



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

SAFETY EVALUATION BY OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO INSERVICE INSPECTION

REQUEST FOR RELIEF NO. 2.1.1

FOR

GEORGIA POWER COMPANY

EDWIN I. HATCH NUCLEAR PLANT, UNIT 1

DOCKET NO. 50-321

1.0 INTRODUCTION

In 1992 the Nuclear Regulatory Commission issued 10 CFR 50.55a(g)(6)(ii)(A) that contains new requirements for an augmented examination of reactor vessels. This section requires licensees to implement, prior to the time required by normal updating of the inservice inspection (ISI) program, the 1989 American Society of Mechanical Engineers (ASME) Section XI provisions to examine "essentially 100%" of the length of all reactor vessel shell welds. The shell welds are specified in the 1989 Edition of the ASME Code, Section XI, Table IWB-2500-1, Examination Category B-A, "Pressure Retaining Welds in Reactor Vessel," Item B1.10. This ASME classification includes Item B1.11, circumferential shell welds, and Item B1.12, longitudinal shell welds. Section 50.55a(g)(6)(ii)(A)(2) defines "essentially 100%" examination as "more than 90% of the examination volume of each weld." The schedule for implementation of the augmented inspection is dependent upon the number of months remaining in the 10-year ISI interval that was in effect on September 8, 1992. Section 50.55a(g)(6)(ii)(A)(3) states that licensees with fewer than 40 months remaining in the inservice inspection interval in effect on September 8, 1992, may elect to defer the augmented reactor pressure vessel (RPV) examinations as long as certain conditions are met. Section 50.55a(g)(6)(ii)(A)(5) requires licensees unable to completely satisfy the requirements of the augmented reactor vessel examination to propose an alternative that would provide an acceptable level of quality and safety. A licensee may use its proposed alternative when authorized by the Office of Nuclear Reactor Regulation.

Pursuant to the provisions of 10 CFR 50.55a(g)(6)(ii)(A)(3), Georgia Power Company (GPC) has elected to defer the augmented RPV examinations for Hatch Unit 1 to the first period of the third inspection interval. The third interval commenced on January 1, 1996.

In a safety evaluation dated September 29, 1986, the staff approved GPC's second interval Request for Relief No. 2.1.1 related to less than 100 percent examination of RPV and closure head circumferential, longitudinal, and meridional welds. However, the staff issued a safety evaluation dated June 22, 1989, that revoked the relief previously granted by Request for Relief No. 2.1.1. The denial was based on staff concerns about service induced degradation and concerns that relief was not warranted because the industry could develop the means to examine essentially 100 percent of the RPV welds. These issues were subsequently addressed by the staff through the augmented reactor vessel examination rule.

## 2.0 EVALUATION

By letter dated December 4, 1995, Georgia Power Company requested that the staff reinstate, for Unit 1 only, the relief granted by Request for Relief No. 2.1.1 in the staff's safety evaluation dated September 29, 1986. Section 50.55a, paragraph (g)(6)(ii)(A)(1), states that all previously granted reliefs, under 50.55a, to licensees for the extent of volumetric examination of reactor vessel shell welds specified in Item B1.10 of Examination Category B-A, "Pressure Retaining Welds in Reactor Vessel," in Table IWB-2500-1 of subsection IWB in applicable editions and addenda of ASME Section XI during the inservice inspection interval in effect on September 8, 1992, are hereby revoked, subject to the specific modification in 50.55a(g)(6)(ii)(A)(3)(iv) for licensees that defer the augmented examination in accordance with 50.55a(g)(6)(ii)(A)(3). Paragraph 50.55a(g)(6)(ii)(A)(3)(iv) states that licensees that defer the augmented examination may retain all previously granted reliefs that otherwise would be revoked by paragraph 50.55a(g)(6)(ii)(A)(1).

As noted above, 10 CFR 50.55a(g)(6)(ii)(A)(3) states that licensees with fewer than 40 months remaining in the inservice inspection interval in effect on September 8, 1992, may elect to defer the augmented RPV examinations as long as certain conditions are met. These conditions are as follows:

1. 10 CFR 50.55a(g)(6)(ii)(A)(3)(i) states that the deferred augmented examinations may not be used as a substitute for the reactor vessel shell weld examination scheduled for implementation during the inservice inspection interval in effect on September 8, 1992. GPC has indicated that they will perform second interval examinations of the reactor vessel shell welds during the Unit 1, spring 1996 refueling outage, using the provisions of IWA-2400(c) and IWB 2412(b) of the 1980 Edition/Winter 1981 Addenda of ASME Section XI. These examinations will be consistent with the Request for Relief No. 2.1.1 granted in the safety evaluation dated September 29, 1986.
2. 10 CFR 50.55a(g)(6)(ii)(A)(3)(ii) states that the deferred augmented examinations may be used as a substitute for the RPV examinations normally scheduled for the interval in which the augmented examinations are performed. GPC has indicated that the deferred augmented examinations will also satisfy the third interval reactor vessel shell weld examination requirements.

3. 10 CFR 50.55a(g)(6)(ii)(A)(3)(iii) states that if the deferred augmented examinations are used as a substitute for the normally scheduled examinations, subsequent examinations must be performed during the first period of successive inspection intervals. GPC has indicated that it will schedule the Unit 1 RPV shell weld examinations for the first period of successive inspection intervals.
4. 10 CFR 50.55a(g)(6)(ii)(A)(3)(iv) states that licensees that defer the augmented examinations may retain all previously granted reliefs that otherwise would be revoked by 10 CFR 50.55a(g)(6)(ii)(A)(1) for the inservice inspection interval in effect on September 8, 1992. GPC has requested that Request for Relief No. 2.1.1 be reinstated for Unit 1 to address the requirements 10 CFR 50.55a with respect to the second interval ISI examinations. Reinstatement of the subject relief request for Unit 2 is not necessary.
5. 10 CFR 50.55a(g)(ii)(A)(3)(v) states that licensees with fewer than 40 months remaining in the inservice inspection interval in effect on September 8, 1992, may extend that interval in accordance with the provisions of Section XI (1989 Edition) IWA-2430(d) for the purpose of implementing the augmented examination during that interval. This condition does not apply.
6. 10 CFR 50.55a(g)(6)(ii)(A)(3)(vi) states that the deferred augmented examination shall be performed in accordance with the related procedures specified in the Section XI edition and addenda applicable to the inspection interval in which the augmented examination is performed. GPC has indicated that it will perform all augmented shell examinations consistent with this requirement.

Based on the discussion of items 1 through 6 above, the staff concludes that GPC satisfies the conditions for deferring the augmented reactor vessel examination to the first period of the third interval for Hatch Unit 1. Since the rule was issued to address the staff concerns that formed the basis for revoking Request for Relief No. 2.1.1 in its safety evaluation dated June 22, 1989, and since GPC has provided the staff with its plans for complying with the rule, the relief granted by the safety evaluation dated September 29, 1986, for Request for Relief No. 2.1.1, is hereby reinstated.

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