

**Southern Nuclear
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November 13, 2007

Docket No.: 50-321

NL-07-2108

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D. C. 20555-0001

Edwin I. Hatch Nuclear Plant – Unit 1
Response to NRC Request Regarding Alternative ISI-ALT-08

Ladies and Gentlemen:

Pursuant to your electronic mail request dated October 15, 2007, Southern Nuclear Operating Company (SNC) hereby provides its response concerning the projected fluence value for the limiting axial weld. ISI-ALT-08 (letter NL-07-0270, dated March 8, 2007) was submitted to extend the authorization for the elimination of the RPV circumferential shell weld examinations required by ASME Code through the renewed license period of extended operation (PEO) at Plant Hatch-Unit 1. The NRC request and the SNC response are provided in the enclosure to this letter.

This letter contains no NRC commitments. If you have any questions, please advise.

Sincerely,

A handwritten signature in black ink, appearing to read "B. J. George". The signature is fluid and cursive, with a long horizontal stroke at the end.

B. J. George
Manager, Nuclear Licensing

BJG/MNW/daj

Enclosure: 1. Response to NRC Request Regarding Alternative ISI-ALT-08

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cc: Southern Nuclear Operating Company
Mr. J. T. Gasser, Executive Vice President
Mr. D. R. Madison, Vice President – Hatch
Mr. D. H. Jones, Vice President – Engineering
RTYPE: CHA02.004

U. S. Nuclear Regulatory Commission
Dr. W. D. Travers, Regional Administrator
Mr. R. E. Martin, NRR Project Manager – Hatch
Mr. J. A. Hickey, Senior Resident Inspector – Hatch

**Edwin I. Hatch Nuclear Plant - Unit 1
Response to NRC Request Regarding Alternative ISI-ALT-08**

Enclosure 1

Enclosure 1

Response to NRC Request Regarding Alternative ISI-ALT-08

Restatement of NRC Request

RE: Proposed Alternative for RPV Circumferential Weld Examinations, NL-07-0270

There is one more piece of data that is needed in order to authorize the request to extend the RV circumferential weld relief out through the end of the period of extended operation: SNC is requested to provide the updated 49.3 EFPY projected fluence value for the limiting axial welds at Hatch 1 that were calculated using the NRC-approved RAMA fluence methodology. 49.3 EFPY is now the number of EFPYs corresponding to the end of the period of extended operation. The reason we need this new end-of-life fluence for the axial welds is because the BWRVIP-05 provisions for eliminating circ. weld examination relief are based on the assumption that the limiting axial weld failure frequency would remain less than 5.0 EE-06 per reactor-year through the end of the period of extended operation. In order to demonstrate this, the licensee needs to provide a valid axial weld fluence value that results in an axial weld Mean RT-NDT value of less than 114 degrees F.

This request is similar to our original RAI on ISI-ALT-08, where we requested this data for the circ. welds. All we need is the new updated 49.3 EFPY limiting axial weld fluence value.

Enclosure 1

Response to NRC Request Regarding Alternative ISI-ALT-08

SNC Response for Plant Hatch - Unit 1

The projected fluence value calculated by RAMA for the limiting axial weld at the end of the period of extended operation (PEO) at Hatch 1 is 0.220×10^{19} n/cm², with the end of the PEO being defined at 49.3 EFPY.

The Hatch Unit 1 mean RT_{NDT} of 63.1⁰F for the limiting axial weld is bounded by the mean RT_{NDT} of 114⁰F assumed in the analysis to demonstrate an RPV failure frequency of approximately 5E-06 per reactor year.

Hatch 1 End of PEO 49.3 EFPY Limiting Axial Weld	
Fluence (10^{19} n/cm²)	0.220
ΔRT_{NDT} (⁰F)	113.1
$RT_{NDT(U)}$ (⁰F)	-50
Mean RT_{NDT} (⁰F)	63.1