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James Knubel Senior Vice President and Chief Nuclear Officer

June 21 , 1999 JPN-99-020

Ur. ad States Nuclear Regulatory Commission Attn: Document Control Desk Mail Station P1-137 Washington, D.C. 20555

Subject: James A. FitzPatrick Nuclear Power Plant Docket No. 50-333 Response to Request for Additional Information Regarding ISI Program Relief Requests for 2<sup>nd</sup> Ten-Year Interval Closeout and Summary Report (TAC No. MA2019)

Reference: NYPA letter, J. Knubel to NRC (JPN-97-023), "Inservice Inspection Program Relief Requests for the Second Ten-Year Interval Closeout and Revised Summary Report," dated July 15, 1997.

Dear Sir:

The purpose of this letter is to provide additional information with regard to the Second Ten-Year Interval Closeout and Revised Summary Report (Reference). Based on review of the interval closeout summary report and a conference call with NRC staff (April 26, 1999) information is being provided to clarify or withdraw individual relief requests contained within the interval closeout summary report. Attachment 1 contains the specific additional information required with respect to Code Category.

There are no commitments made by the Authority in this letter. If you have any questions contact Mr. George Tasick, Licensing Manager, at (315) 349-3572.

Very truly yours

J. Knubel Senior Vice President and Chief Nuclear Officer

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cc: next page



Regional Administrator U.S. Nuclear Regulatory Commission 475 Allendale Road King of Prussia, PA 19406

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Mr. Joseph F. Williams, Project Manager, Section I Project Directorate I Division of Licensing Project Management Office of Nuclear Reactor Regulation US Nuclear Regulatory Commission Mail Stop 8C2 Washington, DC 20555-0001

Mr. Micheal T. Anderson INEEL Research Center 2151 North Blvd. PO Box 1625 Idaho Falls, ID 83415-2209

#### Attachments:

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cc:

- Response to Request for Additional Information Regarding ISI Program Relief Requests for 2<sup>nd</sup> Ten-Year Interval Closeout and Summary Report
- James A. FitzPatrick Nuclear Power Plant Drawing MSK-3037, "I. S. I. RHR Heat Exchanger Weld Identification," Revision 2, July 21, 1986, 1 Sheet.
- Sketches of FitzPatrick A and B RHR Heat Exchangers: (1) "'B' RHR Hx scanning limitation for weld N-4B," January 15, 1992, Sheet 2 of 3; (2) "N-4B 'B' RHR Hx Scanning Limitation," January 15, 1992, Sheet 3 of 3; (3) "N-4B," January 15, 1992, Sheet 2 of 2; (4) "'A' RHR Heat Exchanger N 3A," September 29, 1988, Page 3 of 3; (5) "N 4A 0° Coverage Plot," January 16, 1995, Sheet 3 of 3; (6) "Limitation Sketch of N4-A," January 16, 1995, Sheet 2 of 3; (7) "N4-A ½ V 70° Coverage Plot," January 16, 1995, Sheet 3 of 3.

#### Attachment 1 to JPN-99-020

# Response to Request for Additional Information Regarding ISI Program Relief Requests for 2<sup>nd</sup> Ten-Year Interval Closeout and Summary Report

# Additional Information Required

A.

Category B-G-1	Pressure Retaining Bolting Greater than 2 in. In Diameter
Item No.	B6.190, Flange Surface, when connection disassembled

Relief Request E (Reference 1 nere 24) is being with

## **Examination Requirements**

ASME Section XI, 1980 Edition through Winter 1981 Addenda, Table IWB-2500-1, requires examinations to include all bolts, studs, nuts, bushings, and flange surfaces, when the connection is disassembled.

## **Basis for Withdrawal**

Per the NRC's Safety Evaluation (SE) for the 2<sup>nd</sup> Ten-Year Inservice Inspection Program, dated October 27, 1987, Section 3.1.5, Pump Pressure Boundary, page 17, the Authority was required to submit a relief request for components within this Code Category (B-G-1) and Item Number (B6.190) not disassembled during the 2<sup>nd</sup> Ten-Year Interval. The withdrawal of this relief request is based on the teleconference with the NRC and a review and re-evaluation of components submitted for relief. The re-evaluation of ASME inspection requirements in Table IWB-2500-1 requires these examinations be performed when the flange connection is disassembled. During the 2<sup>nd</sup> Ten-Year Interval these components were not disassembled and therefore relief is not required. Pressure Retaining Welds in Piping

Relief Requests H and I (Reference 1, page 31) are being Withdrawn:

Item No.	B9.10	Nominal Pipe Size > 4 in.
Item No.	B9.11	Circumferential Welds
Item No.	B9.30	<b>Branch Pipe Connection Welds</b>
Item No.	B9.31	Nominal Pipe Size > 4"

# **Examination Requirements**

Category B-J

B.

ASME Section XI, 1980 Edition through Winter 1981 Addenda, Table IWB-2500-1, Note (1)(d), requires that the total number of circumferential butt welds (or branch connection or socket welds) selected for examination equals 25% of the circumferential butt welds (or branch connection or socket welds) in the reactor coolant piping system.

# **Basis for Withdrawal**

The thirty-seven (37) partial weld examinations are being withdrawn for consideration for relief based on satisfactory compliance of the Program B, Code requirements.

The withdrawal of these relief requests is based on the teleconference with the NRC and a review and re-evaluation of components submitted for relief. All welds identified as part of the Reactor Recirculation (Recirc.), Jet Pump Instrumentation (JPI), Core Spray (CS) Systems, (**Table 7 and Table 7A**) are in the IGSCC Inspection Program. These welds are examined volumetrically in accordance with NUREG 0313 Rev.2 and GL 88-01. These examinations are augmented and are performed outside the requirements of ASME Section XI. Relief Request R11 was submitted during the 2<sup>nd</sup> Ten-Year Interval and requested approval to perform the IGSCC examinations required by NRC Generic Letter 88-01 in lieu of ASME Section XI requirements. The NRC's Safety Evaluation (SE), of the 2<sup>nd</sup> Ten-Year Inservice Inspection Program, dated October 27, 1987, Section 3.5.1.1, Page 34, states that the implementation of NUREG 0313 Rev. 2 and GL 88-1 does not require relief based on performing a more stringent examination.

Based on the augmented inspection requirements of these components being met through FitzPatrick's IGSCC Inspection Program and previously approved relief request as noted above, this relief request is withdrawn.

The remainder of component welds in the original relief request is withdrawn based on the following. This relief encompassed all B-J Category welds which examination coverage did not meet or exceed 90% of examination volume. Program B compliance requires 25% of the total nonexempt weld population be inspected each Interval. Distribution in the periods shall meet the range of percentages as stipulated in Program B. The ISI Program at FitzPatrick for the 2<sup>nd</sup> Ten-Year Interval has met and exceeded the Program B parameters for component welds in Category B-J whether applied to systems or cumulative for the category. The following are the weld counts for Category B-J welds and the total examinations performed and credited. .

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CC	DDE CATEGORY B-J (2ND	TEN-YEAR INTER	VAL)
Total Nonexempt	Code Required	Total Exams	Total Exams
Population	Percentage (25%)	Credited	Performed
358	90	100	144

NOTE: Totals do <u>not</u> include the Reactor Water Recirculation System (Recirc.) or Jet Pump Assembly welds which are excluded due to their inclusion as part of the IGSCC Inspection Program. Core Spray Welds identified in Reference 1 are also part of the IGSCC Inspection Program and do <u>not</u> require relief. C. Relief Requests J and K (Reference 1, page 38) are being withdrawn:

Category B-K-1	Integral Att	achments for	Piping,	Pumps,	and	Valves
Item No.	B10.10	Piping Inte	grally V	Velded A	ttacl	hments

# Code Requirements

ASME Section XI 1980 Edition including Winter 1981 Addenda, Table IWB-2500-1, Note: (1) requires examinations include the welded attachments of piping required to be examined by Examination Category B-J and the welded attachments of associated pumps and valves integral to such piping.

# **Basis for Withdrawal**

The withdrawal of these relief requests is based on the teleconference with the NRC and a review and re-evaluation of components submitted for relief. All welds identified as part of the Relief Request J and K (Reference 1, Tables 8 and 8A) are withdrawn from consideration for relief. The initial relief encompassed all B-K-1 Category welds which examination coverage did not meet or exceed 90% of examination volume as allowed by Code Case N-460. Program B compliance requires that 25% of the total nonexempt weld population, per Code Category B-J requirements, be inspected each Interval. The ISI Program at FitzPatrick for the 2<sup>nd</sup> Ten-Year Interval has met and exceeded the Program B parameters for component welds in Category B-K-1, whether applied to systems or cumulative totals for the category. The following are the extent of examination for Category B-K-1 welds during the 2<sup>nd</sup> Ten-Year Interval.

Table 8 below replaces Tables 8 and 8A in the original relief request.

System / No.	Total Nonexempt Population	Code Required Percentage (25%)	Total Exams Credited	Total Exams Performed
Recirc. / 02-2	18	5	5	17
Main Steam / 29	33	8	9	25

# TABLE 8

D. Relief Request O (Reference 1, page 53): Additional Information Required

# Category C-A Pressure Retaining Welds in Pressure Vessels

Item No. C1.10, Shell Circumferential Weld (RHR Ht. Exchgr.)

Request for Relief O seeks relief from the requirement in the ASME Section XI, 1980 Edition Winter 1981 Addenda to perform volumetric examination of the RHR heat exchanger pressure vessel shell circumferential welds as defined by Figure IWC-2500-1 This additional information is being provided based on the teleconference with the NRC and a review and re-evaluation of components submitted for relief.

# **Examination Requirements**

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ASME Section XI, 1980 Edition Winter 1981 Addenda, requires 100% volumetric examination of this weld once per interval.

# Additional Information Requested

The Code requires 100% volumetric examination for the subject circumferential shell weld. Review of drawings submitted by the Licensee show that complete examination coverage was not possible due to restricted access caused by interference from the flange bolting and nozzle N4B. To meet Code requirements of the subject weld, removal of flange bolting and design modification of the heat exchanger nozzle would be required to allow additional access to the weld.

The Code allows for the required examinations to be distributed among the multiple vessels of similar design, size, and service. It is understood that complete coverage for the subject weld is impractical to perform due to interference from flange bolting and nozzle N4B. It appears to the staff that at FitzPatrick, two RHR heat exchangers exists. Please clarify why it is not possible to distribute the Code required coverage over the two heat exchangers as allowed by the Code.

## Response

At FitzPatrick there are two RHR Heat Exchangers, A and B. As shown on drawing MSK-3037 (enclosed), nozzle N4B is on the vessel shell in close proximity to the shell flange. The N4A and N4B nozzles, due to their close proximity to the flange and flange bolting impede examination of the circumferential weld. The area of weld examination coverage that could be performed for heat exchanger A would be identical to that of heat exchanger B. The same weld location would be inspected. The weld examination coverage can not be distributed between the two heat exchangers to obtain essentially 100% weld examination coverage for this reason. No leakage has been noted from either PHR heat exchanger circumferential welds.

Relief Request U and V (Reference 1, page 71) are being withdrawn:

Category C-F	Pressure Retaining Welds in Piping, Pumps, and Valves in Systems Which Circulate Reactor Coolant
Item No	C2.1 Circumferential Butt Welds
Category C-G	Pressure Retaining Welds in Piping, Pumps, and Valves in Systems Which Circulate Other Than Reactor Coolant
Item No. Item No.	C2.1 Circumferential Butt Welds C2.3 Branch pipe-to-pipe weld joints

# **Code Requirements**

E.

The Authority applied for relief during the 2<sup>nd</sup> Ten-Year Inservice Inspection Interval to use the 1974, Summer 1975 Edition of ASME Section XI to determine the extent of examination for pressure-retaining welds in Code Class 2 Piping for a Nuclear Power Plant whose application for a construction permit is docketed prior to July 1, 1978. The NRC's Safety Evaluation (SE), for the 2<sup>nd</sup> Ten-Year Inservice Inspection Program, dated October 27, 1987, Relief Request (R1) and (R3) Sections 3.2.2.1 and 3.2.2.2, pages 28 and 29. Docket No. 50-333, states that the use of 10CFR50.55a(b)(2)(iv)(A) and 10CFR50.55a(b)(2){iv)(B) for this application does not require relief. Classification of Class 2 circumferential butt welds and branch pipe-to-pipe weld joints was performed in accordance with the 1974, Summer 1975 Edition of ASME Section XI, IWC-2411(b)(c)(d)(e) and Tables IWC-2520 and IWC-2600.

# Basis for Withdrawal

The six (6) partial weld examinations are being withdrawn for consideration for relief based on satisfactory compliance of the Program B, Code requirements

The extent of examination for welds require division among the number of components of the same, size, and geometry in each of the multiple streams of a system which perform the same functions. The total examinations completed over the system's service lifetime will be equivalent to having performed 100% of the required examinations in one of the multiple streams of the system. Systems or portions of systems with a single stream shall be examined such that 100% of the required examinations of the components will be completed over the system's service lifetime.

Code Category C-F requires the equivalent of one stream in a system made up of multiple streams or a single stream and examinations are distributed in accordance with the procedure delineated in IWC-2411 (1)(2)(3)(d)(e)(1)(2)(3)(4). The Authority has met and/or exceeded these criteria at FitzPatrick by the end of the 2<sup>nd</sup> Ten-Year Interval.

Code Category C-G requires the equivalent of 50% of one stream in a system made up of multiple streams or a single stream and examinations are distributed in accordance with the procedure delineated in IWC-2411 (1)(2)(3)(d)(e)(1)(1)(3)(4).

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The Authority has met and/or exceeded these criteria at FitzPatrick by the end of the 2<sup>nd</sup> Ten-Year Interval.

Table 16 list systems, a total population of nonexempt welds, total examinations performed, and total examines credited. This Table replaces the Tables submitted in the original relief request. Review of the submitted relief request and re-evaluating supporting documentation reveals that Core Spray welds 16-14-709 (pipe-to-elbow) and HPCI weld 14-23-461 (pipe-to-elbow) are classified as C-G, C2.1 and not C-G, C2.3. Based on the parameters required to meet ASME compliance, relief for these components is not required and they are being withdrawn from consideration. Reference Table 16 below. For components within Code Categories C-F and C-G, Item No. C2.3, Program B compliance has been met and no relief is required.

Attachment 1 to JPN-99-020

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TABLE 16

	Total Numbe: 2 <sup>nd</sup> Interval Examined	11	53	9	21	16
	Total Number Required per Interval	7	40	Q	Q	80
ON XI 74 / S'75	Equ. Total of One Stream C-F or (50% of One Stream for C- G)	28.25	158.5	20	21	31
G (ASME SECTION	Total Non- exempt	113	317	79	81	61
IES C-F AND C-	Number of Streams	4	2	2	2	1
CODE CATEGOR	Item No.	C2.1	C2.1	C2.1.	C2.1	C2.1
	Code Category	C-F	C-F	0-C	C-G	C-G
	System	RHR /10	RHR /10	RHR / 10	CS / 14	HPCI /23

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Relief Request R (Reference 1, page 62): Additional Information Required

## Category C-B Pressure Retaining Nozzle Welds in Vessels

# Item No. C2.21, Nozzle-to-Shell (or Head) Weld

Request for Relief R seeks relief from the volumetric examination requirement in the ASME Section XI, 1980 Edition Winter 1981 Addenda. This additional information is being provided based on the teleconference with the NRC and a review and reevaluation of components submitted for relief.

#### **Examination Requirements**

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F.

ASME Section XI, 1980 Edition Winter 1981 Addenda, Table IWC-2500-1, Examination Requirements / Fig. No. IWC-2500-4 (a) or (b), and Note (4) In the case of multiple vessels of similar design, size, and service (such as steam generators, heat exchangers), the required examinations may be limited to one vessel or distributed among the vessels.

#### Additional Information Requested

The licensee stated that the drawings and sketches included in Enclosure 14 of Reference 1 illustrate the restricted conditions encountered that limit examination coverage. It appears that Enclosure 14 includes only one drawing of the RHR Heat Exchanger. The drawing contains multiple welds and weld identifiers. However, the licensee drawing does not clearly identify the subject welds or the conditions limiting the examination coverage. Provide drawing, sketches, written description etc. which clearly identifies the subject welds and conditions limiting the examination coverage.

#### Response

At FitzPatrick there are two RHR Heat Exchangers A and B, which each has two (2) Class 2 nozzles (4 total) for this Code Category. As shown on drawing MSK-3037, nozzles N-3A and B are located on the top head; and the other Class 2 nozzles are N4A and B which are on the vessel shell in close proximity to the shell flange. As shown on drawing MSK-3037, Detail "D", the configuration fit up for both welds only allows an effective ultrasonic examination for volume coverage to be performed from the shell side or head side. As an additional restriction, the N-4A and B nozzles, due to their close proximity to the flange and flange bolting, impeded examination coverage for approximately 20" along the bottom of the nozzle. In the case of the N4 nozzles both A and B were inspected to the extent practical during the 2<sup>nd</sup> Ten-Year Interval. Enclosed (Enclosure 1) is a full size drawing of the RHR Heat Exchanger along with sketches of the nozzles generated during examinations, which illustrate the restrictive conditions encountered during their inspections. The nozzles are also inspected by the VT-2 method each period during the pressure test required by Code C-H. No leakage has been noted.

# G. Relief Request N (Reference 1, page 49) is being withdrawn

Category B-O	Pressure Retaining Welds in Control Rod Housings
Item No.	B14.10, Reactor Vessel (Welds in CRD Housings)

# **Code Requirements**

ASME Section XI requires that 10% of the pressure retaining welds in peripheral CRD housings be inspected once per interval.

## **Basis for Withdrawal**

The withdrawal of this relief request is based on the teleconference with the NRC and a review and re-evaluation of components submitted for relief. The reevaluation of ASME examination requirements in Table IWB-2500-1, Category B-O, requires that 10% peripheral CRD Housings be inspected each interval. As part of the 2<sup>nd</sup> Ten-Year Interval submittal Relief Request 6 estimated that approximately 24 to 32 CRD upper housing welds were accessible. As part of the 2<sup>nd</sup> Ten-Year Interval Closeout a relief was submitted for these components stating the amount of CRD Housing Welds examined for clarification. The extent and frequency of examination requirements in Table IWB-2500-1 have been meet. Based on meeting the Code requirements as stipulated in ASME XI, Code Category B-O, this request for relief is being withdrawn. Examinations conducted on these components meet the Code requirements and do not require relief.

# H. Relief Request W (Reference 1, page 77) is being withdrawn

#### Category C-H

#### All Pressure Retaining Components

# Category D-A, D-B, and D-CPressure Retaining Boundary

All

Item No.

# **Basis for Withdrawal**

Based on the Authority's review of the original request for relief, relief requests should not be granted (or requested) for missed tests. Contrary to statements made in the LER 92-022 and LER 92-038, relief requests are not an appropriate corrective action for missed tests. The NRC staff concurred with this position during recent telephone discussions between the Authority and the NRC staff.

Reference 1 requested relief for components not pressure tested during the second period of the 2<sup>nd</sup> ISI interval. These required tests were missed and were reported LER-92-022 and LER-92-038. Subsequent pressure tests and VT-2 examination during the 2<sup>nd</sup> interval ensured system integrity.

# **REFERENCES:**

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 NYPA letter, J. Knubel to NRC (JPN-97-023), "Inservice Inspection Program Relief Requests for the Second Ten-Year Interval Closeout and Revised Summary Report," dated July 15, 1997. Attachment 2 to JPN-99-020

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Response to Request for Additional Information Regarding ISI Program Relief Requests for 2<sup>nd</sup> Ten-Year Interval Closeout and Summary Report

Drawing MSK-3037, "I. S. I. - RHR Heat Exchanger Weld Identification," Revision 2, July 21, 1986, 1 sheet

> New York Power Authority James A. FitzPatrick Nuclear Power Plant

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#### Attachment 3 to JPN-99-020

Response to Request for Additional Information Regarding ISI Program Relief Requests for 2<sup>nd</sup> Ten-Year Interval Closeout and Summary Report

# Sketches of FitzPatrick A and B RHR Heat Exchangers

- (1) "'B' RHR Hx scanning limitation for weld N-4B," January 15, 1992, Sheet 2 of 3;
- (2) "N-4B 'B' RHR Hx Scanning Limitation," January 15, 1992, Sheet 3 of 3;
- (3) "N-4B," January 15, 1992, Sheet 2 of 2;
- (4) "'A' RHR Heat Exchanger N 3A," September 29, 1988, Page 3 of 3;
- (5) "N 4A 0° Coverage Plot," January 16, 1995, Sheet 3 of 3;
- (6) "Limitation Sketch of N4-A," January 16, 1995, Sheet 2 of 3;
- (7) "N4-A 1/2 V 70° Coverage Plot," January 16, 1995, Sheet 3 of 3.

New York Power Authority James A. FitzPatrick Nuclear Power Plant



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QUALITY ASSURANCE ENGINEERING DATA SKt. # UT-161

# INSERVICE INSPECTION SKETCH SHEET

"A" RHR HEAT EXCHANGE LINE AND WELD(S) N 3A







Raytheon Engineers & Constructors	
BY S. NEWGARD DATE 1-16-95 CHKD. BY MOR DATE 1/19/ CLIENT N Y P A	195 OFS NO. 6100 DEPT. 2542
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ACHIEVED 100 SCAN OBSTRUCTED FO	% COVERAGE OF THIS CROSS-SECTIONAL PLOT. R 20" (SEE SHETCH), WELD LENGTH = 67.2"
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