

David H. Jones
Vice President
Engineering

**Southern Nuclear
Operating Company, Inc.**
40 Inverness Center Parkway
Birmingham, Alabama 35242

Tel 205.992.5984
Fax 205.992.0341



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January 30, 2008

Docket No.: 50-321

NL-08-0132

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

Edwin I. Hatch Nuclear Plant – Unit 1
Response to NRC Questions Regarding Modification of the
Core Shroud Stabilizer Assemblies

Ladies and Gentlemen:

By letter dated August 14, 2007, pursuant to 10 CFR 50.55a(a)(3)(i), Southern Nuclear Operating Company (SNC) requested NRC approval of a proposed modification to each of the four core shroud stabilizer assemblies. During the upcoming 2008 Refueling Outage (1RFO23), SNC proposes to replace the Hatch Unit 1 stabilizer assembly upper supports and tie rod top nuts with an improved design. By letter dated November 29, 2007, the NRC requested additional information regarding this submittal. By letter dated December 18, 2007, SNC provided responses to these questions. Per telephone conversation on January 29, 2008, the NRC requested additional information. The SNC responses are provided in Enclosure 1.

The NRC commitments contained in this letter are provided as a table in Enclosure 2. If you have any questions, please advise.

Sincerely,

A handwritten signature in black ink, appearing to read "D. H. Jones", is written over a large, stylized "J" that loops back to the left.

David H. Jones
Vice President – Engineering

DHJ/MNW/daj

- Enclosures:
1. SNC Responses to NRC Questions Regarding Core Shroud Stabilizer Modification
 2. List of Regulatory Commitments

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

U. S. Nuclear Regulatory Commission
Mr. V. M. McCree, Acting Regional Administrator
Mr. R. E. Martin, NRR Project Manager – Hatch
Mr. J. A. Hickey, Senior Resident Inspector – Hatch

**Edwin I. Hatch Nuclear Plant
Proposed Modification of the Unit 1 Core Shroud Stabilizer Assemblies**

Enclosure 1

**SNC Responses to NRC Questions Regarding Core Shroud
Stabilizer Modification**

Enclosure 1

SNC Responses to NRC Questions Regarding Core Shroud Stabilizer Modification

NRC Question 1

What is the inspection method and frequency SNC will use to examine the upper support radius location where cracking occurred previously?

SNC Response

As described in Enclosure 2, SNC will inspect the upper support arm inner and outer corner radius locations during the 2010 refueling outage and on a 10-year interval thereafter. The technique used will be VT-1, visual examination as described in the 2001 Edition of the ASME Section XI Code with 2003 Addenda. The existing flaws were initially detected with a VT-3 examination technique and confirmed with EVT-1.

NRC Question 2

Section 6.1 of Enclosure 1 of NL-07-1155 indicates that the Tie Rod Upper Support Dowel Pins could be fabricated from Type 316SS or Alloy X750. Table 6-3 of Enclosure 2 indicates that the Tie Rod Upper Support Dowel Pins were fabricated from Type 316SS. If the Tie Rod Upper Support Dowel Pins were fabricated from Alloy X750, have they been evaluated for IGSCC susceptibility?

SNC Response

The Tie Rod Upper Support Dowel Pins are made of Alloy X750. The Shroud Repair Replacement Upper Support Stress Analysis Report (Enclosure 2 of NL-07-1155) evaluated the Tie Rod Upper Support Dowel Pins as Type 316SS. The stress for the Dowel Pins is listed on Table 6-3 of Enclosure 2 and is the same regardless of the type of material used. Type 316SS has significantly more limiting material properties than Alloy X750 as shown on Table 4-1 of Enclosure 2 of NL-07-1155 and the stress for the Alloy X750 dowel pins is significantly less than the threshold for Alloy X750 IGSCC initiation listed on Table 5-3 of Enclosure 2. Thus, it can be concluded that Tie Rod Upper Support Dowel Pins fabricated from Alloy X750 pass the IGSCC susceptibility screen criteria by a large margin.

NRC Question 3

How does the proposed modification impact downcomer flow?

SNC Response

The proposed modification is bounded by the analysis contained in the original core shroud stabilizer design submittal dated September 2, 1994 as it relates to downcomer flow and water inventory in the downcomer (GENE-771-42-0894, Rev. 0, Section 1.4).

**Edwin I. Hatch Nuclear Plant
Proposed Modification of the Unit 1 Core Shroud Stabilizer Assemblies**

Enclosure 2

List of Regulatory Commitments

Enclosure 2

List of Regulatory Commitments

The following table identifies those actions committed by Southern Nuclear Operating Company in this document for Edwin I. Hatch Nuclear Plant. Any other statements in this submittal are provided for information purposes and are not considered to be regulatory commitments.

Commitment	Type		Scheduled Completion Date (If Required)
	One-Time Action	Continuing Compliance	
In the first refueling outage following installation of the modified tie rod upper supports, SNC will inspect the upper support arm inner and outer corner radius locations using a VT-1 examination technique as described in the 2001 Edition of the ASME Section XI Code with 2003 Addenda.	X		During 1RFO24, scheduled for February 2010.
On a 10-year interval following the 1RFO24 outage, SNC will inspect the upper support arm inner and outer corner radius locations using a VT-1 examination technique as described in the 2001 Edition of the ASME Section XI Code with 2003 Addenda.		X	On a 10-year interval following 1RFO24.