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March 10, 2003

Docket Nos.: 50-348  
50-364

NL-03-0455

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

Joseph M. Farley Nuclear Plant  
Inservice Inspection Program  
Additional Information for Request for Relief No. RR-48

Ladies and Gentlemen:

By letter dated September 28, 2001, Southern Nuclear Operating Company (SNC) submitted Request for Relief No. RR-48 for the Inservice Inspection Program for the Joseph M. Farley Nuclear Plant, Units 1 and 2. Relief was requested from the 1989 Edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code Section XI requirement. Based on discussions with the NRC staff, SNC revised RR-48 in letter dated April 30, 2002 to the NRC.

Subsequent to the SNC April 30, 2002 letter, additional discussions were held with the NRC staff in which information was requested. As a result of these discussions, SNC is requesting that a visual examination be used in lieu of an ultrasonic examination performed on the reactor vessel inner nozzle radius section per ASME Table IWB-2500-1, Examination Category B-D. Enclosed are the additional NRC requests and the SNC responses.

Sincerely,

A handwritten signature in black ink, appearing to read "J. B. Beasley, Jr.", written over a printed name.

JBB/JLS/sdl

Enclosure

A047

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cc: Southern Nuclear Operating Company  
Mr. J. D. Woodard, Executive Vice President  
Mr. D. E. Grissette, General Manager – Plant Farley  
Document Services RTYPE: CFA04.054

U. S. Nuclear Regulatory Commission  
Mr. L. A. Reyes, Regional Administrator  
Mr. F. Rinaldi, NRR Project Manager – Farley  
Mr. T. P. Johnson, Senior Resident Inspector – Farley

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**NRC Request**

1. *The April 30, 2002 submittal does not provide specific identification of the nozzles affected by this request. Provide a list/table of the nozzles, nozzle sizes, percent of coverage from prior examinations, and when last (month/year) examined. Discuss the effects on coverage as a result of changing the examination method from UT to VT. Discuss meaning of the phrase "essentially 100% coverage." If there are any restrictions that limit the examination, provide a sketch showing the obstruction*

**SNC Response**

Unit 1

Component	Description	Nozzle Size	UT - Percent Coverage	Date Examined
ALA1-1100-17IR	NOZZLE INSIDE RADIUS / OUTLET	29"	92.8 %	April 1997
ALA1-1100-18IR	NOZZLE INSIDE RADIUS / INLET	27.5"	100 %	April 1997
ALA1-1100-19IR	NOZZLE INSIDE RADIUS / OUTLET	29"	92.8 %	April 1997
ALA1-1100-20IR	NOZZLE INSIDE RADIUS / INLET	27.5"	100 %	April 1997
ALA1-1100-21IR	NOZZLE INSIDE RADIUS / OUTLET	29"	92.8 %	April 1997
ALA1-1100-22IR	NOZZLE INSIDE RADIUS / INLET	27.5"	100 %	April 1997

Unit 2

Component	Description	Nozzle Size	UT - Percent Coverage	Date Examined
APR1-1100-17IR	NOZZLE INSIDE RADIUS / OUTLET	29"	100 %	November 1999
APR1-1100-18IR	NOZZLE INSIDE RADIUS / INLET	27.5"	100 %	November 1999
APR1-1100-19IR	NOZZLE INSIDE RADIUS / OUTLET	29"	100 %	November 1999
APR1-1100-20IR	NOZZLE INSIDE RADIUS / INLET	27.5"	100 %	November 1999
APR1-1100-21IR	NOZZLE INSIDE RADIUS / OUTLET	29"	100 %	November 1999
APR1-1100-22IR	NOZZLE INSIDE RADIUS / INLET	27.5"	100 %	November 1999

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For the visual examination, 100% coverage will be obtained. For Unit 1 outlet nozzles, the examination coverage will increase from 92.8% to 100%. The phrase "essentially 100% coverage" will be 100% coverage of the required surface area as defined by ASME Section XI, IWB-2500-7(a) and (b) for examination area M-N. Typically for all ISI examinations, the definition of "essentially 100% coverage" means that at least 90% coverage has been achieved and this is acceptable without requesting NRC relief. This corresponds to the ASME Code Case N-460 which indicates that Code coverage in excess of 90% is permissible. The NRC has accepted this philosophy in Regulatory Guide 1.147.

This examination will be performed at the end of the ISI interval with the upper and lower internals removed. There will be no restrictions or physical limitations that would prevent 100% coverage.

**NRC Request**

2. *Describe the skill of the personnel and the remote visual equipment system that will be used for the examination. Discuss the resolution sensitivity and any difficulty in maintaining a minimum 1 mil wide wire/crack resolution sensitivity during the examination. Provide a description of the demonstration for resolution sensitivity.*

**SNC Response**

The visual personnel performing this examination will be certified Level II or III VT-1 personnel. The equipment to be used will have the required lighting and magnification to detect a 0.001" (1 mil) wire. The camera operators will be trained in the use and control of the equipment. The examination will be performed remotely. The examination will be demonstrated with a resolution standard that will have the 0.001" wire in a holder that will be placed in the water. The resolution standard will be resolved at the minimum and maximum distance from the camera to the resolution standard, along with the lighting to be used during the examination. This resolution demonstration will be recorded, along with the examination, on a video tape or similar permanent storage medium. Since Farley will have the lower internals removed and no examination restrictions will exist, the distance from the camera to the nozzle inside radius section will be dictated by the successful demonstration of resolution from the 0.001" wire.

**NRC Request**

3. *Discussion (sic), in numeric terms, any reduction in radiation exposure associated with using VT in lieu of UT for the inner nozzle radius examinations.*

**SNC Response**

Since both the ultrasonic and the visual examinations are performed remotely, the expected dose savings will be minimal, less than 50 millirem per Farley unit.