123 Main Street
White Plains, New York 10601
914 681.6240

New York Power Authority

John C. Brons
Executive Vice President
Nuclear Generation

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JPN-88-051

U. S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D.C. 20555

Attn: Document Control Desk

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
First Ten-Year Inservice Inspection Interval
Response to Request for Additional Information

Reference:
1. NYPA letter, J. C. Brons to the NRC, dated August 6, 1987 (JPN-87-043) submitted "Summary Report of the First Ten-Year Interval."
2. NRC letter, H. Abelson to J. C. Brons, dated August 15, 1988 requested additional information.

Dear Sir:

The James A. FitzPatrick Nuclear Power Plant's first 10-year inservice inspection interval ended July 28, 1985. As required by 10 CFR 50.55a, the Authority requested relief from required inservice inspections not completed during the first interval. (See Reference 1).

In Reference 2, the NRC requested further information to complete the review. Attachment I provides the requested information.

Should you or your staff have any questions, please contact Mr. J. A. Gray, Jr. of my staff.

Very truly yours,

John C Brons

John C. Brons
Executive Vice President
Nuclear Generation

Enclosures

cc: Listed on following page

A047
1/1

cc: U. S. Nuclear Regulatory Commission
Region I
475 Allendale Road
King of Prussia, PA 19406

Office of the Resident Inspector
U. S. Nuclear Regulatory Commission
P. O. Box 136
Lycoming, New York 13093

Mr. Harvey Abelson
Project Directorate I-1
Division of Reactor Projects - I/II
U.S. Nuclear Regulatory Commission
Mail Stop 14B2
Washington, DC 20555

JPN-88-051

ATTACHMENT I

FIRST TEN-YEAR INSERVICE INSPECTION INTERVAL
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

New York Power Authority
James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
DPR-59

NRC Question A.

"Relief Request 1(b): The Licensee states that welds VV-BH-2A, B, C, E, and F require total relief and weld VV-BH-2D requires partial relief. Attachment II of the August 6, 1987 submittal shows that weld VV-BH-2A received a partial examination. Verify that this weld has received a partial examination, list any of the other welds that have received partial examinations, and state the percentage of the Code-required examination that each of these welds has received."

NYPA Response A.

A review of data sheets and outage records confirms partial examination of weld VV-BH-2A during the 1985 outage. The examined volume is 5% of the total. Only this 5% portion of weld VV-BH-2A is accessible . As stated in Reference 1, all other meridional welds (VV-BH-2B, -2C, -2E, -2F) in the vessel bottom head are inaccessible. Therefore, weld VV-BH-2A requires partial relief, and welds VV-BH-2B, -2C, -2E, -2F require total relief.

NRC Question B.

"Relief Requests 2(a) and 2(b): Relief is requested from examining the inaccessible portions of the RPV nozzle inner radius areas. The Summary Report for the First 10-Year Interval indicates that the RPV nozzle-to-vessel welds did not receive the full Code-required volumetric examinations. Should the RPV nozzle-to-vessel welds also be included in this request? If so, indicate the percentage of the Code-required examination that was performed on each of the RPV nozzle-to-vessel welds."

NYPA Response B.

The nozzle-to-vessel welds also require relief from complete examination. The Authority described the extent of examination of each nozzle-to-vessel weld on pages 8-10, Attachment I of Reference 1. These pages are included as Attachment II to this letter. The Authority requests relief based on insufficient radial clearance to inspect the complete weld volume thoroughly.

NRC Question C.

"Relief Request 3: Relief is requested from the Code-required volumetric examination of the Jet Pump instrumentation nozzle-to-safe end welds (Examination Category B-F, Item B1.6) due to high radiation fields. Is relief also requested from performing the Code-required surface examination of these welds?

Relief is requested from the volumetric examination of the Jet Pump instrumentation nozzle penetration seal welds (Examination Category B-J, Item B4.6). In Note 2 on page 150 of Attachment 2 of the August 6, 1987 submittal, it is stated that the Code-required examination of these welds shall be performed during the next scheduled refueling outage. List the specific welds for which relief is requested and state whether or not these welds will be examined again during the second 10-year inspection interval."

NYPA Response C.

The Authority requests relief from Code-required volumetric and surface examinations for one Jet Pump instrumentation nozzle-to-safe end weld, N8B-SE, for the first interval. The Authority inspected weld N8B-SE (volume and surface) in the 1987 refueling outage after decontamination by flushing, as part of the IGSCC program for the second interval.

During the 1985 outage, Jet Pump instrumentation nozzle N8A-SE received volumetric examination and visual (VT-2) inspection, in lieu of surface examination. The Authority has scheduled decontamination of the Jet Pump instrumentation nozzle assemblies for the 1988 refueling outage. Accordingly, nozzle-to-safe end weld N8A-SE is scheduled for inspection as required by NUREG-0313, Rev. 2. Therefore, the Authority requests relief from both the volumetric and surface examinations of nozzle-to-safe end weld N8B-SE and from surface examination on N8A-SE for the first interval, which ended 6/85.

The Authority requests relief from inspection during the first 10 year interval for the following Jet Pump instrumentation nozzle penetration seal welds, due to high radiation levels (even after flushing, the shielded dose rate exceeds 5 rem/hr.):

"A" Jet Pump Assembly	"B" Jet Pump Assembly
N8A-SE-1	N8B-SE-1
N8A-SE-2	N8B-SE-2
N8A-SE-3	N8B-SE-3
4-117	4-118

During the 1987 refueling outage, the Authority performed volumetric and surface examinations on "B" Jet Pump assembly welds. This was the first outage of the second 10 year interval. These inspections reflected the second 10 year interval Inservice Inspection (ISI) and the draft of NUREG-0313, Rev. 2 and Generic letter 84-11 requirements. The "A" Jet Pump assembly welds will be inspected during the 1988 outage in accordance with NUREG-0313, Rev. 2.

NRC Question D.

"Relief Request 8: Integrally welded support #24-29-638B is listed twice in Table 8.3. Is there another component number that should be listed instead of the duplicate number?

Also, relief was previously granted, in the NRC's April 18, 1986 SER, to examine the B-K-1 components by surface examination in accordance with 77S78 in lieu of the volumetric examination required by 74S75 with the provision that examination of the subject welds be conducted once per inspection interval. Relief is now requested from performing the surface examination of 53 of these integrally welded supports. Provide sufficient information to justify the determination of impracticality of performing the surface examination of these integrally welded supports during the first 10-year inspection interval."

NYPA Response D.

The duplicate listing of integrally welded support 24-29-638B is incorrect. In addition, weld 24-29-638C is listed incorrectly. No weld has this number. Also, weld 24-29-638B is a socket weld (Category B-J) and should not be listed in the B-K-1 section.

The Authority requests relief from examining approximately 50 support welds of thickness 5/8" or greater. This request is based on the Authority's interpretation of the ASME Code, Section XI during the first interval. The required frequency of examination is not clear in the '77 Edition, Summer '78 Addenda. In the ISI program submitted in September 1979, the Authority interpreted it as 25% of all integrally welded supports, rather than 100% of welds 5/8" or greater in thickness.

The NRC first expressed its position to the Authority in January 1984. It advocated examination of 50% of the non-exempted components. The Authority restated its interpretation and requested reconsideration of this relief request. By a letter dated April 18, 1986, the NRC granted this relief providing that 100% of all non-exempted support welds be inspected during the interval. The first ten year inspection interval for the FitzPatrick plant was effectively completed at the end of the Spring 1985 outage, thus, it was impossible to complete these inspections during the first interval. Subsequent inspections have been conducted in accordance with the ISI program submitted in September 1985. The Authority summarized the inspections performed during the first interval in Reference 1. This letter also requested relief from, and proposed earlier scheduling during the second interval of, inspections of the integrally welded support welds (category B-K-1). Therefore, the impracticality of performing inspections is due to the completion of the first interval before final determination of the required frequency. The requirement of 100% inspection was not definitively expressed until Code Case XI-1-86-04 was published in 1986, which was subsequent to the completion of the first 10 year interval.

As stated in Reference 1, the subject welds will be inspected in accordance with the current ISI program during the first part of the second interval. In addition, a review of as-built drawings to verify weld thicknesses showed that the following welds, previously listed as requiring examination, are either less than 5/8" thick or are not support attachments:

Residual Heat Removal:

- 37-10-152A and 37-10-139A -

  Review of data sheets indicates that both of these were examined in 1985; i.e., during the first interval. Currently, these welds are classified in IWE - Containment Boundary welds.

- 24-10-146C

  Erroneously listed, does not exist.

Reactor Water Clean-up:

- 4-12-470C and 4-12-477B - Both are less than 5/8" thick and exempt from examination.

Main Steam:

- 24-29-534A was inspected in 1985, no relief required.
- 24-29-574B is a socket weld, exempt from examination in accordance with Category B-J.
- 24-29-638B erroneously listed twice.
- 24-29-602C erroneously listed, does not exist.
- 37-29-574B was inspected in 1985, currently classified as IWE - Containment Boundary weld.

In summary, 52.5% of all support welds were examined, including those with thickness less than 5/8" (82 out of 156 total support welds). This total includes 43 support welds of 5/8" thickness or greater, out of a total population of 86, which represents inspection of 50.0% of these welds. Thus, a total of 43 B-K-1 welds require relief from examination during the first ten-year interval, and, as indicated in Reference 1, will be inspected early in the second interval as part of the current ISI program.

NRC Question E.

"Relief Request 11: List the specific C-E-1 welds for which relief is requested and provide sufficient information to justify the determination of impracticality of performing the surface examination of these integrally welded supports during the first 10-year inspection interval."

NYPA Response E.

The Authority implemented the ISI program based on the 1974 edition, Summer 1975 Addenda of Section XI of the ASME Boiler Pressure Vessel Code during the Spring/Summer 1980 refueling outage. Prior to that time, inservice inspections at the FitzPatrick plant were performed in accordance with the 1970 edition of Section XI. This mid-interval code update resulted in a significant expansion of ISI requirements. The 1970 edition had required inspection of only those components which are now considered Class 1, while the newer code expanded the scope of inspection to include Class 2 and Class 3 components. Therefore, while the initial FitzPatrick plant ten-year interval for Class 1 components ended July 28, 1985, the actual interval for the Class 2 and 3 components was at its midpoint. The Authority, in a letter dated March 4, 1985, committed to meet 50% of the Code requirements for inspections of the Class 2 components in order to consolidate the inspection intervals. As detailed in Reference 1 for Code Category C-E-1, the '74 Edition, Summer '75 Addenda, required 100% inspection of non-exempt welds for one equivalent piping stream. This corresponds to 50% of an equivalent stream for each system containing Code category C-E-1 components. As detailed in the attachment to Reference 1, not all systems received inspection of 50% or greater of its C-E-1 components. The following table shows the number of welds in one equivalent stream of those systems, and indicates the total number of welds inspected:

System	50% Equivalent Stream	Number Inspected
RHR	43	29
RCIC	5	2
Core Spray	6	2
Containment Atmosphere Dilution (CAD)	6	5

In addition, two typographical errors were found in Reference 1. Only one additional weld in the CAD system requires inspection, as is indicated in the Attachment to that letter, not 20 additional welds as indicated in Table 11.1. Also, a total of 14 C-E-1 welds in the RHR System, not 13, require inspection.

The 22 welds needed to achieve 50% inspection exist in a population of hundreds. For example in the RHR system, there are 133 C-E-1 welds. Out of these 133, 14 must be inspected to achieve 50% of one equivalent stream. The welds are not uninspectable due to physical inaccessibility. The necessary weld examinations will be performed during the second interval. The relief requested is based on the fact that the first interval is over, some components were not inspected during the interval, and those will be inspected during the second interval as indicated in Reference 1.

References

1. NYPA letter, J. C. Brons to the NRC, dated August 6, 1987 (JPN-87-043).

JPN-88-051

ATTACHMENT II

FIRST TEN-YEAR INSERVICE INSPECTION INTERVAL
RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION

New York Power Authority
James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
DPR-59

24-10-142	24-10-130
24-10-143	24-10-131
24-10-144	24-10-132

As shown on page 39 of Attachment II, the geometry of these welds prevents examination of ultrasonic shear wave techniques. The wall thickness of over 2" prevents meaningful radiographic inspection without system drain down and component disassembly. Development of unique calblocks is currently underway. Until such time as an adequate, practical examination methodology is developed, limited ultrasonic, visual and surface examinations will be performed in lieu of volumetric inspection. (See Attachment II, page 38).

5. Item B.4.12: Piping Pressure Retaining Bolting less than 2" in diameter; Code Category B-G-2.

Relief is requested from visual examination of the pressure retaining bolting associated with Flanges A, B, C, and D in the Residual Heat Removal (RHR) System head spray line. As previously indicated, this bolting was scheduled for inspection only when these components were disassembled for other maintenance. Since most bolting failure occurs during loosening and retightening, and since drywell leakage limits would serve as a warning of a failed bolt, this relief request will not affect plant safety. (See Attachment II, page 42).

6. Item B.1.11: Reactor Vessel Pressure Retaining Bolting less than 2" in Diameter; Code Category B-G-2. (See Attachment II, page 11).

The components in this category are the bolting of the 137 Control Rod Drives and of the 43 Incore Instrumentation Penetrations. This bolting is inaccessible in place due to the control rod drives and incore instruments, and was inspected only during disassembly for component maintenance/ replacement. During the first 10 year interval, 79 components or 57% of the CRDs' bolting were inspected, and 7 components or 16% of the incore instrumentation bolting were inspected. Relief is requested from the Code-required extent of examination (100%) for the ten year interval with the above percentages inspected instead.

Remote inspection for leakage was also performed on each component during the Class 1 hydrostatic test at the end of the interval.

Since most bolting failure commonly occurs during loosening and retightening, this relief request will not affect plant safety.

7. Item B.6.9: Valve Pressure Retaining Bolting less than 2" in diameter; Code Category B-G-2.

Relief is requested from visual examination of the pressure retaining bolting in the vales listed in Table 7.1.

This bolting was scheduled for inspection only when these components were disassembled for other maintenance. Since most bolting failure occurs during loosening and retightening, and since FitzPatrick has drywell leakage limits, this relief request will not affect plant safety. (See Attachment II, pages 18, 42, 74, 82, 96, 112, and 132).