification of structural integrity through satisfactory performance of the hydrostatic test without unnecessary challenges which could occur if components were over-pressurized.

Relief request RR-46 concerns the schedular requirements of the ASME Code for performance of hydrostatic tests. Section XI, Tables IWC-2500-1 and IWD-2500-1, require that performance of hydrostatic tests during subsequent intervals be scheduled during the same inspection period used in the previous interval or that hydrostatic tests be deferred to the end of the ten-year interval. During the first ten years of operation, Farley Nuclear Plant deferred a number of hydrostatic tests to near the end of the interval. To more evenly distribute the performance of tests during the second interval, Alabama Power Company desires to reschedule the tests to be performed more equally during each of the three inspection periods. In no case would the performance of any given test during the second interval be scheduled more than approximately ten years from the date that the first interval test was completed. It should be noted that this relief is schedular and all code required hydrostatic tests as described in the ISI Program will be performed.

It is respectfully requested that the reliefs included in Revision 2 of the ISI Program be granted by March 7, 1989. The required fees for review of the ISI Program were submitted by letter dated May 27, 1987; therefore, no additional fees are included.

Respectfully Submitted

ALABAMA POWER COMPANY

W. G. Hairston, III

WGH/STB:pr-8.27

Enclosures

cc: Mr. L. B. Long
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Mr. E. A. Reeves
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bc: Mr. Bill M. Guthrie
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Mr. D. N. Morey w/1 enclosure
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Mr. Scott Fulmer
Mr. D. B. Hartline w/1 enclosure
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Commitment Tracking System (2)
FNP Document Control
File: K-22.1

Summary of Revision 1 to the J. M. Farley Nuclear Power Plant Unit No. 1. Second Ten Year Inservice Inspection Program for ASME Code Class 1, 2, and 3 Components.

Page No./Description, Reason for Change

1. Page 1-3, Section 1.7.1: Added "as amended by Code Case N-98." to end of first paragraph per TCN 0A. To officially incorporate the provisions of ASME Section XI Code Case N-98 as allowed by Regulatory Guide 1.147, Rev. 4.

2. Page 1-3, Section 1.7.6: Corrected word "lead" to "load" per TCN 0A. Editorial correction.

The 1974 Edition of Section XI of the ASME Boiler and Pressure Vessel Code, with Summer 1975 Addenda, Appendix I, was used for the design of the existing ultrasonic calibration blocks for ferritic vessels 2-1/2 inches and greater in wall thickness. Existing calibration blocks for piping and thin-walled vessels under 2-1/2 inches in wall thickness were designed to the 1974 Edition of Section V, with Summer 1975 Addenda, Article 5, as amended by Code Case N-98.

Because of the impracticality of some of the requirements of Article 5 of Section V, the 1977 Edition of Section XI, Appendix III was also used for guidance. This provided alternative machined notches for reference reflectors in lieu of side-drilled holes.

1.7.2 RADIOGRAPHY

Radiographic techniques will be used to supplement ultrasonic examination as required.

1.7.3 EDDY CURRENT

Eddy current examinations will be performed on the steam generator tubing in accordance with the provisions of Appendix IV of Section XI and the plant Technical Specifications.

1.7.4 LIQUID PENETRANT

Dye penetrant examinations will be used whenever a surface examination is required on nonferrous components.

1.7.5 MAGNETIC PARTICLE

Magnetic particle tests will usually be used when surface examination of ferrous components is required.

1.7.6 VISUAL

The following visual examinations will be employed as appropriate:

- VT-1: To detect detrimental condition(s) of parts, components, or on examined surfaces.
- VT-2: To locate evidence of leakage during a system or functional test.
- VT-3: To determine the general mechanical and structural condition of components and their supports, and also to determine conditions that could affect operability or functional adequacy of snubbers, and constant load and spring type supports.

Summary of Revision 2 to the J. M. Farley Nuclear Power Plant Unit 1
Second Ten-Year Inservice Inspection Program for ASME Code
Class 1, 2, and 3 Components

Page No./Description/Reason for Change

1. Page 1-2, Section 1.7: Added training and examination requirement for personnel performing nondestructive examination methods other than those covered by SNT-TC-1A per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard. Clarification.

2. Pages 1-3 and 1-4: Sections 1.7.1 and 1.7.6 (VT-3) relocated to pages 1-3 and 1-4 respectively. Editorial.

3. Page 3-7: Ltdwn. H.X., C2.33; Page 3-8: Ex. Ltdwn. H.X., C2.33; Page 3-9: Regen. H.X., C2.33; Page 3-10: S.W.R. Fltr., C2.33; Page 3-11: VCT, C2.33; Page 3-12: Ltdwn. Reht. H.X., C2.33; Page 3-12: S.W. H.X., C2.33; Page 3-13: S.G., C2.33; Page 3-14: R.C. Fltr., C2.33; Page 3-15: Ltdwn. Delay Tks., C2.33; Page 3-16: Ex. Ltdwn. Delay Tks., C2.33; Page 3-16: B.I.T., C2.33; Deleted VT-2 examinations per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard. Not applicable.

4. Page 3-8 and 3-9, Regenerative Heat Exchangers: Changed word "Exchangers" to "Exchanger" per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard. Editorial correction.

5. Page 3-16, Boron Injection Tank: Deleted comment "N/A to FNP". Editorial correction.

6. Page 6-4, Added new Relief Requests RR-45 and RR-46 per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard.

7. Page 6-5, Component or Relief Area: Added calibration block APR-7 for examination of the Boron Injection Tank and also added Boron Injection Tank to applicability for calibration block ALA-RV-1. Examination of component during second ten-year interval using existing calibration blocks.

8. Page 6-39, Component or Relief Area: Changed "no." to "nos." and added line HCB-99 per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard. Omission.

9. Page 6-43, Basis for Relief: Changed "P" to "P_d" per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard. Editorial omission.

10. Page 6-43, Alternate Examination: Changed "P" to "P_{sv}" and "P_d" per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard. Editorial omission.

11. Page 6-47, Basis for Relief: Change "P" to "P_{sv}" per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard. Editorial omission.

12. Page 6-59, RR-45: New Relief Request to provide for the pressure differential that is evident in low pressure systems during system hydrostatic testing when the system has a large change in elevation per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard. Field encountered problem area.

13. Page 6-60, RR-46: New Relief Request to provide for a more even distribution of system hydrostatic tests between the three periods during the second interval per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard.

14. Page 7-3, Items 14 thru 17: Added additional reference letters per APC letter FNP-88-0502 dated 7/8/88 from D. N. Morey to J. D. Woodard.

requirements. The component design codes remain as stated in the Final Safety Analysis Report (FSAR).

1.4 SUBSEQUENT ISI PROGRAM REVISIONS

In accordance with the existing regulations of 10 CFR 50.55a, the inservice examination program for Class 1, 2, and 3 components will be reviewed near the end of each 120-month interval. At this time the program will be modified, as required, to bring it into compliance with the latest NRC-approved version of Section XI.

1.5 RESPONSIBILITY

Alabama Power Company bears the overall responsibility for the performance of the inservice examinations. Certain nondestructive examinations may be performed by a qualified examination agency. The results of such examinations would be reported to Alabama Power Company for final evaluation and disposition.

1.6 RECORDS

Records and documentation of all information and inspection results, which provide the basis for evaluation and which facilitate comparison with results from previous and subsequent inspections, will be maintained and will be available for the active life of the plant in accordance with Section XI, IWA-6000.

1.7 METHODS OF EXAMINATION

The method of examination planned for each area is delineated in subsequent sections. Personnel performing nondestructive examinations will be trained in accordance with the American Society for Nondestructive Testing (ASNT) "Recommended Practice SNT-TC-1A, Supplements and Appendices," as applicable for the technique and method used. For methods not covered by SNT-TC-1A, personnel shall be trained to comparable levels of competence by subjection to comparable examinations on the particular method involved, e.g. VT-1. Personnel performing visual examinations outside the scope of nondestructive examinations shall be trained to the requirements of ANSI N45.2.6 "Qualifications of Inspection, Examination, and Testing Personnel for Nuclear Power Plant".

1.7.1 ULTRASONIC

Ultrasonic examinations will be conducted in accordance with the provision of Appendix III of Section XI and Articles 4 and 5 of Section V as required by Paragraph IWA-2232.

The 1974 Edition of Section XI of the ASME Boiler and Pressure Vessel Code, with Summer 1975 Addenda, Appendix I, was used for the design of the existing ultrasonic calibration blocks for ferritic vessels 2-1/2 inches and greater in wall thickness. Exiting calibration blocks for piping and thin-walled vessels under 2-1/2 inches in wall thickness were designed to the 1974 Edition of Section V, with Summer 1975 Addenda, Article 5, as amended by Code Case N-98.

Because of the impracticality of some of the requirements of Article 5 of Section V, the 1977 Edition of Section XI, Appendix III was also used for guidance. This provided alternative machined notches for reference reflectors in lieu of side-drilled holes.

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Radiographic techniques will be used to supplement ultrasonic examination as required.

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Eddy current examinations will be performed on the steam generator tubing in accordance with the provisions of Appendix IV of Section XI and the plant Technical Specifications.

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Dye penetrant examinations will be used whenever a surface examination is required on nonferrous components.

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Magnetic particle tests will usually be used when surface examination of ferrous components is required.

1.7.6 VISUAL

The following visual examinations will be employed as appropriate:

- VT-1: To detect detrimental condition(s) of parts, components, or on examined surfaces.
- VT-2: To locate evidence of leakage during a system or functional test.

. VT-3: To determine the general mechanical and structural condition of components and their supports, and also to determine conditions that could affect operability or functional adequacy of snubbers, and constant load and spring type supports.

1.8 EVALUATION OF EXAMINATION RESULTS

Examination results of evaluated in accordance with IWA-3000, IWB-3000, and IWF-3000 of the ASME Code, Section XI. Articles IWC-3000 and IWD-3000, titled "Acceptance Standards for Flaw Indications," are in the course of preparation and, as yet, are not available for use. Therefore, the results of IWB-3000 may be utilized for ISI Class 2 and 3 components.

1.9 REPAIR AND REPLACEMENT PROGRAM

Alabama Power Company's repair and replacement program is defined in various plant administrative and departmental procedures. The detailed program for welding and related activities is defined in the Special Processes Manual, FNP-0-M-23.

1.10 LIMITATIONS OF EXAMINATIONS

Limitations may occur for the examination of piping system circumferential butt welds (Categories B-J and C-F) when the welds occur at geometric discontinuities such as pipe-to-vessel welds, pipe-to-fitting welds, or fitting-to-fitting welds. The volume of weld and base material reqired to be examined for piping welds has changed significantly from the first 10-year inspection interval. Limitations evident during the first interval may no longer be relevent.

For pipe-to-fitting or pipe-to-vessel nozzle welds, examinations can be performed to the extent required by III-3230 of Section XI from the pipe surface. Examination from the fitting side would be dependent upon the geometric configuration. Where elbows or tees are concerned, examinations can be performed from the fitting side except where the intrados of the fitting prevents adequate ultrasonic coupling. No examinations can be performed from the fitting side when it is a valve or a flange. In all cases, the required volume of the weld and base material will be examined. Where limitations are encountered and ultrasonic examinations cannot be performed on the required volume of the weld and base material, surface or visual examinations may be performed to supplement limited volumetric examination.

In instances where the locations of pipe supports or hangers restrict the access available for the examination of pipe welds as required by IWB-2500, examinations will be performed to the extent practical unless removal of the support is permissible without unduly stressing the system.

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[1] Second Interval	Relief Request	Comments
	Letdown Heat Exchanger						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-shell (or head) when Inside of Vessel is inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Excess Letdown Heat Exchanger						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[1] Second Interval	Relief Request	Comments
	Excess Letdown Heat Exchanger (Con't)						
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Regenerative Heat Exchanger						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[1] Second Interval	Relief Request	Comments
	Regenerative Heat Exchanger (Con't)						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Residual Heat Exchangers (2)						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel (2)	IWC-2500-4(c)	Sur.	IWC-3000	All Nozzles at terminal end[1] of piping runs[2].	-	-
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	Note 5	VT-2	No Leakage	All Nozzles at terminal end[1] of piping runs[2].	-	Note 6 Required each period. REV. 2

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[3] Second Interval	Relief Request	Comments
	Seal Water Return Filter						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Volume Control Tank						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[3] Second Interval	Relief Request	Comments
	Volume Control Tank (Con't)						
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Letdown Reheat Heat Exchanger						
C2.10	Nozzles in Vessels ≤ 1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[2] Second Interval	Relief Request	Comments
	Letdown Reheat Exchanger (Con't)						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Seal Water Heat Exchanger						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-?	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[3] Second Interval	Relief Request	Comments
	Steam Generators (3)						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or Head) Weld(2)	IWC-2500-4(a) or (b)	Vol. Sur.	IWC-3000	All Nozzles at terminal ends[1] of piping runs[2].	-	-
C2.22	Nozzle Inside Radius Section > 12 in. NPS (2)	IWC-2500-4(a) or (b)	Vol.	IWC-3000	All Nozzles at terminal ends[1] of piping runs[2].	RR-28	-
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Reactor Coolant Filter						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[3] Second Interval	Relief Request	Comments
	Reactor Coolant Filter (Con't)						
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Letdown Delay Tanks (2)						
C2.10	Nozzles in vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ Figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[3] Second Interval	Relief Request	Comments
	Letdown Delay Tanks (2) (Con't)						
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP
	Excess Letdown Delay Tanks (2)						
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness						
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness						
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP

C-B, PRESSURE RETAINING NOZZLE WELDS IN VESSELS

Item No.	Parts Examined	Examination Requirements/ figure No.	Examination Method	Acceptance Standard	Extent and Frequency of Examination[1] Second Interval	Relief Request	Comments	
	Excess Letdown Delay Tanks (2)							
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP	▮
	Boron Injection Tank							
C2.10	Nozzles in Vessels ≤1/2 in. Nominal Thickness							
C2.11	Nozzle-to-Shell (or Head) Weld	IWC-2500-3	N/A	N/A	N/A	-	N/A to FNP	
C2.20	Nozzles without Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness							
C2.21	Nozzle-to-Shell (or Head) Weld	IWC-2500-4(a) or (b)	Vol. Sur.	IWC-3000	All Nozzles at terminal ends[3] of piping runs[2].	-	-	▮
C2.22	Nozzle Inside Radius Section > 12 in. NPS	IWC-2500-4(a) or (b)	N/A	N/A	N/A	-	N/A to FNP	
C2.30	Nozzles with Reinforcing Plate in Vessels > 1/2 in. Nominal Thickness							
C2.31	Reinforcing Plate Welds to Nozzle and Vessel	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP	
C2.32	Nozzle-to-Shell (or Head) Welds when Inside of Vessel is Accessible	IWC-2500-4(c)	N/A	N/A	N/A	-	N/A to FNP	
C2.33	Nozzle-to-Shell (or Head) when Inside of Vessel is Inaccessible	N/A	N/A	N/A	N/A	-	N/A to FNP	▮

RELIEF REQUESTS

FNP-1

Relief Request No.	Examination Area
RR-35	Hydrostatic testing of Class 3 buried piping in the service water system.
RR-36	Visual (VT-2) examination of the tubes in the Class 3 component cooling water heat exchangers.
RR-37	Visual (VT-2) examination of condenser coils (tubes) in Class 3 coolers.
RR-38	Hydrostatic testing of Class 3 portions of auxiliary steam piping.
RR-39	Hydrostatic testing of Class 3 auxiliary feedwater pump minimum flow piping.
RR-40	Hydrostatic testing of all Class 2 branch pipe lines from VCT to first valve.
RR-41	Break away drag test for hydraulic snubbers.
RR-42	Additional sample testing requirements for snubbers.
RR-43	Hydrostatic testing of Class 2 portions of the RCS head vent lines.
RR-44	Operational monitoring of the Class 3 spent fuel pool cooling heat exchangers.
RR-45	Hydrostatic testing Class 2 and 3 low pressure systems where a large change in elevation exists.
RR-46	Schedule adjustment for seven (7) system hydrostatic tests.

RELIEF REQUEST

FNP-1

RR-1

Component or Relief Area: Relief from the material requirements for calibration blocks used to perform ultrasonic examination of the following:

APR-6: Steam generator channel head-to-tubesheet welds.

APR-7: Boron injection tank head-to-shell circumferential welds and nozzle-to-head welds.

ALA-RV-1: Reactor vessel lower head-to-lower, shell weld and all lower head welds. Boron injection tank head-to-shell circumferential welds.

ALA-RV-3: Reactor vessel shell-to-nozzle welds and top head welds.

Requirement from which Relief is Requested: Section XI, 1983 Edition with Addenda through Summer 1983, paragraph IWA-2232 requires that ultrasonic examination of vessel welds in ferritic materials greater than 2 in. in thickness be performed in accordance with Article 4, Section V. Paragraph T-434.1.1(3), Article 4, requires that the material from which calibration blocks are fabricated be of the same material specification, product form, and heat treatment as one of the materials being joined.

Basis for Relief: During fabrication of the Farley Unit 1 nuclear steam supply system vessels, the calibration blocks used to perform examinations by the vessel manufacturer were fabricated to the requirements of American Society of Mechanical Engineers (ASME) Section III. When ASME Section XI was issued for inservice inspection, the new requirements for vessel calibration blocks rendered the existing blocks unacceptable for use. The original blocks had to be replaced but some vessel materials were no longer available. The vessel calibration blocks had to be refabricated to the Section XI requirements applicable at that time.

RELIEF REQUEST

FNP-1

RR-26

Component or Relief Area: Hydrostatic testing of portions of Class 2 piping systems isolated from the test boundary by closed check valves. Affected lines are as follows: Reference drawing D351116, Sheet 2 of 4.

A. Charging pump suction piping from the chemical mixing tank between valve Q1E21V186 and check valve Q1E21V187 (line No. HCB-11).

B. Hydrogen and nitrogen supply piping to the VCT from check valve Q1E21V201 to isolation valves Q1E21V202, Q1E21V583, and Q1G21V260 (line Nos. HCB-68 and HCB-99).

C. Charging pump suction piping from volume control tank between check valve Q1E21V211 and locked closed valve Q1E21V212 (Line No. 2" HCB-16).

D. Charging pump suction piping from boric acid blender between check valve Q1E21V210 and normally closed valve Q1E21V264.

Requirement from which Relief is Requested: Category C-H, Table IWC-2500-1 of ASME Section XI, requires a hydrostatic test for all Class 2 pressure retaining components once every 10-year inspection interval in accordance with IWC-5222.

Basis for Relief: Pressurization of the portions of system piping listed above cannot be assured due to the position of the check valves. The check valves listed prevent flow from the test fill point to the specified boundary valves.

Alternate Examination: Portions of the above mentioned Class 2 piping will be visually examined during the Class 2 system functional test.

RELIEF REQUEST

FNP-1

RR-30

Component or Relief Area:	Hydrostatic testing of the Class 2 portion of the steam generators and associated piping. Reference drawings D351110, sheet 1 of 2 and D351122, sheet 1 of 3.
Requirement from which Relief is Requested:	Item No. C7.10, Category C-H, Table IWC-2500-1 of ASME Section XI, requires a system hydrostatic test of Class 2 pressure retaining pressure vessel once every 10-year inspection interval, in accordance with IWC-5222. Also, paragraph IWA-5213(d) requires a 4-hour holding time for hydrotest of the insulated system.
Basis for Relief:	In order to prevent undue stress on the steam generators, Westinghouse recommends that the hydrostatic test of the secondary side of the steam generators be conducted at 1.25 P_d for a minimum of 10 minutes and a maximum of 30 minutes, and then reduced to operating pressure, 1.0 P_d, for the balance of the 4-hour holding period. The related Class 2 piping is hydrostatically tested along with the steam generator.
Alternate Examination:	The Class 2 portions of the steam generator and related piping will be hydrostatically tested at 1.25 P_{sv} for a minimum of 10 minutes and a maximum of 30 minutes. The test pressure will then be reduced to 1.0 P_d for the remainder of the required 4-hour holding time.

RELIEF REQUEST

FNP-1

RR-34

Component or Relief Area:	Hydrostatic testing of Class 3 spray additive piping and components in the containment spray system (reference drawing D351115, Sheet 3).
Requirement from which Relief is Requested:	Paragraph IWD-2510 and Table IWD-2500-1 of ASME Section XI require that all Class 3 pressure retaining components be subjected to visual examination (VT-2) in conjunction with the system pressure test of IWD-5000.
Basis for Relief:	While in service these spray additive lines have an operating pressure of 15 psig and temperature of 100°F, which is well below the design conditions of 210 psig pressure and 300°F temperature. Therefore, a system hydrostatic test at 1.25 P_{sv} would not provide a meaningful test. In addition, the hydrostatic test will involve handling of highly corrosive sodium hydroxide, which is undesirable and hazardous to personnel safety.
Alternate Examination:	A measured flow test in accordance with plant Technical Specification paragraph 4.6.2.2d will be conducted periodically to assure the leaktightness of these Class 3 components.

RELIEF REQUEST

FNP-1

RR-45

Component or Relief Area:

Hydrostatic testing of Class 2 or 3 low pressure systems where the system under test has a large change in elevation and the test boundaries cannot be reduced due to plant configuration:

Requirement from Which Relief is Requested:

IWC-5222(a) and IWD-5223(a) specify the minimum required pressure to be applied during system hydrostatic testing. However, IWA-5265(b) also requires that when testing a group of components or a multi-component system, the imposed pressure on any component, including static head, will not exceed 106% of the specified test pressure for the system.

Basis for Relief:

The minimum required pressure to be applied during system hydrostatic testing is based on design conditions of the piping to be tested. When considering a system where a large change in elevation is encountered, the hydrostatic pressure throughout the system would be reduced proportionally as elevation increased. During hydrostatic testing of these systems, this 106% upper limit on test pressure will produce a condition where the minimum test pressure required by IWC-5222(a) and IWD-5223(a) cannot be achieved in the higher elevations of the test circuit.

Alternate Examination:

Where this is a concern hydrostatic testing will be conducted with the lowest point in the system at 106% of the specified test pressure per IWA-5265(b) and the pressure at the highest location may fall below the minimum test pressure required by IWC-5222(a) or IWD-5223(a).

RELIEF REQUEST

FNP-1

RR-46

Component or Relief Area:	Scheduling for the performance of Class 2 and 3 system hydrostatic tests to be accomplished during the second ten-year inspection interval.
Requirement from Which Relief is Requested:	Table IWC-2500-1, Examination Category C-H, Note 5 and Table IWD-2500-1, Examination Categories D-A, D-B, and D-C, Note 2 require that system hydrostatic tests be conducted at or near the end of the inspection interval or during the same inspection period of each inspection interval for Inspection Program B.
Basis for Relief:	The system hydrostatic tests are scheduled on a periodic basis in accordance with Inspection Program B. As a result of performing additional tests during the first ten-year interval, it is necessary to move eight (8) hydrostatic tests forward one period. The original schedule for performing hydrostatic testing was based on dividing the systems to be tested into eighteen (18) procedures. Due to operational conditions during the course of the interval, several procedures were divided resulting in additional hydrostatic testing procedures to be performed. At the end of the interval twenty five (25) procedures existed to cover the systems to be tested.
Alternate Examinations:	All twenty five (25) hydrotest procedures will be performed during the second inspection interval. They will be scheduled to distribute the testing evenly between the three (3) periods for the second interval.

12. Relief Requested from Inspection Requirements for Certain Pressure-Retaining Valve Body Welds and Internal pressure Boundary Surfaces, Letter dated March 11, 1986, from R. P. McDonald, APC, to L. S. Rubenstein, USNRC.

13. Nuclear Regulatory Commission Notice of Granting Relief for Pressure-Retaining Valve Body Welds and Internal Pressure Boundary Surfaces, letter dated June 19, 1986, from D. G. McDonald, USNRC, to R. P. McDonald, APC.

14. Relief Requested from Inspection Requirements of Steam Generator primary side Nozzle Inner Radiused Sections. Letter dated January 13, 1987 from R. P. McDonald, APC to L. S. Rubenstein, USNRC.

15. Nuclear Regulatory Commission Notice of Granting Relief for Steam Generator primary side Nozzle Inner Radiused Sections. Letter dated July 8, 1987 from E. G. Adensam, USNRC to R. P. McDonald, APC.

16. Second Ten-Year submittal of the Inservice Inspection Program, letter dated May 27, 1987 from R. P. McDonald, APC, to USNRC.

17. Second Ten-Year submittal of the Inservice Inspection Program, letter dated November 23, 1987 from R. P. McDonald, APC, to USNRC.

18. Nuclear Regulatory Commission Notice of granting Interim Approval for the Second Ten-Year Inservice Inspection Program. Letter dated December 10, 1987 from E. G. Adensam, USNRC to R. P. McDonald, APC.