



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATING TO THE GRANTING OF RELIEF
FROM CERTAIN INSERVICE INSPECTION REQUIREMENTS
FOR
ARKANSAS NUCLEAR ONE, UNIT NO. 1
ARKANSAS POWER AND LIGHT COMPANY
DOCKET NO. 50-313

INTRODUCTION

Technical Specifications for Arkansas Nuclear One, Unit No. 1, state that inservice examination of 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.

We have reviewed the licensee's first ten-year interval inservice inspection program plan and the requests for relief from certain requirements of the applicable ASME Code edition and addenda. By letter dated April 18, 1983, we had granted relief from the examination requirements which we had determined to be impractical to perform at Arkansas Nuclear One, Unit 1. We had also denied relief in those cases where the necessary findings could not be made.

Additional information and requests for relief from certain Code inspection requirements in the 1974 Edition of Section XI of the ASME Boiler and Pressure Vessel Code with Addenda through Summer 1975 determined to be impractical were received by letters dated November 12, 1982, November 19, 1984, December 19, 1984, January 31, 1985, and June 24, 1985. In order to complete the first ten-year inspection interval at the Arkansas Nuclear One, Unit 1, these requests for relief from inservice inspection requirements of the 1974 Edition of the ASME Code Section XI with Addenda through Summer 1975 would need to be reviewed and granted as applicable.

EVALUATION

Requests for relief from the requirements of Section XI which have been determined to be impractical to perform have been reviewed by our contractor, Science Applications International Corporation. The contractor's evaluations of the licensee's requests for relief and his recommendations are presented in the Technical Evaluation Report (TER) attached (ATTACHMENT 1). We have reviewed the TER and adopt the evaluations and recommendations. A summary of our determinations is presented in the following tables:

TABLE 1

CLASS 1 COMPONENTS

IWB-2600 ITEM NO.	IWB-2500 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAMINATION	RELIEF REQUEST STATUS
B1.6 & B4.1	B-F	B1.6: Reactor Vessel B4.1: Piping Pressure Boundary	B1.6: Nozzle-to- Safe End Welds B4.1: Safe-End to Piping Welds & Safe-End in Branch Piping Welds (2 Core Flood Nozzle-to-Safe End & Safe End- to-Pipe Welds)	Volumetric & Surface	Volumetric From Vessel ID Coincident with Vessel Nozzle Exam	Granted
B1.12	B-H	Reactor Vessel	Integrally- Welded Vessel Supports (Vessel Support Skirt-to- Vessel Weld)	Volumetric	None	Granted Provided Visual Exam is Conducted Early in 2nd Inspection Interval
B1.13, B1.14, B2.9 & B3.8	B1.13 & B1.14: B-I-1 B2.9 & B3.8: B-I-2	B1.13 & B1.14: Reactor Vessel B2.9: Pressuri- zer B3.8: Steam Generators	B1.13: Closure Head Cladding B1.14, B2.9 & B3.8: Vessel Cladding	B1.13: Visual & Surface, or Volumetric B1.14, B2.9 & B3.8: Visual	Visual of Accessible Areas (1977 Edition of Code Thru Summer 1978 Addenda)	Granted

TABLE 1

CLASS 1 COMPONENTS (continued)

IWB-2600 ITEM NO.	IWB-2500 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAMINATION	RELIEF REQUEST STATUS
B4.6 & B4.7	B-J	Piping Pressure Boundary	Branch Pipe Connection Welds B4.6: Exceeding 6 in. Diameter B4.7: 6 in. Diameter & Smaller	B4.6: Volumetric B4.7: Surface	Exam Per 1977 Edition of Code Thru Summer 1978 Addenda	Granted
B5.6	B-L-1	Reactor Coolant Pump	Pump Casing Welds	Volumetric	Radiographic Exam (MINAC) Early in 2nd Inspection Interval	Granted
B5.7	B-L-2	Pump	Pump Casings	Visual	Partial Surface Replication Obtained from Casing Weld Volu- metric Exam	Granted Provided Code-Required Exam is Per- formed Upon Pump Dis- assembly for Maintenance

TABLE 2

CLASS 2 COMPONENTS

IWC-2600 ITEM NO.	IWC-2520 EXAM. CAT.	SYSTEM OR COMPONENT	AREA TO BE EXAMINED	REQUIRED METHOD	LICENSEE PROPOSED ALTERNATIVE EXAMINATION	RELIEF REQUEST STATUS
C1.2	C-B	Decay Heat Removal Cooler	Nozzle-to- Vessel Welds (Welds with Installed Reinforcing Collars)	Volumetric	Surface of Nozzle-to- Collar & Collar-to- Vessel Fillet Welds	Granted
C2.1, C2.2 & C2.3	C-F & C-G	Piping	C2.1: Circumferential Butt Welds C2.2: Longitudinal Weld Joints in Fittings C2.3: Branch Pipe-to-Pipe Weld Joints	Volumetric	Exam of Pipes with Wall Thickness 0.5 in. or Less Per 1977 Edition of Code Thru Summer 1978 Addenda	Granted (1)

Note: (1) Relief is granted with implementation of proposed alternative. The extent of examination in the Residual Heat Removal, Emergency Core Cooling, and Containment Heat Removal Systems when using the 1974 Edition Summer 1975 Addenda of Section XI does not include the exemption criteria given in IWC-1220 relating to pipe size, Pressure & Temperature, and Chemistry control.

TABLE 3

CLASS 3 COMPONENTS

NO RELIEF REQUESTS

TABLE 4

COMPONENT SUPPORTS

NO RELIEF REQUESTS

TABLE 5

PRESSURE TESTS

NO RELIEF REQUESTS

TABLE 6
ULTRASONIC EXAMINATION TECHNIQUE

SYSTEM OR COMPONENT	REQUIREMENT	LICENSEE PROPOSED ALTERNATIVE TEST	RELIEF REQUEST STATUS
Reactor Vessel, Pressurizer, & Steam Generator	Appendix I of Section XI (Paragraph IWA-2232)	Article 4 of Section V, 1977 Edition of Code Thru Summer 1978 Addenda	Granted