

**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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NL-08-0746

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

**Edwin I. Hatch Nuclear Plant – Unit 1**  
**Notification of Deviation from BWRVIP-76**

Ladies and Gentlemen:

In accordance with an agreement with the Boiling Water Reactor Vessel Improvement Program (BWRVIP), participating licensees will notify the NRC staff within 45 days of a decision by the licensee to not fully implement the approved guidance. Plant Hatch-Unit 1 will not fully implement the subject guidance with respect to examination of horizontal welds on the Core Shroud contained in BWRVIP-76.

During the Plant Hatch-Unit 1 Refueling Outage 22, upper support arms at two of the four core shroud stabilizer locations were found with indications, one at 135 degrees and one at 225 degrees. Southern Nuclear Operating Company (SNC) resolved those indications by performing examination and evaluation of core shroud horizontal welds which determined that sufficient shroud horizontal weld ligament was present and acceptable for at least a cycle of operation. SNC then submitted a shroud stabilizer modification design that would have replaced the four upper supports with an improved design. This design was intended for implementation during the Plant Hatch-Unit 1 Refueling Outage 23 and was approved by the NRC staff by safety evaluation (TAC NO. MD6396).

As documented in SNC NL-08-0350, dated March 8, 2008, two of the four upper supports were not replaced and permission was requested to postpone the replacement until the Plant Hatch-Unit 1 Refueling Outage 24. The two locations (225 degrees and 45 degrees) were successfully reassembled. However, the location at azimuth 225 degrees contained the indication previously identified during Plant Hatch-Unit 1 Refueling Outage 22. The indication was visually reexamined and was evaluated to have grown at approximately half the rate assumed for the comparable evaluation following Plant Hatch-Unit 1 Refueling Outage 22. Additionally, the 45 degree location was visually examined with no indications recorded. An evaluation established that the 225 degree upper support will not become a loose part during the next fuel cycle. Shroud horizontal weld ultrasonic examinations were employed that established the structural integrity of the shroud for the additional fuel cycle.

Core Shroud BWRVIP Inspection and Evaluation Guidelines (BWRVIP-76) specify an inspection scope of 100 percent of the accessible horizontal welds. Examination of 100 percent of the accessible areas of the horizontal welds was not performed for the following reasons:

- justifying a long term interval for re-inspection was not the objective;
- the limited availability of inspection equipment and qualified personnel;
- the emergent nature of the examinations.

Based on the criteria in BWRVIP-76 Appendix D, an ultrasonic examination scope was determined to ensure the remaining ligament needed for an additional operating cycle existed on welds H1 through H7. Examination results were applied to flaw evaluations to provide assurance that the horizontal welds will provide the necessary structural support until the shroud stabilizer modification can be completed during the Plant Hatch-Unit 1 Refueling Outage 24.

The deviation from the BWRVIP guidelines has been prepared, reviewed, and approved in accordance with SNC internal procedures. The review provides assurance that there are no safety implications or reliability concerns with the deviations. The shroud and shroud stabilizer recovery efforts and results, including this deviation, were discussed in various teleconferences between SNC, NRC NRR, and NRC Region II.

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

Sincerely,  


D. H. Jones  
Vice President – Engineering

DHJ/PAH/daj

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. L. A. Reyes, Regional Administrator  
Mr. R. E. Martin, NRR Project Manager – Hatch  
Mr. J. A. Hickey, Senior Resident Inspector – Hatch