



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
THE THIRD TEN YEAR INTERVAL INSERVICE INSPECTION PROGRAM PLAN,
AND ASSOCIATED REQUESTS FOR RELIEF
SOUTHERN NUCLEAR OPERATING COMPANY, INC.
EDWIN I. HATCH NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-321 AND 50-366

1.0 INTRODUCTION

The Technical Specifications for Edwin I. Hatch Nuclear Plant (Hatch), Units 1 and 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 (ASME Code) and applicable Addenda as required by Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a, except where specific written relief has been granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i), or alternatives approved pursuant to 10 CFR 50.55a(a)(3). Section 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 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 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 Hatch Units 1 and 2, third 10-year inservice inspection (ISI) interval is the 1989 Edition. The third 10-year ISI interval began January 1, 1996, for Hatch Units 1 and 2.

Enclosure 1

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.

By letter dated October 17, 1995, as supplemented January 26, April 5, June 4, August 13, and November 18, 1996, Georgia Power Company submitted to the NRC its third 10-year ISI program plan and associated requests for relief, and responded to the NRC staff's requests for additional information for Hatch Units 1 and 2. A summary of the requested reliefs is attached.

2.0 EVALUATION AND CONCLUSIONS

The staff, with technical assistance from its contractor, the Idaho National Engineering and Environmental Laboratory (INEEL), has evaluated the information provided by the licensee in support its third 10-year interval ISI plans and associated requests for relief for Hatch Units 1 and 2. Based on the information submitted, the staff adopts the contractor's conclusions and recommendations presented in the Technical Evaluation Report (TER), INEL-96/0188, Revision 1, dated December 1996 (Enclosure 2). The staff's evaluation of Request for Relief (RR) No. 11 is contained in Enclosure 3.

Based on the information provided, the staff concludes that no deviations from regulatory requirements or commitments were identified in the third 10-year interval ISI program plan for Hatch Units 1 and 2.

For RR Nos. 03, 05, and 06 the staff concludes that the Code requirements contained in these requests are impractical and that the licensee's proposed testing provides reasonable assurance of operational readiness of the subject systems. Based on the impracticality of complying with the Code requirements and the burden on the licensee if the Code requirements were imposed, the staff has concluded that pursuant to 10 CFR 50.55a(g)(6)(i) relief is granted for Requests for Relief Nos. RR-03, RR-05, and RR-06 as requested. The relief granted is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest giving due consideration to the burden that could result if the requirements were imposed on the facility.

Also, the staff has concluded that the alternatives contained in RR-01, RR-04, RR-07, RR-11, RR-12, RR-13, RR-14, provide an acceptable level of quality and safety. Therefore, the alternatives contained in the above requests for relief are authorized pursuant to 10 CFR 50.55a(a)(3)(i) as requested.

In addition, the staff has concluded that requiring the licensee to comply with the Code requirements contained in RR-02, RR-09, RR-10, RR-15, and RR-16 would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. The licensee's proposed alternatives provide reasonable assurance of operational readiness of the subject systems. Therefore, the licensee's proposed alternatives are authorized pursuant to 10 CFR 50.55a(a)(3)(ii) as requested.

Code Cases N-498-1, N-509, N-522, N-524, N-416-1, and N-523 contained in RR-02, RR-04, RR-07, RR-09, RR-13, and RR-14, respectively, are authorized for the current interval or until such time as the Code Cases are published in a future revision of Regulatory Guide 1.147. At that time, if the licensee intends to continue to implement these Code Cases, the licensee is to follow all provisions in the above Code Cases, with limitations issued in Regulatory Guide 1.147, if any. Relief is not required for RR-08.

Attachment: Summary of Relief Requests

Principal Contributor: T. McLellan

Date: June 16, 1997

TABLE 1
SUMMARY OF RELIEF REQUESTS

Relief Request Number	System or Component	Exam Category	Item No.	Volume or Area to be Examined	Required Method	Licensee Proposed Alternative	Relief Request Status
RR-01	Reactor Pressure Vessel	B-G-1	B6.10	Closure Head Nuts	Surface	VT-1 Visual Examination	Authorized
RR-02	Code Class 1, 2, and 3 Systems	B-E B-P C-H D-A D-B D-C	B4.11 B4.12 B4.13 B15.11 B15.51 B15.61 B15.71 C7.20 C7.40 C7.60 C7.80 D1.10 D2.10 D3.10	Hydrostatic Test Boundaries	Hydrostatic Test	Apply Alternatives Contained in Code Case N-498-1	Authorized
RR-03	Reactor Pressure Vessel	B-D	B3.90 B3.100	2"NPS Bottom Head Drain Vessel-to-Nozzle Welds N15 and 2N15 2"NPS Bottom Head Drain Vessel Inside Radius Section N15 and 2N15	Volumetric	VT-2 visual examination	Granted

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Relief Request Number	System or Component	Exam Category	Item No.	Volume or Area to be Examined	Required Method	Licensee Proposed Alternative	Relief Request Status
RR-04	Class 1, 2, and 3	B-K-1 C-C D-A D-B D-C	B10.10 B10.20 C3.10 C3.20 D1.20 thru D1.60 D2.20 thru D2.60 D3.20 thru D3.60	Integrally Welded Attachments	Volumetric or Surface Surface VT-3 Visual Examination	Apply Alternatives Contained in Code Case N-509	Authorized
RR-05	Class 2 Pressure Vessels	C-A	C1.20	Residual Heat Removal Heat Exchanger Head Welds: Shell Head-to-Upper Shell Ring Welds 1E11-2HX-A-1, 1E11-2HX-B-1, 2HX-A-1, 2HX-B-1	Volumetric	Volumetric and Supplemental Surface to the Extent Practical	Granted
RR-06	Reactor Pressure Vessel	B-F	B5.20	2.5" Core D.P. & Liquid Control Nozzle-to-Safe-End Welds N10 and 2N10 3" Bottom Head Drain Nozzle-to-Safe-End Welds N15 and 2N15 2.5" RPV Instrumentation Nozzle-to-Safe-end Welds N16A, 2N16A, N16B, and 2N16B	Surface	VT-2 Visual Examination	Granted
RR-07	Class 1 & 2 Piping	B-J C-F-2	B9.12 C5.52 C5.82	Longitudinal Welds	Volumetric and Surface as applicable	Apply Code Case N-524	Authorized

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Relief Request Number	System or Component	Exam Category	Item No.	Volume or Area to be Examined	Required Method	Licensee Proposed Alternative	Relief Request Status
RR-10	Class 1 and 2 Piping and Components	IWA-2600	NA	Weld Reference System	NA	Develop Reference for Each Examination Area When Examined	Authorized
RR-11	Snubbers	NA	NA	NA	NA	NA	Authorized (see evaluation by NRC/MEB)
RR-12	Class 1 and 2 Piping and Components	IWA-5250(a)(2)	NA	Bolted Connections	Remove All Bolting At Leaking Connection For Evaluation	Evaluations of Bolted Connection	Authorized
RR-13	Class 2 Piping	C-H	C7.10 C7.30 C7.50 C7.70	Penetration Piping	Pressure Test	Appendix J	Authorized
RR-14	Recording and Reporting	IWA-6220 IWA-6230	NA	NA	NA	Code Case N-523	Authorized
RR-15	Class 2 Piping	C-H	C7.40 C7.60	High Pressure coolant Injection System Piping	Pressure Test	Perform pressure test in conjunction with the System Functional Test	Authorized
RR-16	Class 3 Piping	D-A	D1.10	Safety Relief Valve Piping	Pressure Test	No Alternative	Authorized



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1.0 INTRODUCTION

Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.55a, requires that inservice inspection (ISI) of certain Code Class 1, 2, and 3 components be performed in accordance with Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel (B&PV) Code and applicable Edition and Addenda, except where specific written relief has been requested by the licensee and granted by the Commission pursuant to 10 CFR 50.55a(g)(6)(i), or alternatives approved pursuant to 10 CFR 50.55a(a)(3). In proposed alternatives, the licensee must demonstrate that: (i) the proposed alternatives provide an acceptable level of quality and safety; or (ii) compliance would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety. In requesting relief, the licensee must demonstrate that the requirement is impractical for their facility. NRC guidance contained in Generic Letter (GL) 90-09, *Alternative Requirements for Snubber Visual Inspection Intervals and Corrective Actions*, provides alternatives to the Code requirements determined to be acceptable to the NRC staff.

Section 50.55a authorizes the Commission to grant relief from ASME Code requirements upon making the necessary findings. The NRC staff's findings with respect to granting or not granting the relief request as part of the licensee's ISI program are contained in this Safety Evaluation (SE).

This SE covers a request for relief from the ASME B&PV Code, Section XI, Subarticle IWF-5300(a) and (c), inservice visual examination requirements. The licensee proposes an alternate visual examination method, as described in relief request RR-11, submitted by Georgia Power Company's (GPC) letter dated October 17, 1995, with additional information provided by letter dated August 13, 1996. The licensee's ISI program is based on the requirements of Section XI of the ASME B&PV Code, 1989 Edition. The 1989 Edition of the ASME B&PV Code, Section XI, Subarticles IWF-5300(a) and (c), require that snubber inservice examinations be performed in accordance with the first Addenda to ASME/ANSI OM-1987, Part 4, published in 1988 (OM-1988, Part 4), using the VT-3 visual examination methods described in paragraph IWA-2213.

Enclosure 3

The ASME Code, Section XI, requires personnel performing nondestructive examinations be qualified and certified as described in Subarticle IWA-2300.

2.0 RELIEF REQUEST RR-11

The licensee requests relief from the ASME B&PV Code, Section XI, requirement to use certified personnel in the performance of the visual examination of snubbers and their attachments, excluding welded attachments, using the VT-3 methods described in paragraph IWA-2113.

2.1 Licensee's Basis For Requested Relief

A selected group of GPC Maintenance Department personnel have received special training in the examination and testing of snubbers. The training consisted of specialized classes, presented by various snubber vendors and contractors, that included: (1) training for identification of potential problems and deficient conditions relative to snubber operability; (2) instructions in snubber repair and complete overhaul; and (3) training in performance of snubber functional testing. Individuals from the selected group have been far more involved and have accumulated many more hours of experience in activities associated with the removal, installation, examination, repair, overhaul, and testing of snubbers than a typical ASME, Section XI, VT-3 certified inspector.

Utilization of selected maintenance personnel, specifically trained to inspect, test, repair, remove, install, and overhaul snubber supports to perform the visual examinations in conjunction with the Site Snubber Program will: (1) eliminate a redundant inspection by VT-3 certified personnel, reduce resource expenditures, and radiation exposure; (2) provide personnel with extensive experience in snubber applications and maintenance; (3) meet all aspects of Section XI, Article IWF requirements other than certification of inspection personnel; (4) provide reasonable assurance that unallowable inservice flaws have not developed or that they will be detected and repaired prior to returning the reactor to service; and (5) provide an acceptable level of quality and safety and not endanger public health and safety.

2.2 Alternate Method

Maintenance personnel who have been trained to recognize potential problems and deficient conditions, specifically applicable to snubbers, and who have been involved with the snubber functional testing program will be used to perform visual examinations required by Subarticles IWF-5300(a) and (c) and Table IWF-2500-1 (excluding welded attachments).

The qualification of personnel will be in accordance with the GPC Quality Assurance Program for training and qualification of plant personnel. The selected personnel will have all training documented to the training program requirements. The inspector's Section XI, Article IWF-5000, activities will be documented in the Site Snubber Program. Further, the GPC snubber examination procedures require that all data sheets be reviewed by the site snubber engineer for concurrence and resolution of any reported snubber condition.

2.3 Evaluation

Section XI, Subarticles IWF-5300(a) and (b), titled, Inservice Examinations and Tests, in part, require that inservice inspection of snubbers and their integral and nonintegral attachments including lugs, bolting, pins, and clamps must be examined using the VT-3 visual examination method described in paragraph IWA-2213. Paragraph IWA-2213, titled, Visual Examinations VT-3, in part, requires that the VT-3 visual examination be conducted to determine the general mechanical and structural condition of components and their supports and include examinations for conditions that could affect operability or functional adequacy of snubbers and constant load or spring-type supports. Further, paragraph IAW-2321, titled, Visual Acuity, in part, provides the personnel vision requirements and qualifications for VT-3 examiners.

The licensee proposes to use selected maintenance personnel, specifically trained and experienced in activities of removal, installation, examination, repair, overhaul, and testing of snubbers to perform the VT-3 visual examinations, in lieu of certified inspectors. This alternative will reduce personnel radiation exposure and resource expenditures. The inspections will be limited to the visual examination of snubbers and their associated attachments, excluding the welded attachments. The selected personnel's qualifications and training will be in accordance the GPC Quality Assurance Program and documented. All snubber examination results will be documented in the Site Snubber Program procedures. GPC procedures require the site snubber engineer to review and resolve any reported snubber deficiency condition. Further, by GPC letter dated August 13, 1996, in response to the NRC's request for additional information, the licensee states that the maintenance personnel who will perform the snubber inspections are required to have annual eye examinations, which meet the ASME Code, Section XI, paragraph IWA-2321 requirements.

Based on a consideration of: (1) the licensee's proposed use of experienced personnel explicitly trained for snubber visual examination; (2) the GPC Quality Assurance Program's qualification, documentation, and training requirements; (3) the resulting reduction of unnecessary radiation exposure of plant personnel; and (4) the level of quality and safety provided, the staff has determined that the proposed alternative is acceptable in that it will provide a sufficient means to detect the condition of snubbers. Compliance with the required ASME Code use of certified inspectors would result in hardship without a commensurate increase in the level of quality and safety.

3.0 CONCLUSION

The staff concludes that the licensee's proposed alternative to use selected qualified personnel for visual examination of snubbers and their attachments in lieu of Code-required certified inspectors is authorized pursuant to 10 CFR 50.55a(a)(3)(ii), based on the determination that compliance with the Code requirements would result in a hardship without a compensating increase in the level of quality and safety.

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