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 MECEDY, R.C. Rochester Gas & Electric Corp.
 RECIP. NAME RECIPIENT AFFILIATION
 JOHNSON, A.R.

SUBJECT: Provides response to items 2 & 3 of GL 92-01, Rev 1, Suppl 1,
 "Reactor Vessel Structural Integrity."

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ROBERT C. MECREDY
Vice President
Nuclear Operations

November 20, 1995

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Allen R. Johnson
Project Directorate I-1
Washington, D.C. 20555

Subject: Six Month Response to NRC Generic Letter 92-01, Revision 1, Supplement 1, "Reactor Vessel Structural Integrity" R.E. Ginna Nuclear Power Plant Docket No. 50-244

Ref.(a): NRC Generic Letter 92-01, Revision 1, Supplement 1, "Reactor Vessel Structural Integrity", dated May 19, 1995

(b): Letter from R. C. Mecredy (RG&E) to A. R. Johnson (NRC) "Pressurized Thermal Shock Assessment for Ginna Reactor Vessel", R.E. Ginna Nuclear Power Plant, Docket No. 50-244, dated 10/11/95

Dear Mr. Johnson:

The purpose of this letter is to provide the Rochester Gas and Electric response to items (2) and (3) of the reference (a) letter as follows:

<u>Item</u>	<u>Response</u>
(2)	after consideration of all relevant data, there is no change in best estimate chemistry
(3)	a pressurized thermal shock assessment has been provided to NRC for approval which includes the ratioing technique described in Position 2.1 of Regulatory Guide 1.99, Rev. 2.

Item (4) of Reference (a) requires that a written report be generated which addresses RPV integrity, LTOP or P/T limits as required. The RPV integrity has been addressed by reference (b) for NRC review and approval. LTOP and P/T limits have been addressed by the RG&E Improved Technical Specification submittal per NUREG-1431. Completion of these activities will constitute completion of item (4).

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The attached tables provide the data applicable to the R.E. Ginna
RPV integrity.

Very truly yours,


Robert C. Mecredy

Attachment
REJ\399

xc: Mr. Allen R. Johnson (Mail Stop 14B2)
Project Directorate I-1
Washington, D.C. 20555

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

Ginna Senior Resident Inspector

Table 1. R. E. Ginna - - Data Summary for Pressurized Thermal Shock Calculation

Beltline Material	Heat No.	IS Neut. Fluence at EOL/EFY	IRT_{NDT} F	Method of Determin. IRT_{NDT}	Chemistry Factor	Method of Determin. CF	%Cu	%Ni
Upper Shell Forging	123P118VA1	$3.69E+18^1$	$+30^3$ ($\sigma_1=0$)	Plant Specific	223.6	RG1.99 Table 2	0.35^9	0.68^3
Interm. Shell Forging	125S255VA1	$3.68E+19^2$	$+20^3$ ($\sigma_1=0$)	Plant Specific	16.2^6	Calculated	0.07^{10}	0.68^{10}
Lower Shell Forging	125P666VA1	$3.68E+19^2$	$+40^3$ ($\sigma_1=0$)	Plant Specific	27.80^6	Calculated	0.05^{10}	0.68^{10}
SA-1101 US to IS Circ. Weld	71249	$3.72E+18^1$	$+10^4$ ($\sigma_1=0$)	Plant Specific	173.56^7	Calculated	0.26^{11}	0.60^{11}
SA-847 IS to LS Circ. Weld	61782	$3.68E+19^2$	-19.5^5 ($\sigma_1=18.5$)	Plant Specific	TBD*	Calculated	0.25^{11}	0.54^{11}
SA-848 LS to Dutch. Circ. Weld	61782	N/A ¹	-19.5^5 ($\sigma_1=18.5$)	Plant Specific	TBD*	Calculated	0.25^{11}	0.54^{11}

* To Be Determined - Currently under NRC review.⁸

Table 1. (cont.) R. E. Ginna - - Data Summary for Pressurized Thermal Shock Calculations

NOTES:

1. Values from July 2, 1992 letter from R. C. Mecredy (RG&E) to A. R. Johnson (USNRC) Subject: Reactor Vessel Structural Integrity, 10CFR50.54(f), Response to Generic Letter 92-01, Revision 1, R. E. Ginna Nuclear Power Plant.
2. Values determined from WCAP-13902 and WCAP-13893.
3. Values determined from data in Material Test Report.
4. Value determined from data in EPRI NP-373.
5. Mean value from data in BAW-1803, Revision 1 and BAW 1920P.
6. Chemistry Factors for forging 125S255VA1 and forging 125P666VA1 were determined using REG surveillance data as reported in WCAP-13902 and WCAP 13893.
7. Chemistry Factor for weld metal SA-1101 was determined using TP3 surveillance data for weld metal SA-1101. The TP3 30 ft-lb transition temperature shift data were obtained from BAW-1803, Revision 1, while the fluence data for the capsules were obtained from BAW-1803, Revision 1 and NUREG CR-3319, Revision 1.
8. Chemistry Factor for weld metal SA-847 and weld metal SA-848 was determined using B&WOG surveillance data for weld metal SA-1135 and R.E. Ginna surveillance data for weld metal SA-1036. These surveillance welds were fabricated with the same wire heat as weld metal SA-847 and weld metal SA-848. The B&WOG surveillance data were obtained from BAW-1803, Revision 1. The R.E. Ginna surveillance data were obtained from WCAP-13902 and used ratioing guidance per Regulatory Guide 1.99 Revision 2.
9. No data available for this material, therefore, 0.35% is specified as defined in Regulatory Guide 1.99, Revision 2.
10. Values obtained from BAW-2150.
11. Values obtained from BAW-2121P and BAW-1500.

Table 2. R. E. Ginna - - Data Summary for Upper-Shelf Energy Calculation

Beltline Material	Heat No.	Material Type	1/4T USE at EOL	1/4T Neutron Fluence at EOL	Unirrad. USE	Method of Determin. Unirrad. USE
Upper Shell Forging	123P118VA1	SA-336	78.8 ¹	2.71E+18 ³	117	MTEB 5-2 ⁵ : 65% (Matl. Cert.)
Interm. Shell Forging	125S255VA1	A 508-2	72.6 ¹	2.49E+19 ^{1.7}	91	MTEB 5-2 ⁵ : 65% (Surv. Matl.)
Lower Shell Forging	125P666VA1	A 508-2	94.2 ¹	2.49E+19 ^{1.7}	114	MTEB 5-2 ⁵ : 65% (Surv. Matl.)
SA-1101 US to IS Circ. Weld	71249	Linde 80 SAW	EMA ²	2.71E+18 ³	70	Generic ⁶
SA-847 IS to LS Circ. Weld	61782	Linde 80 SAW	> 50 ft-lbs ⁷	2.49E+19 ^{1.7}	70	Generic ⁶
SA-848 LS to Dutch. Circ. Weld	61782	Linde 80 SAW	N/A ⁴	<1.00E+17 ³	70	Generic ⁶

Table 2. (cont.) R. E. Ginna - - Data Summary for Upper-Shelf Energy Calculation

NOTES:

1. Values determined using Regulatory Guide 1.99, Revision 2, guidelines.
2. USE issue covered by the approved equivalent margins analysis in the Topical Reports BAW-2192PA and BAW-2178PA.
3. Values obtained from BAW-2192PA
4. Not applicable due to fluence being below threshold
5. Unirradiated USE is 65% of the USE from a longitudinal oriented specimens as defined in MTEB 5-2.
6. Unirradiated USE is determined using data from other plants with similar materials to the beltline material (BAW-1803, Table 3-5).
7. Values determined using capsule surveillance results WCAP-13902

