



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 11, 2013

Mr. C. R. Pierce
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
P.O. Box 1295, Bin-038
Birmingham, AL 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 - REQUEST FOR
ADDITIONAL INFORMATION CONCERNING THE DEFERRAL OF INSERVICE
INSPECTION OF REACTOR PRESSURE VESSEL COLD LEG NOZZLE
DISSIMILAR METAL WELD (TAC NOS. ME9739 AND ME9740)

Dear Mr. Pierce:

By letter dated October 1, 2012, (Agencywide Documents Access and Management System Accession No. ML12276A110), Southern Nuclear Operating Company, (SNC, the licensee) submitted for the U.S. Nuclear Regulatory Commission (NRC) approval the request for alternative (RFA) FNP-ISI-ALT-13, Version 1. The licensee proposed an alternative to certain requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI. RFA FNP-ISI-ALT-13 relates to the inservice inspection requirements for the reactor pressure vessel (RPV) cold leg dissimilar metal welds at the Joseph M. Farley Nuclear Plant (Farley), Units 1 and 2, for the fourth 10-year interval, which commenced on December 1, 2007, and will end on November 30, 2017.

A response to the enclosed Request for Additional Information (RAI) is needed before the NRC staff can complete the review. This request was discussed with Mr. Ryan Joyce of your staff on April 9, 2013, and it was agreed that SNC would respond within 45 days of issuance of this letter. If you have any questions, please feel free to contact me at (301) 415-2315.

Sincerely

/RA/

Eva A. Brown, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

Enclosure: RAI

cc: Distribution via Listserv

REQUEST FOR ADDITIONAL INFORMATION
REQUEST FOR ALTERNATIVE REGARDING DEFERRAL OF
INSERVICE INSPECTION OF REACTOR PRESSURE VESSEL COLD LEG NOZZLE
DISSIMILAR METAL WELD
SOUTHERN NUCLEAR COMPANY
JOSEPH M. FARLEY NUCLEAR PLANT
DOCKET NOS. 50- 384 AND 50-364

1. Discuss and demonstrate in detail why the reactor pressure vessel (RPV) cold leg dissimilar metal (DM) welds for which alternative is requested are bounded by the results of generic analyses documented in Enclosure 2, "Materials Reliability Program: PWR Reactor Coolant System Cold-Loop Dissimilar Metal Butt Weld Reexamination Interval Extension" (MRP-349) to the submittal (FNP-ISI-ALT-13) dated October 1, 2012, (Agencywide Documents Access and Management System (ADAMS) Accession No. ML12276A110), notably Figures 5-2, 5-3, and 5-4. Section 5.3.2 of Enclosure 2 documented that a 25 percent through-wall inside diameter (ID) weld repair was assumed in the flaw evaluations. Discuss why a 50 percent through-wall ID weld repair was not assumed. In addition, provide details on the depth of any fabrication defect repaired on the ID of the subject RPV DM welds.
2. Provide a flaw evaluation for axial flaw growth for 10 years. Provide the bounding residual hoop stress profiles used in the analysis.
3. In order for the staff to perform a confirmatory flaw evaluation, provide the following information for the subject RPV cold leg DM welds for which alternative is requested.
 - a. Diameter and thickness of pipes or welds.
 - b. As-built length of safe-ends.
 - c. Discussion on welding process or procedure (e.g., how the RPV nozzle is welded to the safe end and the safe end is welded to pipe). Include a discussion on whether, or how, the process affects the residual stresses in the subject DM welds.
 - d. The bounding residual axial stress profiles used in the analysis to support results shown in Figures 5-2 and 5-3 of MRP-349.
4. Justify why the time to grow an assumed axial initial flaw to the ASME Code, Section XI, IWB-3600 allowable 75 percent through-wall was not used as the basis for this request.
5. Enclosure 1 to FNP-ISI-ALT-13, stated that the baseline examinations by ultrasonic testing (UT) were performed on Farley, Units 1 and 2, in 2007 and 2010. Discuss

Enclosure

whether there were any indications detected in the subject RPV DM welds during baseline examinations by UT.

6. The Farley, Units 1 and 2, fourth 10-year ISI interval began on December 1, 2007, and will end on November 30, 2017. Subsequently, the Farley, Units 1 and 2, fifth 10-year ISI interval will begin on December 1, 2017, and will end on November 30, 2027. The results in Figures 5-2 and 5-3 MRP-349 to FNP-ISI-ALT-13 showed that a postulated through-wall flaw would be acceptable for 10 years. However, the excerpt below taken from Enclosure 1 to FNP-ISI-ALT-13 stated:

SNC is requesting extension of the requirements of Code Case N-770-1, Inspection Item B for the RPV CL DM Welds from every second inspection period to once per 10 year interval.

Specifically, this proposed alternative would permit the deferral of the CL volumetric examinations currently scheduled for fall of 2013 for Unit 1 (baseline exams performed in fall of 2007) to be moved to the fall of 2017 (± 1 -year as allowed by ASME IWA-2430 to allow inspections to coincide with the plant outage). Exams would occur during or before the spring 2018 outage. For Unit 2, this would allow examinations currently scheduled for the spring of 2016 (baseline exams performed in the spring of 2010) to be moved to the spring of 2020 (± 1 -year as allowed by ASME IWA-2430 to allow inspections to coincide with the plant outage). Exams would occur during or before the fall 2020 outage.

- a. Discuss why the results shown in Figures 5-2 and 5-3 of MRP-349 to FNP-ISI-ALT-13 justify deferral of examination to 11 (10+1) years.
- b. Clarify whether the deferral of examination is proposed to be moved to the fall of 2017 outage for Unit 1 and to the spring of 2020 outage for Unit 2, or to once per 10 year interval.

April 11, 2013

Mr. C. R. Pierce
Regulatory Affairs Director
Southern Nuclear Operating Company, Inc.
P.O. Box 1295, Bin-038
Birmingham, AL 35201-1295

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT, UNITS 1 AND 2 - REQUEST FOR
ADDITIONAL INFORMATION CONCERNING THE DEFERRAL OF INSERVICE
INSPECTION OF REACTOR PRESSURE VESSEL COLD LEG NOZZLE
DISSIMILAR METAL WELD (TAC NOS. ME9739 AND ME9740)

Dear Mr. Pierce:

By letter dated October 1, 2012, (Agencywide Documents Access and Management System Accession No. ML12276A110), Southern Nuclear Operating Company, (SNC, the licensee) submitted for the U.S. Nuclear Regulatory Commission (NRC) approval the request for alternative (RFA) FNP-ISI-ALT-13, Version 1. The licensee proposed an alternative to certain requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code (ASME Code), Section XI. RFA FNP-ISI-ALT-13 relates to the inservice inspection requirements for the reactor pressure vessel (RPV) cold leg dissimilar metal welds at the Joseph M. Farley Nuclear Plant (Farley), Units 1 and 2, for the fourth 10-year interval, which commenced on December 1, 2007, and will end on November 30, 2017.

A response to the enclosed Request for Additional Information (RAI) is needed before the NRC staff can complete the review. This request was discussed with Mr. Ryan Joyce of your staff on April 9, 2013, and it was agreed that SNC would respond within 45 days of issuance of this letter. If you have any questions, please feel free to contact me at (301) 415-2315.

Sincerely
/RA/

Eva A. Brown, Senior Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket Nos. 50-348 and 50-364

Enclosure: RAI

cc: Distribution via Listserv

DISTRIBUTION:

PUBLIC	LPL2-1 R/F	RidsAcrcAcnw_MailCTR	JCollins
RidsNrrDoriDpr Resource	RidsNrrDoriLpl2-1	RidsNrrPMFarley	RidsOgcRp
RidsRgn2MailCenter	RidsNrrLASFiguroa	RidsNrrDeEpnb	AREzai, NRR

ADAMS Accession No.: ML13036A261

***Via e-mail**

OFFICE	LPL2-1/PM	LPL2-1/PM	DE/EPNB	LPL2-1/BC
NAME	EBrown	SFiguroa	TLupold*	RPascarelli
DATE	04/10/13	04/11/13	04/09/13	04/11/13

OFFICIAL RECORD COPY