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SUBJECT: Forwards summary for pressurized thermal shock calculation
 re GL 92-01 closout.

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ROBERT C. MECREDY
Vice President
Ginna Nuclear Production

June 30, 1994

U.S. Nuclear Regulatory Commission
Document Control Desk
Attn: Allen R. Johnson
Project Directorate I-3
Washington, D.C. 20555

Subject: Response to Generic Letter 92-01 Request for Closure
Information
R.E. Ginna Nuclear Power Plant
Docket No. 50-244

Ref.(a): Letter from A. R. Johnson (NRC) to R. C. Mecredy (RG&E),
Generic Letter (GL) 92-01, Revision 1, Reactor Structural
Integrity", dated April 12, 1994

(b): Letter from R. C. Mecredy (RG&E) to A. R. Johnson (NRC),
"Generic Letter 92-01 Revision 1 Reactor Structural
Integrity Response for Additional Information", dated May
16, 1994

(c): Letter from R. C. Mecredy (RG&E) to A. R. Johnson (NRC),
"Analysis of Capsule "S" from the Rochester Gas and
Electric Corporation R. E. Ginna Reactor Vessel WCAP
13902 December 1993", dated March 29, 1994

Dear Mr. Johnson:

The reference (a) letter requested information to support closeout
of issues addressed in Generic Letter 92-01. Specifically, it was
requested that data listed in two tables attached in that reference
be evaluated and updated as required. Rochester Gas and Electric
Corporation (RG&E) provided its initial response in reference (b).
It is the intent of this letter to complete RG&E's response.

The data applicable to the R. E. Ginna reactor vessel are provided
in Tables 1 and 2 attached. These data reflect results derived
from the latest surveillance capsule (ref. c) and information
derived through the B&W Owners Group. The attached data supersedes
the data provided in reference (b).

The B&W Owners Group has provided Topical Reports BAW-2178PA and
BAW-2192PA which present equivalent margin analyses to address
conditions of low upper-shelf energy. Though the R. E. Ginna
reactor vessel does not demonstrate low upper shelf energy for its
limiting SA-847 weld material, RG&E endorses the results and
conclusions presented in these reports and may choose to apply

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these reports to the Ginna reactor vessel should conditions later warrant.

Very truly yours,


Robert C. Mecredy

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xc: 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/EFPY	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	$3.68E+19^2$	-5^5 ($\sigma_1=19.7$)	Generic	147.19^8	Calculated	0.25^{11}	0.54^{11}
SA-848 LS to Dutch. Circ. Weld	61782	N/A ¹	-5^5 ($\sigma_1=19.7$)	Generic	147.19^8	Calculated	0.25^{12}	0.54^{12}

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.
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 REG 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 REG surveillance data were obtained from WCAP-13902.
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.
12. Values obtained from 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

