

**Dave Morey**  
Vice President  
Farley Project

**Southern Nuclear  
Operating Company, Inc.**  
Post Office Box 1295  
Birmingham, Alabama 35201  
Tel 205.992.5131

August 2, 2001  
Docket Nos.: 50-348  
50-364



*Energy to Serve Your World<sup>SM</sup>*  
NEL-01-0153

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

**Joseph M. Farley Nuclear Plant**  
**Inservice Inspection Relief Request Numbers R-44, RR-45, R-46 and RR-47**

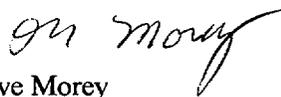
Ladies and Gentlemen:

Southern Nuclear Operating Company (SNC) submitted the following relief requests on December 18, 2000; Unit 1 relief requests RR-44, RR-45 and RR-46 and Unit 2 relief requests RR-44, RR-45, and RR-47. These relief requests were necessary due to coverage limitations for weld examinations. As described in Attachment 1, SNC submitted relief requests for ISI examinations performed to two different ASME Code Editions for Unit 2, which resulted in some confusion. SNC was allowed by the NRC to update the Unit 2 ASME Code Edition early in the interval to coincide with the Unit 1 ISI interval such that the third Period ISI examinations were performed to the 1989 ASME Code. To eliminate this source of confusion, SNC will seek relief for the examinations performed to the different ASME Code Editions separately. SNC is now withdrawing Unit 2 relief requests RR-45 and RR-47.

By this letter SNC is submitting a revised Unit 2 relief request RR-45 that addresses examinations performed during the second Interval third Period using the 1989 Code. In accordance with the provisions of 10 CFR 50.55a, SNC is requesting NRC approval of this relief request. SNC plans to submit a revised RR-47 for Unit 2 at a later date.

In Attachment 1 to this letter, SNC is providing responses to NRC questions concerning RR-44, RR-45, RR-46 and RR-47. Attachment 2 provides our revised Relief Request RR-45. If you have any questions, please advise.

Respectfully submitted,

  
Dave Morey

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**Attachments:**

- Attachment 1: SOUTHERN NUCLEAR OPERATING COMPANY ADDITIONAL RESPONSES TO NRC QUESTIONS.
- Attachment 2: REVISED COPY OF SOUTHERN NUCLEAR OPERATING COMPANY FARLEY UNIT 2 RR-45 FOR EXAMINATIONS TO THE 1989 ASME CODE.

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U. S. Nuclear Regulatory Commission

cc: Southern Nuclear Operating Company  
Mr. L. M. Stinson, General Manager

U. S. Nuclear Regulatory Commission, Washington, D. C.  
Mr. F. Rinaldi, Licensing Project Manager – Farley

U. S. Nuclear Regulatory Commission, Region II  
Mr. L. A. Reyes, Regional Administrator  
Mr. T. P. Johnson, Senior Resident Inspector – Farley

**ATTACHMENT 1**

**SOUTHERN NUCLEAR OPERATING COMPANY  
ADDITIONAL RESPONSES TO NRC QUESTIONS**

## SNC Responses to NRC Questions on RR-44 through RR-47

**1) NRC Question:** Please clarify what is meant by an interim interval. There is no such thing as an 'updated' or 'current interval' in the context that the licensee is using. They are either in their second or third interval. There are no in between.

**SNC Response:** The Unit 2 Second Interval consists of 1983 Section XI examinations for the first two periods and due to the early Code update to coincide with the Unit 1 update, the third period examinations were performed using the 1989 Section XI. The terminology that has been used was an effort to differentiate between the two ASME Code Editions used in the same 10-year interval.

NRC SER dated March 20, 1997 approved the early update of the Unit 2 ISI and IST Programs and Plans so that Units 1 and 2 would be on the same update schedule. (Please note that on August 31, 1988, NRC first approved this early update approach for the Unit 2 ISI and IST programs.) The scheduling and sequence of examinations and the ASME Code completion requirements per period are based on the 10CFR50 interval definition and are not affected by the early update.

In the 1997 SER referenced above, NRC acknowledged that SNC was to continue this early update practice for Unit 2 until the end of life. In this manner, Units 1 and 2 will always be updated simultaneously to the same ASME Code but the update for Unit-2 will not coincide with the 10-year anniversary of the commercial power date per 10CFR50. See Sketch 1 for clarification.

**2) NRC Question:** It is very confusing for the reviewer as to what relief belongs to what interval and Code Edition. In the pending RAI response you need to define what relief belongs to the second and third interval and the applicable Edition of the Code.

**SNC Response:** All of the Unit 1 relief requests, RR-44, RR-45, RR-46, RR-47 belong to the third Interval under the 1989 Code. Unit 2 relief requests RR-44 cover examinations to the 1989 Code. There is currently no RR-46 relief request for Unit 2.

SNC believes that most of the confusion on this issue is centered on the Unit 2 relief requests RR-45 and RR-47. Simply stated, Unit 2 relief request RR-45 sought to combine into a single document, those piping weld examination coverage limitations from the second Interval, Periods 1 and 2 using the 1983 ASME Code with those from second Interval, Period 3 using the 1989 ASME Code. This was not clearly stated in the original relief request.

Similarly, Unit 2 relief request RR-47 attempted to combine into a single document, those vessel weld examination coverage limitations from the second Interval which were performed as in the previous paragraph. This was not clearly stated in the original relief request.

SNC has decided to separate the relief requests for the Unit 2 second Interval into separate relief requests for each ASME Code Edition for clarity.

**3) NRC Question:** (The reviewer)... understands that you have performed second interval exams in the first Period of the third Interval.

**SNC Response:** It is incorrect to state that SNC has performed second Interval exams in the first Period of the third Interval for either unit. SNC makes a practice of completing 100% of each interval's requirements when and as required. The explanation above should help with this question.

**4) NRC Question:** It looks like part of one relief is for the second Interval and the rest are for the third Interval. This is fine if you differentiate the intervals for each relief.

**SNC Response:** See response to NRC Question 2 above.

**5) NRC Question:** You need to clarify if you are, or not, taking credit for examinations done in the second Interval for the third Interval? In other words, are you double dipping?

**SNC Response:** No. All examinations for the Unit 2 Relief Requests are for the second 10-year Interval.

**6) NRC Question:** Weld no. ALA-4105-RC-R40 Integrally welded attachment. You stated that a large pipe clamp prevented them from doing 100% examination, but did not state the size of the pipe nor pipe clamp. Please provide the size of the pipe and clamp.

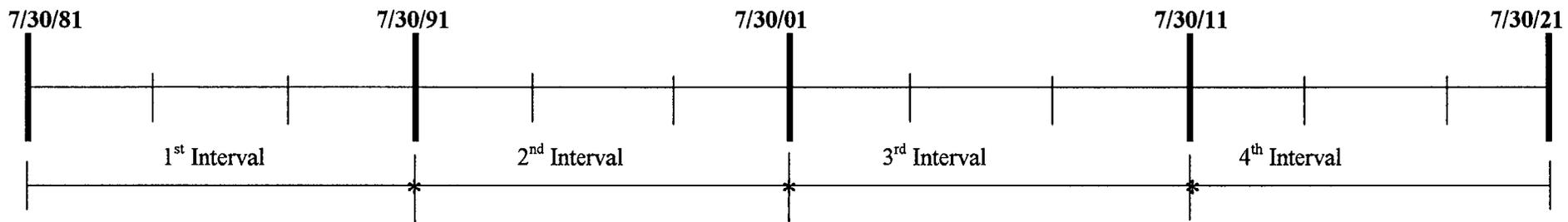
**SNC Response:** (This question applies to RR-45 for Unit 1.) This welded attachment is located on a 4-inch diameter line that runs in the vertical direction. The welded attachment rests on a large clamp that limits the amount of coverage that can be achieved on the area beneath the clamp. Since this is a vertical run of pipe, a temporary support would have to be installed before the clamp could be removed and SNC determined that the costs involved in removing the clamp were not justified. It should be noted that the requirement to remove clamps to accomplish a surface examination on a welded attachment has been removed from later NRC-approved Code Editions (Figure IWB-2500-15 in the 1995 Addenda and subsequent Editions).

**7) NRC Question:** For the subject relief requests (RR-45 and RR-47) did SNC perform surface examinations?

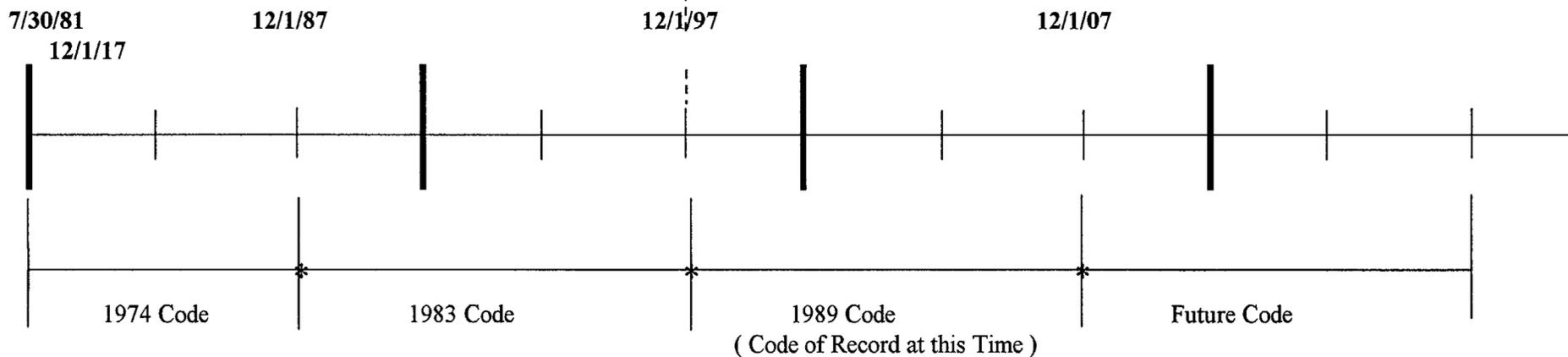
**SNC Response:** SNC performed surface examinations as required by the ASME Code and unless specifically stated, the percent coverage for all surface examinations was 100%.

SKETCH 1  
Unit 2 ISI Intervals and Code Applicability

**I. Intervals Based on 10CFR50 and Commercial Service**  
**Date of 7/30/81**



**II. Code Applicability per NRC SER**  
**Dated March 20, 1997**



ATTACHMENT 2

REVISED COPY

SOUTHERN NUCLEAR OPERATING COMPANY  
FARLEY UNIT 2  
REQUEST FOR RELIEF NO. RR-45 FOR EXAMINATIONS  
TO THE 1989 ASME CODE

SOUTHERN NUCLEAR OPERATING COMPANY  
FARLEY UNIT 2  
ISI EXAMINATIONS per the 1989 ASME CODE  
REQUEST FOR RELIEF NO. RR-45

- I. System/Components(s) for Which Relief is Requested: Volumetric and/or surface examination of Class 1 and 2 pressure-retaining piping welds identified in Attachment 1 to this request for relief. Attachment 1 lists those piping welds examined in the second 10-year interval to the 1989 Edition of ASME Section XI.
- II. Code Requirement: Category B-J, Table IWB-2500-1 and Categories C-F-1 and C-F-2, Table IWC-2500-1, of ASME Section XI, 1989 Edition, no addenda, require surface and volumetric examination of pressure-retaining welds in Class 1 and Class 2 piping. Applicable examination volumes are shown in ASME Section XI Figure IWB-2500-8 and IWC-2500-7 and include essentially 100% of the weld length. ASME Section XI Appendix III, Article III-4420 requires that the examinations shall be performed using a sufficiently long examination beam path to provide coverage of the required examination volume in two beam-path directions. The examination shall be performed from two sides of the weld, where practicable, or from one side of the weld as a minimum. For austenitic and dissimilar metal welds, ASME Section XI Appendix III, Supplement 4, requires that the angle beam examination for reflectors transverse to the weld be performed on the weld crown and 1/2 inch of the base material on each side of the weld. This requirement became effective at Farley-2 at the start of the 1989 Code portion of the second 10-year interval on December 1, 1997.
- III. Code Requirement from Which Relief is Requested: Relief is requested from performing a full Code coverage volumetric and/or surface examination of the Class 1 and 2 piping welds identified in Attachment 1 to this request for relief.
- IV. Basis for Relief: Physical limitations restrict coverage of the Category B-J, C-F-1 and C-F-2 piping welds and prevent 100% examination of the total volume required by Figure IWB-2500-8, IWC-2500-7, and ASME Section XI Appendix III. These limitations are due to the geometric configuration of the welds (access from only one side) as well as the location of a whip restraint adjacent to one weld. Reference Attachment 2 of this document for a typical representation of a single side access examination, along with limitations for those examinations performed to the 1989 Edition of ASME Section XI.
- V. Alternate Examination: None. Coverage, to the maximum extent practical, has been obtained.
- VI. Justification for Granting Relief: The examinations identified herein are being conducted to the fullest extent practical. As noted for the welds listed in Attachment 1, physical access is restricted thereby preventing full Code-required examination coverage.

In order to examine 100% of the weld volume, systems would require extensive modifications. While Code coverage during this ten-year interval may vary from the coverage in previous intervals due to different Code requirements, the level of quality will not change from that obtained during earlier intervals.

As a result, SNC requests that relief is authorized pursuant to 10 CFR 50.55a(g)(6)(i) since complete Code required examination coverage is impractical.

- VII. Implementation Schedule: This request for relief is applicable to examinations using the 1989 Edition of Section XI (from December 1, 1997 through November 30, 2007).
- VIII. Relief Request Status: This request for relief is awaiting NRC approval.

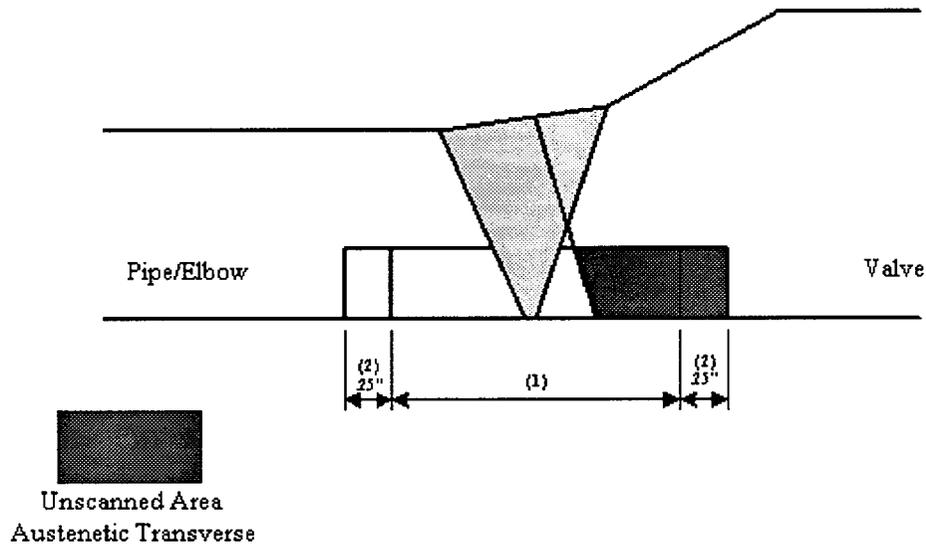
Revised

**RR-45  
ATTACHMENT 1  
Examinations to the 1989 Edition of Section XI**

<b>ASME Section XI Category/Item No.</b>	<b>Identification No. / Description</b>	<b>Outage / ASME Code Requirements</b>	<b>Limitation</b>	<b>Approximate Percentage</b>
B-J / B9.11	APR1-4304-24 6" Pipe to Branch Connection	U2R12 ( Outage 2-3-1 ); Surface and Volumetric	Limitation due to the configuration of the branch connection	PT - 100 % UT - 47%
B-J / B9.11	APR1-4501-5 6" Elbow to Elbow	U2R13 ( Outage 2-3-2 ); Surface and Volumetric	Whip restraint limits all scans	PT - 38% UT - 35%
C-F-2 / C5.51	APR2-4301-5 32" Pipe to Valve	U2R13 ( Outage 2-3-2 ); Surface and Volumetric	Header to valve weld configuration limits all scans	MT - 100 % UT - 22%
C-F-1 / C5.11	APR2-4518-14 14" Pipe to Tee	U2R13 ( Outage 2-3-2 ); Surface and Volumetric	Limitation due to configuration of the tee	PT - 100 % UT - 55%
C-F-1 / C5.11	APR2-4518-15 14" Tee to Pipe	U2R13 ( Outage 2-3-2 ); Surface and Volumetric	Limitation due to configuration of the tee	PT - 100 % UT - 55%

ATTACHMENT 2

Ultrasonic Examination for Reflectors Transverse to the Weld  
Typical Examination Coverage at Farley



- (1) Examination volume – weld + ¼" each side of weld toe for ferritic welds. The angle-beam examination for reflectors transverse to the weld is performed on the weld and ¼" each side of the weld toe (as configuration allows).
- (2) Examination volume – weld + ½" each side of weld toe for austenitic welds. The angle-beam examination for reflectors transverse to the weld is performed on the weld and ½" each side of the weld toe ( as configuration allows ).

