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J. D. Woodard
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the southern electric system

January 31, 1997

Docket Nos. 50-321
50-366

HL-5310

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

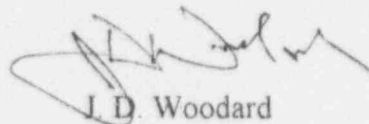
Edwin I. Hatch Nuclear Plant
Response to Request for Additional Information
on Technical Specification Revision Request:
Pressure-Temperature Limits

Gentlemen:

This letter elaborates on our response to an NRC request for additional information concerning our pressure/temperature submittal of September 19, 1996. Our response was submitted on January 23, 1997. You have since verbally asked for an elaboration on the response to question C; it is provided in the enclosure.

Additionally, the attachment contains the welding material qualifications for two heat numbers of Weld 1-313.

Sincerely,



J. D. Woodard

OCV/eb

Enclosure: Additional Information on Technical Specification Revision:
Pressure-Temperature Limits

Attachment: Welding Material Qualifications for Weld 1-313,
Heat Number 33A277/0091 Flux 3977 Lot and
Heat Number 90099/0091 Flux 3977 Lot

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U. S. Nuclear Regulatory Commission
January 31, 1997

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cc: Georgia Power Company
Mr. H. L. Sumner, Nuclear Plant General Manager
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.
Mr. K. Jabbour, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II
Mr. L. A. Reyes, Regional Administrator
Mr. B. L. Holbrook, Senior Resident Inspector - Hatch

Enclosure
Edwin I. Hatch Nuclear Plant
Response to Request for Additional Information
on Technical Specification Revision Request:
Pressure-Temperature Limits

Question:

Please provide supporting information to document the initial RT_{NDT} of -50°F for Weld 1-313 with heat and lot number 33A277/0091 flux 3977 and why -10°F was previously used for Weld 1-313.

Response:

In NEDC-30997, "Edwin I. Hatch Nuclear Power Plant, Unit 1, Reactor Pressure Vessel Surveillance Materials Testing and Fracture Toughness Analysis", dated October, 1985 only the weld material with the limiting initial RT_{NDT} was reported in Tables 3-2 and 3-4, even though the data was available for the other welds (for example, the chemistry for 33A277 as well as 90099 are reported in Table 3-1). Therefore, in NEDC-30997, the limiting weld initial RT_{NDT} of -10°F was used for all welds. This was an unnecessary conservative assumption. Subsequently, Reg. Guide 1.99 was revised and the NRC issued Generic Letter (GL) 88-11. In Georgia Power Company's response to GL 88-11 the unnecessary conservatism was removed by reporting the -50°F initial RT_{NDT} for 33A277. Later, in the Georgia Power response to GL 92-01, we made the following statement in response to NRC question 2.b in referring to beltline weld materials, "The unirradiated RT_{NDT} was determined from the procedure as the higher of either (T_{50T} - 60°F) or -50°F. Accordingly, initial RT_{NDT} values used in the Appendix G analysis were 10°F for plate and -10°F for weld." Again, only the data for the limiting weld initial RT_{NDT} was reported. As described in our January 23, 1997 letter, when the NRC asked Plant Hatch to confirm the data for the reactor vessel integrity database (RVID), in which the initial RT_{NDT} for heat numbers 90099 and 33A277 were both reported as -10°F, we failed to notify you that the correct number for heat 33A277 was -50°F.

In the current PT submittal under review by the NRC, the evaluation was performed consistent with the GL 88-11 submittal.

Enclosure
Pressure-Temperature Limits

- Attached is the Welding Material Qualification for heat number 33A277/0091 flux 3977 lot to support the calculation of initial RT_{NDT} .

For heat number 33A277, since the Charpy tests at 10°F are all above 50 ft-lbs, the initial RT_{NDT} is the higher of the NDT or the (CVN 50 ft-lb - 60°F).

$$(CVN 50 \text{ ft-lb}) - 60^{\circ}\text{F} = 10^{\circ}\text{F} - 60^{\circ}\text{F} = -50^{\circ}\text{F}$$

In the absence of NDT data, RT_{NDT} shall not be lower than -50°F. Therefore, the initial RT_{NDT} is -50°F.

- Also, for comparison purposes, the Welding Material Qualification for heat number 90099/0091 flux 3977 lot is attached.

For heat number 90099, since the lowest Charpy tests value at 10°F is 30 ft-lbs, the CVN 50 ft-lb is calculated as follows:

$$CVN 50 \text{ ft-lb} = (50 \text{ ft-lb} - 30 \text{ ft-lb}) \times 2^{\circ}\text{F/ft-lb} + 10^{\circ}\text{F} = 50^{\circ}\text{F}$$

Initial RT_{NDT} is the higher of the NDT or the (CVN 50 ft-lb - 60°F)

$$(CVN 50 \text{ ft-lb}) - 60^{\circ}\text{F} = 50^{\circ}\text{F} - 60^{\circ}\text{F} = -10^{\circ}\text{F}$$

Therefore, the initial RT_{NDT} is -10°F.

As presented, the initial RT_{NDT} for Weld ID 1-313 with heat number 90099/0091 flux 3977 lot is -10°F and for Weld ID 1-313 with heat number 33A277/0091 flux 3977 lot is -50°F. Please revise the RVID to reflect that -50°F is the correct initial RT_{NDT} for Weld ID 1-313 with heat number 33A277/0091 flux 3977 lot.

Attachment

**Welding Material Qualifications for Weld 1-313,
Heat Number 33A277/0091 Flux 3977 Lot and
Heat Number 90099/0091 Flux 3977 Lot**

COMBUSTION ENGINEERING, INC.

ADDRESSEE	SUBJECT	FROM — DATE
Mr. P. C. Kiefer cc: Mr. R. E. Lorentz, Jr. Mr. S. A. Lewis Mr. S. R. Lewis Mr. J. E. Brasfield	Welding Material Qualification to Requirements of ASME Section III A-32255 810560	Metallurgical Research and Development Department Chattanooga October 7, 1970

The following test data is for 3/16" diameter bare wire, type B-4, heat number 33A277, flux type 0091, lot number 3977.

A weld deposit was made using the above heat of wire and lot of flux. Welding was done in accordance with C. E. Welding Procedure Specification B-4 SAA-11S(2). The completed weldment was given a post weld heat treatment of 1150°F ±25°F for 40 hours and furnace cooled to 600°F.

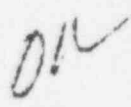
Charpy V-Notch Impacts

<u>Test Code</u>	<u>Ft/Lbs. @ +10°F</u>	<u>Requirements</u>
BB	111, 106, 113	20 Ft/Lbs @ +10°F

All Weld Metal .505 Tensile

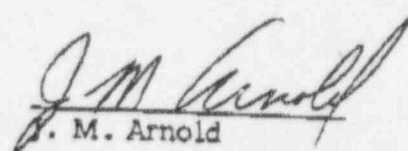
<u>Yield Strength KSI</u>	<u>Ultimate Tensile Strength KSI</u>	<u>Elongation in 2" %</u>	<u>Reduction of Area %</u>
67.7	81.3	31.0	70.2

JMA:sl


**NUCLEAR
QUALITY ENGR.**

OCT 10 1970

P. C. K.


 J. M. Arnold

ENGINEERING, INC.

RESSEE	SUBJECT	FROM — DATE
Mr. P. C. Kiefer	Welding Material Qualification to Requirements of ASME	Metallurgical Research & Development Department Chattanooga
cc: Mr. R. E. Lorentz, Jr.	Section III	
Mr. S. A. Lewis	A-32255	
Mr. S. R. Lewis	810560	October 7, 1970
Mr. J. E. Brasfield		

The following test data is for 3/16" diameter bare wire, type B-4, heat number 90099, flux type 0091, lot number 3977.

A weld deposit was made using the above heat of wire and lot of flux. Welding was done in accordance with C. E. Welding Procedure Specification SAA-33 L(1). The completed weldment was given a post weld heat treatment of 1150°F ±25°F for 40 hours and furnace cooled to 600°F.

Charpy V-Notch Impacts

<u>Test Code</u>	<u>Ft/Lbs. @ +10°F</u>	<u>Requirements</u>
3C	56, 30, 52	30 Ft/Lbs @ +10°F

All Weld Metal .505 Tensile

<u>Yield Strength KSI</u>	<u>Ultimate Tensile Strength KSI</u>	<u>Elongation in 2" %</u>	<u>Reduction of Area %</u>
77.0	89.5	25.0	68.6

JMA:sl

OK

J. M. Arnold
J. M. Arnold

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P. C. K.