August 1, 2001

Mr. D. N. Morey
Vice President - Farley Project
Southern Nuclear Operating
Company, Inc.
Post Office Box 1295
Birmingham, Alabama 35201-1295

SUBJECT: SECOND 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM REQUEST FOR ALTERNATIVE FOR JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 2 (TAC NO. MB0738)

By letter dated December 4, 2000, you requested the NRC staff to approve a proposed alternative to the examination requirement of reactor vessel shell welds, pursuant to the provisions of 10 CFR 50.55a(g)(6)(ii)(A). As stated in the enclosed safety evaluation, the staff approves the proposed alternative to the examination of reactor vessel shell welds, because the staff concludes that the licensee's proposed alternative provides an acceptable level of quality and safety. Therefore, the proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the second 10-year ISI interval.

The staff considers this matter resolved and is closing out TAC No. MB0738.

Sincerely,

/RA/

Richard L. Emch, Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No.: 50-364

Enclosure: As stated

cc w/encl: See next page

Mr. D. N. Morey
Vice President - Farley Project
Southern Nuclear Operating
Company, Inc.
Post Office Box 1295
Birmingham, Alabama 35201-1295

August 1, 2001

SUBJECT: SECOND 10-YEAR INTERVAL INSERVICE INSPECTION PROGRAM REQUEST FOR ALTERNATIVE FOR JOSEPH M. FARLEY NUCLEAR PLANT, UNIT 2 (TAC NO. MB0738)

By letter dated December 4, 2000, you requested the NRC staff to approve a proposed alternative to the examination requirement of reactor vessel shell welds, pursuant to the provisions of 10 CFR 50.55a(g)(6)(ii)(A). As stated in the enclosed safety evaluation, the staff approves the proposed alternative to the examination of reactor vessel shell welds, because the staff concludes that the licensee's proposed alternative provides an acceptable level of quality and safety. Therefore, the proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the second 10-year ISI interval.

The staff considers this matter resolved and is closing out TAC No. MB0738.

Sincerely,

/RA/

Richard L. Emch, Jr., Chief, Section 1
Project Directorate II
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No.: 50-364

Enclosure: As stated

cc w/encl: See next page

DISTRIBUTION:

PUBLIC	PDII-1 R/F
HBerkow	OGC
GHill (2)	ACRS
SRosenberg,EDO	SCahill, RII
CKhan	BFu

DOCUMENT NAME: ML012000378 *See previous concurrence

OFFICE	PDII-1/PM	PDII-1/LA	PDII-1/SC	OGC*
NAME	FRinaldi	CHawes	REmch	RHoefling
DATE	7/31/01	7/31/01	8/1/01	7/27 /01

OFFICIAL RECORD COPY

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SECOND 10-YEAR INTERVAL INSERVICE INSPECTION

REQUEST FOR ALTERNATIVE

FARLEY NUCLEAR POWER STATION, UNIT 2

SOUTHERN NUCLEAR OPERATING COMPANY

DOCKET NUMBER 50-364

1.0 INTRODUCTION

The inservice inspection (ISI) of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (Code) Class 1, Class 2, and Class 3 components is to be performed in accordance with Section XI of the ASME Code and applicable edition and addenda as required by 10 CFR 50.55a(g), except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i). 10 CFR 50.55a(a)(3) states in part that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if the licensee demonstrates that: (i) the proposed alternatives would provide an acceptable level of quality and safety, or (ii) compliance with the specified requirements would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety.

Pursuant to 10 CFR 50.55a(g)(4), ASME Code Class 1, 2, and 3 components (including supports) shall meet the requirements, except the design and access provisions and the pre-service examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection (ISI) of Nuclear Power Plant Components," to the extent practical within the limitations of design, geometry, and materials of construction of the components. The regulations require that inservice examination of components and system pressure tests conducted during the first ten-year interval and subsequent intervals comply with the requirements in the latest edition and addenda of Section XI of the ASME Code incorporated by reference in 10 CFR 50.55a(b) twelve months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The Code of record for the second 10-year ISI interval for Farley Nuclear Power Station, Unit 2 is the 1986 Edition of Section XI of the ASME Code. The components (including supports) may meet the requirements set forth in subsequent editions and addenda of the ASME Code incorporated by reference in 10 CFR 50.55a(b) subject to the limitations and modifications listed therein and subject to Commission approval.

The staff has reviewed the information submitted by Southern Nuclear Operating Company (licensee) in its letter dated December 4, 2000, requesting an alternative to certain Code-required inspection criteria. The licensee's proposed alternative to the Code requirements is contained in its relief request dated December 4, 2000, for the second 10-year ISI interval at Farley Nuclear Power Station, Unit 2. The staff's evaluation is provided below.

2.0 EVALUATION

The information provided by the licensee in support of its request for relief from Code requirements has been evaluated and the basis for disposition is documented below.

2.1 Code Requirement

10 CFR 50.55a(g)(6)(ii)(A) requires all licensee to augment their RPV examinations by implementing once, as part of the inservice inspection interval, the examination of reactor vessel shell welds specified in Item B1.10 of Examination Category B-A in Table IWB-2500-1of Subsection IWB of the 1989 Edition of ASME Section XI Code. To meet 10 CFR 50.55a(g)(6)(ii)(A), more than 90% of the examination volume of each weld must be examined.

2.2 Licensee's Proposed Alternative Examination

A total of seven RPV shell welds, three circumferential and four longitudinal, were examined per Code requirement to meet 10 CFR 50.55a(g)(6)(ii)(A) as well as ASME Section XI ISI requirements. Out of the seven welds, six of them, Weld Nos. APR1-1100-2, APR1-1100-5, APR1-1100-3, APR1-1100-4, APR1-1100-6, and APR1-1100-7, were examined 100% as required by the code.

The examination of the lower shell-to-bottom head circumferential weld, Weld No. APR1-1100–8, was limited to 84.5% due to physical configuration. Four core support lugs occupying a space of about 20 degrees each are positioned above the lower shell-to-bottom head circumferential weld.

The examination results of these welds revealed no recordable indications that exceed the applicable standards of ASME Section XI, Paragraph IWB-3500. The licensee proposed that the examinations already completed, as described above, serve as the alternative.

2.3 Staff Evaluation

The Code requires essentially 100% volumetric examination of the subject reactor vessel circumferential lower shell-to-bottom head weld. 10 CFR 50.55a(g)(6)(ii)(A)(2) states that "... essentially 100% as used in Table IWB-2500-1 means more than 90 percent of the examination volume of each weld, where the reduction in coverage is due to interference by another component, or part geometry." Coverage is limited due to interference by the vessel support lugs that limits examination of the subject weld.

These limitations prevent achieving the 90% volumetric examination coverage. To gain access for additional examination coverage, the subject weld would require design modifications. Imposition of this requirement would create a substantial burden on the licensee.

The licensee has examined a significant portion of this weld, obtaining 84.5% volumetric coverage. Based on the coverage obtained, the staff concludes that any existing patterns of degradation would have been detected by the examination completed and that reasonable assurance of the structural integrity has been provided. Therefore, the staff concludes that the licensee's proposed alternative provides an acceptable level of quality and safety.

3.0 CONCLUSION

The staff has evaluated the licensee's submittal and concludes that certain inservice examinations cannot be performed to the extent required by the Code at Farley Nuclear Power Station, Unit 2. For the request for relief discussed above, the staff concludes that the licensee's proposed alternative provides an acceptable level of quality and safety. Therefore, the proposed alternative is authorized pursuant to 10 CFR 50.55a(a)(3)(i) for the second 10-year ISI interval.

Principal Contributor: Bart Fu, EMCB/DE

Date: August 1, 2001

Joseph M. Farley Nuclear Plant

cc:

Mr. L. M. Stinson
General Manager -
Southern Nuclear Operating Company
Post Office Box 470
Ashford, Alabama 36312

Mr. Mark Ajluni, Licensing Manager
Southern Nuclear Operating Company
Post Office Box 1295
Birmingham, Alabama 35201-1295

Mr. M. Stanford Blanton
Balch and Bingham Law Firm
Post Office Box 306
1710 Sixth Avenue North
Birmingham, Alabama 35201

Mr. J. D. Woodard
Executive Vice President
Southern Nuclear Operating Company
Post Office Box 1295
Birmingham, Alabama 35201

State Health Officer
Alabama Department of Public Health
434 Monroe Street
Montgomery, Alabama 36130-1701

Chairman
Houston County Commission
Post Office Box 6406
Dothan, Alabama 36302

Resident Inspector
U.S. Nuclear Regulatory Commission
7388 N. State Highway 95
Columbia, Alabama 36319

Rebecca V. Badham
SAER Supervisor
Southern Nuclear Operating Company
P. O. Box 470
Ashford, Alabama 36312