October 19, 1995

Mr. Jerry W. Yelverton
Vice President, Operations ANO
Entergy Operations, Inc.
1448 S. R. 333
Russellville, AR 72801

SUBJECT: ARKANSAS NUCLEAR ONE, UNIT 2 - INSERVICE INSPECTION RELIEF REQUEST NO. B-J/B4.5 (TAC NO. M92425)

Dear Mr. Yelverton:

By letter dated May 23, 1995, you submitted Relief Request No. B-J/B4.5 to the Revised First 10-Year Inservice Inspection Program for Arkansas Nuclear One, Unit 2. The requested relief is granted. The related Safety Evaluation and a Technical Evalation Report from our contractor, the Idaho National Engineering Laboratory are enclosed.

Sincerely,
ORIGINAL SIGNED BY:
George Kalman, Senior Project Manager
Project Directorate IV-1
Division of Reactor Projects III/IV
Office of Nuclear Reactor Regulation

Docket No. 50-368

Enclosures: 1. Safety Evaluation
2. Technical Evaluation Report

cc w/encls: See next page

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OFC	(A)LA/PD4-1	PM/PD4-1	OGC*
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DATE	10/19/95	10/19/95	10/16/95
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

OF THE FIRST TEN YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN

REVISED REQUEST FOR RELIEF NO. B-J/B4.5

FOR

ENTERGY OPERATIONS, INC

ARKANSAS NUCLEAR ONE, UNIT 2

DOCKET NO. 50-368

1.0 INTRODUCTION

The Technical Specifications for Arkansas Nuclear One, Unit 2 state that the inservice inspection of the American Society of Mechanical Engineers (ASME) Code Class 1, 2, and 3 components shall be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable 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 that alternatives to the requirements of paragraph (g) may be used, when authorized by the NRC, if (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 difficulties 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 preservice examination requirements, set forth in the ASME Code, Section XI, "Rules for Inservice Inspection 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 10-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) 12 months prior to the start of the 120-month interval, subject to the limitations and modifications listed therein. The applicable edition of Section XI of the ASME Code for the Arkansas Nuclear One, Unit 2 first 10-year inservice inspection (ISI) interval is the 1974 Edition through Summer 1975 Addenda.

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.

Enclosure 1

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Pursuant to 10 CFR 50.55a(g)(5), if the licensee determines that conformance with an examination requirement of Section XI of the ASME Code is not practical for its facility, information shall be submitted to the Commission in support of that determination and a request made for relief from the ASME Code requirement. After evaluation of the determination, pursuant to 10 CFR 50.55a(g)(6)(i), the Commission may grant relief and may impose alternative requirements that are determined to be authorized by law, will not endanger life, property, or the common defense and security, and are otherwise in the public interest, giving due consideration to the burden upon the licensee that could result if the requirements were imposed. In a letter dated May 23, 1995, Entergy Operations, Inc. submitted to the NRC its first 10-year interval inservice inspection program plan, revised Request for Relief No. B-J/B4.5 for the Arkansas Nuclear One, Unit 2.

2.0 EVALUATION AND CONCLUSIONS

The staff, with technical assistance from its contractor, the Idaho National Engineering Laboratory (INEL), has evaluated the information provided by the licensee in support of its first 10-year interval inservice inspection program plan, revised Request for Relief No. B-J/B4.5 for the Arkansas Nuclear One, Unit 2.

Based on the information submitted, the staff adopts the contractor's conclusions and recommendations presented in the Technical Letter Report attached. The staff concludes that the Code requirement is impractical giving due consideration to the burden on the licensee in the form of configuration modifications if the requirements were imposed. In addition, performing the examination to the extent practical, as proposed by the licensee, will provide a reasonable assurance of operational readiness of the tee-to-pipe circumferential weld 25-017. Therefore, relief is granted for Revised Request for Relief No. B-J/B4.5 pursuant to 10 CFR 50.55a(g)(6)(i).

Principal Contributor: T. McLellan

Date: October 19, 1995

TECHNICAL LETTER REPORT

ON THE FIRST 10-YEAR INSERVICE INSPECTION INTERVAL

REVISED REQUEST FOR RELIEF B-J/B4.5

FOR

ARKANSAS NUCLEAR ONE, UNIT 2

ENTERGY OPERATIONS, INC.

DOCKET NO. 50-368

1.0 INTRODUCTION

By letter dated May 23, 1995, Entergy Operations, Inc. (the licensee) submitted a revised Request for Relief for tee-to-pipe circumferential Weld 25-017 because the Code-required examination coverage was not obtained for the first 10-year interval. The Idaho National Engineering Laboratory (INEL) staff has evaluated this Request for Relief in the following section.

2.0 EVALUATION

The Code of record for the Arkansas Nuclear One, Unit 2, first 10-year inservice inspection (ISI) interval, which began March 25, 1980 and ended March 26, 1990, is the 1974 Edition through the Summer 1975 Addenda of the *American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI*. The information provided by the licensee in support of the Request for Relief from Code requirements has been evaluated and the basis for disposition is documented below.

Request for Relief B-J/B4.5, Examination Category B-J, Item B4.5, Pressure-Retaining Welds in Class 1 Piping

Code Requirement: Tables IWB-2500 and IWB-2600, Examination Category B-J, Item B4.5, require 100% volumetric examination of 25% of Class 1 piping circumferential welds.

Licensee's Code Relief Request: The licensee requested relief from the Code-required 100% volumetric examination of tee-to-pipe circumferential Weld 25-017.

Licensee's Basis for Requesting Relief (as stated):

"The axial scan direction examination performed during 2R10 was limited to 56% coverage of the examination volume. After an examination was determined to be impracticable from the tee side of this weld because of

the configuration, an effort was made to remove the pipe clamp located adjacent to the weld on the pipe side. However, due to the design of the support, only the bottom half of the clamp could be removed."

"A short tube steel stanchion is welded to the top half of the clamp. The top of the stanchion is welded to a plate. An approximately 1/16" gap exists between this plate and the bottom of the support member directly above. This design feature prohibited the removal of the clamp because: a) the clamp and attached stanchion could not be lifted out and away from the pipe due to insufficient clearance, and b) the clamp and attached stanchion could not be slid down the length of the pipe due to the proximity of a 3/4" pressure point line welded to the main run piping pressure boundary immediately downstream of the examination area. Therefore, removal of the clamp could not be achieved without taking destructive action. This action would have entailed cutting the stanchion to facilitate clamp removal. If this had been performed, the subsequent restoration of the support would have required welding. The required cutting and welding were not deemed appropriate due to ALARA considerations."

"Entergy Operations believes that the maximum, reasonable achievable coverage was attained on this weld. The 56% axial scan direction coverage obtained in 2R10, coupled with the 100% circumferential scan direction coverage previously obtained in 2R6, yields an overall average coverage of 78%. Entergy Operations believes this provides sufficient evidence to substantiate the integrity of this weld. Furthermore, this weld is only one of a large sampling of B-J/B4.5 circumferential piping welds examined per 74S75 Code requirements during the first inspection interval. When viewed collectively, the overall integrity of this category of piping circumferential welds has been adequately demonstrated."

Licensee's Proposed Alternative Examination (as stated):

"None"

Evaluation: The Code requires that the subject weld receive a 100% volumetric examination during the inspection interval. By letter dated August 31, 1989, Entergy Operations submitted inservice inspection Relief Requests for the ANO-2 first 10-year interval. Included in this submittal was a Request for Relief for tee-to-pipe Weld 25-017. By letter dated December 30, 1992, the NRC notified the licensee that Request for Relief for Weld 25-017 was denied because the information provided was unclear and insufficient to support the determination that the Code requirement was impractical. Subsequent to the denial, the licensee proposed to optimize coverage during the 2R10 refueling outage. Based on the coverage obtained on the subject weld during the 2R10 refueling outage, the licensee submitted additional information in support of the Relief Request.

During the 2R10 refueling outage (completed April 24, 1994), the licensee examined the subject weld, making an effort to maximize axial scan volumetric coverage. However, examination coverage was limited due to the tee configuration and the nonremoveable upper section of the support clamp on the pipe side of the weld. Examination coverage was maximized by the removal of the bottom half of the support; this allowed access for scanning in the axial direction for 56% of the weld. No axial scans were performed on the tee side due to the tee configuration.

Based on a review of the documentation on the subject examination area, it has been determined that complete Code volumetric coverage is impractical because of the tee-to-pipe configuration and the interfering support. To obtain complete volumetric coverage, modifications would be required that would cause a considerable burden on the licensee.

The licensee proposes to perform the volumetric examinations to the extent practical, resulting in an estimated overall 78% coverage. Based on the percent of coverage that was obtained, it is reasonable to conclude that significant degradation, if present, would have been detected. As a result, reasonable assurance of structural integrity has been provided.

3.0 CONCLUSION

The INEL staff has evaluated the Request for Relief for tee-to-pipe circumferential Weld 25-017, and concluded that complete volumetric coverage of the tee-to-pipe weld is impractical. The examination performed by the licensee will provide reasonable assurance of the structural integrity of tee-to-pipe Weld 25-017. Therefore, it is recommended that relief be granted pursuant to 10 CFR 50.55a(g)(6)(i).