



August 10, 1994
JPN-94-041

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Mail Stop P1-137
Washington, DC 20555

Subject: James A. FitzPatrick Nuclear Power Plant
Docket No. 50-333
Generic Letter 92-01, Revision 1,
"Reactor Vessel Structural Integrity"

References: 1. NYPA letter, W. A. Josiger to NRC, "Generic Letter 92-01, Revision 1, Reactor Vessel Structural Integrity," (JPN-94-021), dated April 29, 1994.

Following discussions with the NRC staff, the Authority is providing additional information regarding our response to "Generic Letter 92-01, Revision 1, Reactor Vessel Structural Integrity," (Reference 1).

The NRC requested that the Authority complete and submit the plant applicability verification forms contained in Appendix B to NEDO-32205, "BWR Owners' Group Topical Report on Upper Shelf Energy Equivalent Margin Analysis," Revision 1. Because initial weld USE data is unavailable, a calculated value is used in lieu of the measured value. The NRC also requested that the Authority resubmit the corrections to the NRC's Reactor Vessel Integrity database. Attachments I and II to this letter contain the requested information.

If you have any questions, please contact Mr. J. A. Gray, Jr.

Very truly yours,

William A. Josiger
Acting Executive Vice President
Nuclear Generation

cc: See next page

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- I. Appendix B to NEDO-32205, "BWR Owners' Group Topical Report on Upper Shelf Energy Equivalent Margin Analysis," Revision 1.
- II. Corrections to "Summary File for Pressure-Temperature Limits" and "Summary File for Upper Shelf Energy."

cc: Regional Administrator
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19400

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

Mr. John E. Menning
Project Directorate I-1
Division of Reactor Projects I/II
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Attachment I to JPN-94-041

Appendix B to NEDO-32205, "BWR Owners' Group Topical Report on Upper
Shelf Energy Equivalent Margin Analysis," Revision 1

New York Power Authority

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

EQUIVALENT MARGIN ANALYSIS
PLANT APPLICABILITY VERIFICATION FORM
FOR James A. FitzPatrick Plant

BWR/3-6 PLATE

Surveillance Plate USE:

$$\%Cu = \underline{.13}$$

$$\text{Capsule Fluence} = \underline{2.7 \times 10^{17}} \text{N/CM}^2$$

$$\text{Measured \% Decrease} = \underline{7.0} \quad (\text{Charpy Curves})$$

$$\text{R.G. 1.99 Predicted \% Decrease} = \underline{9.2} \quad (\text{R.G. 1.99, Figure 2})$$

Limiting Beltline Plate USE:

$$\%Cu = \underline{.13}$$

$$32 \text{ EPY Fluence} = \underline{1.3 \times 10^{18}} \text{N/CM}^2$$

$$\text{R.G. 1.99 Predicted \% Decrease} = \underline{14.0} \quad (\text{R.G. 1.99, Figure 2})$$

$$\text{Adjusted \% Decrease} = \underline{11.0} \quad (\text{R.G. 1.99, Position 2.2})$$

$14\% \leq 21\%$, so vessel plates are bounded by equivalent margin analysis
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NEDO-32205-A

EQUIVALENT MARGIN ANALYSIS
PLANT APPLICABILITY VERIFICATION FORM

FOR James A. FitzPatrick Plant

BWR/2-6 WELD

Surveillance Weld USE:

%Cu = .31

Capsule Fluence = 2.7×10^{17} N/CM²

*Calculated ~~Measured~~ % Decrease = 20 (Charpy Curves)

R.G. 1.99 Predicted % Decrease = 20 (R.G. 1.99, Figure 2)

Limiting Beltline Weld USE:

%Cu = .25

32 EFY Fluence = 1.3×10^{18} N/CM²

R.G. 1.99 Predicted % Decrease = 26 (R.G. 1.99, Figure 2)

Adjusted % Decrease = 30 (R.G. 1.99, Position 2.2)

30% ≤ 34%, so vessel welds are
bounded by equivalent margin analysis

*Measured % decrease is unavailable until next surveillance capsule is removed. Calculated value used instead.

Attachment II to JPN-94-041

Corrections to "Summary File for Pressure-Temperature Limits" and
"Summary File for Upper Shelf Energy"

New York Power Authority

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

Summary File for Pressure-Temperature Limits

Plant Name	Beltline Ident.	Heat No. Ident.	ID Heat. Fluence at EOL/EFPY	IRT _{min}	Method of Determin. IRT _{min}	Chemistry Factor	Method of Determin. CF	%Cu	%Ni
Fitz-Patrick EOL: 10/17/2014	Lower Shell	C3394-1	2.51E18 1.96	-10°F	Plant Specific	73.6	Table	0.11	0.56
	Lower Shell	C3376-2	2.51E18 1.96	24°F ¹	Plant Specific	91	Table	0.13	0.60
	Lower Shell	C3103-2	2.51E18 1.96	-2°F ¹	Plant Specific	100	Table	0.14	0.60
	Lower Int. Shell	C3368-1	2.51E18 2.32	-10°F ¹	Plant Specific	81.8	Table	0.12	0.54
	Lower Int. Shell	C3301-1	2.51E18 2.32	-18°F ¹	Plant Specific	134	Table	0.18	0.60
	Lower Int. Shell	C3278-2	2.51E18 2.32	-10°F ¹	Plant Specific	91	Table	0.13	0.60
	Lower Int. Axial Welds 1-Z33A/C	13253/ 12008	2.51E18 2.32	-50°F	Plant Specific	223.9	Table	0.26	0.87
	Lower Shell Axial Welds 2-Z33A/C	27204/ 12008	2.51E18 1.96	-22°F ¹	Plant Specific	241.3	Table	0.25	0.99
	Circ. Weld 1-240	305414	2.51E18 2.32	-50°F	Plant Specific	203.75	Table	0.33	0.59

Reference for FitzPatrick

IRT, fluence, and chemical composition data are from July 9, 1992, letter from R. E. Beedle (PASMY) to USMRC Document Control Desk, subject: Response to Generic Letter 92-01, Revision 1

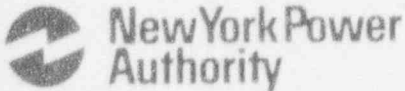
¹Additional information required to confirm value.

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Summary File for Upper Shelf Energy

Plant Name	Beltline Ident.	Heat No.	Material Type	USE at EOL/EFPY	1/4T Neutron Fluence at EOL/EFPY	Unirrad. USE	Method of Determin. Unirrad. USE
FitzPatrick EOL: 10/17/2014	Lower Shell	C3394-1	A 5338-1	73	1.7E18 1.3	86	65%
	Lower Shell	C3376-2	A 5338-1	66	1.7E18 1.3	77	65%
	Lower Shell	C3103-2	A 5338-1	70	1.7E18 1.3	83	65%
	Lower Int. Shell	C3368-1	A 5338-1	58	1.7E18	67	65%
	Lower Int. Shell	C3301-1	A 5338-1	68	1.7E18	83	65%
	Lower Int. Shell	C3278-2	A 5338-1	76 73	1.7E18	85	65%
	Lower Int. Axial Welds 1-233A/C	13253/12008	Linde 1092, SAW	76	1.7E18	104	Direct
	Lower Shell Axial Welds 2-233A/C	27204/12008	Linde 1092, SAW	EMA ²	1.7E18 1.3	EMA ²	---
	Circ. Weld 1-240	305414	Linde 1092, SAW	EMA ²	1.7E18	EMA ²	---
<u>Reference for FitzPatrick</u> Fluence, chemical composition, and USE data are from July 9, 1992, letter from R. E. Beedle (PASNY) to USNRC Document Control Desk, subject: Response to Generic Letter 92-01, Revision 1							

²Licensee must confirm applicability of Topical Report NEDO-32205, Rev. 1



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Very truly yours,

A handwritten signature in dark ink, appearing to read "William A. Josiger", written over a horizontal line.

William A. Josiger
Acting Executive Vice President
Nuclear Generation

cc: See next page

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NEDO-32205-A

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