

Georgia Power Company
40 Inverness Center Parkway
Post Office Box 1295
Birmingham, Alabama 35201
Telephone 205 877-7122

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Georgia Power

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the southern electric system

C. K. McCoy
Vice President Nuclear
Vogtle Project

April 25, 1994

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Docket Nos. 50-321 50-424
50-366 50-425

HL-4578
LCV-0351

Mr. Samuel J. Chilk
Secretary of the Commission
U. S. Nuclear Regulatory Commission
Washington, DC 20555

ATTENTION: Docketing and Service Branch

Comments on Proposed Rule
"Codes and Standards for Nuclear Power Plants;
Subsections IWE and IWL"
(59 Federal Register 979 of January 7, 1994)

Dear Mr. Chilk:

Georgia Power Company has reviewed the proposed rule "Codes and Standards for Nuclear Power Plants; Subsection IWE and IWL," published in the Federal Register on January 7, 1994. In accordance with the request for comments, Georgia Power Company is in total agreement with the NEI comments which are to be provided to the NRC. In addition, Georgia Power Company (GPC) is enclosing comments which are specific to GPC nuclear plants.

Should you have any questions, please advise.

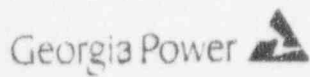
Respectively submitted,

CKM'g
C. K. McCoy

CKM/jdk

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U. S. Nuclear Regulatory Commission

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cc: Georgia Power Company
J. T. Beckham, Jr., Vice President, Plant Hatch
J. B. Beasley, General Manager - Vogtle Electric Generating Plant
H. L. Sumner, Jr., General Manager - Plant Hatch

U. S. Nuclear Regulatory Commission, Washington, DC
K. N. Jabbour, Licensing Project Manager - Hatch
D. S. Hood, Licensing Project Manager - Vogtle

U. S. Nuclear Regulatory Commission, Region II
S. D. Ebnetter, Regional Administrator
L. D. Wert, Senior Resident Inspector - Hatch
B. R. Bonser, Senior Resident Inspector - Vogtle

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Comments on the Proposed Rule
"Codes and Standards for Nuclear Power Plants;
Subsections IWE and IWL"

These comments are based on the review of this proposed rule as it applies to our GPC Plants.

- (01) Choosing the 1992 Edition with 1992 Addenda presents a problem to those plants which will be upgrading in the near future. We anticipate our three plants to be using the 1992 Edition with 1993 Addenda and it would be much easier if the IWE/IWL scope of work was to the same Edition and Addenda of the ASME Code as the remaining Section XI examinations.
- (02) We are not convinced that the problems listed in the NRC SECY-93-328 are adequate to justify the implementation of these stringent requirements. There were only two cases of corrosion/degradation where thickness measurements revealed areas where the wall thickness was at or below the minimum design thickness.
- (03) The requirement of an expedited examination schedule is unnecessary. It puts an undue burden on those plants that are updating to new Editions within the next couple of years. If a requirement is instituted to complete these examinations within a specific time-frame, we would propose seven and one-half years as a minimum to complete this scope of work. We feel that we would need a minimum of four outages at each of our units to develop the plan and complete the examinations called out in IWE and IWL.
- (04) The special allowance by the NRC of giving an extra two years for those plants which will be upgrading in the near future is of no real benefit since we will still have to complete the examinations within the same five year time-frame. As noted in (04), we would propose seven and one-half years as a more adequate time to complete this scope of work.
- (05) Since the Proposed Rule doesn't require the submittal of an ISI Program to the NRC, we will need to submit Relief Requests to cover those cases where we are unable to meet these requirements.
- (06) When this Proposed Rule becomes effective, our BWR plant (Hatch) is planning to submit the "BWROG Model Containment Inspection Program" as an alternative to Subsection IWE.

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The following comments are related to Subsection IWE as applicable to our GPC Plants:

- (1) IWE has been developed for application to a new plant and thus should not be applied to existing plants. If IWE is warranted to monitor containment integrity, then the requirements should only be applicable to future plants so that IWE could be considered and accounted for during original plant design and construction. Existing plants already have programs in place to maintain the integrity of the containments and these programs should be allowed to continue.
- (2) If the accessibility requirements of IWE-1231 cannot be met, relief requests will be required. (i.e. access for visual examination from at least one side is required for; penetrations and openings, structural discontinuities, single welded butt joints from the welded side, 80% of the containment surface area, all surface areas subject to accelerated degradation).
- (3) NRC endorsement of IWE will result in a flood of additional relief requests during plant ISI Program updates with the resultant NRC review, rebuttal, approval process and extended periods of time before approved examination programs are in place. Containment integrity for existing plants can be more efficiently maintained with existing industry initiatives and examination/testing programs.
- (4) We will be required that whenever paint or coatings are to be either removed or re-applied, a visual examination is to be performed.
- (5) It is our understanding that Paragraph (b) of IWE-2420 applies only to the schedule of examinations required in Category E-C and not the examination methods. We would perform the examinations to the examination method called out under the specific Examination Category.
- (6) Paragraph (b) of IWE-2430, Additional Examinations, requires that if additional flaws or areas of degradation are found in the first expanded scope, "all of the remaining examinations within the same category shall be performed to the extent specified in Table IWE-2500-1 for the inspection interval". This is not a reasonable requirement in that it is much more restrictive than even Class 1 component examinations in this situation.

(7) TABLE IWE-2500 - EXAMINATION CATEGORIES

(A) EXAMINATION CATEGORY E-A, CONTAINMENT SURFACES

- (1) This category requires visual examination (VT-3) of 100% of the accessible surface areas of containment at Vogtle and the drywell and torus at Hatch. This is a very large

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scope of work considering the PWR containment surfaces and the torus at Hatch which has been extensively modified with T-stiffeners on the outside and inside of the shell. Some of these examinations will have to be done remotely and Table IWA-2210-1 requires that the VT-3 examination be demonstrated such that a lower case character (0.105-in. tall) be seen remotely with proper illumination. This may not be possible and we would take exception to this requirement. In addition, there are concerns about outage impact and personnel safety since we would probably have to perform these examinations from the polar crane.

Subsection IWE has included containment surface examination requirements which should be of no concern for containment integrity. 10 CFR 50 Appendix J, paragraph V.A., presently includes requirements for a general visual examination of the interior and exterior containment surfaces prior to each ILRT which is sufficient to monitor general containment integrity.

Examinations should be limited to known problem areas or areas which are most susceptible to degradation based on engineering evaluation of the applicable designs, construction practices, materials, coatings and environments (e.g. non-coated wetted surfaces, drywell air gaps where forming material was not removed). Potential problem areas will probably not be suitable for meaningful visual examination and other examination methods would be required. Therefore a requirement for 100% visual examination of the accessible surface areas of the containment structure is unwarranted.

(2) Item number E1.20 requires VT-3 of 100% of the accessible surfaces of the containment vent system. There needs to be a clear definition of the scope of this requirement. Item E1.12 requires VT-3 examination of 100% of the accessible surfaces of the containment structure and the vent system would be part of the area included in this item.

(3) Item No. E1.11 requires a "General Visual" and Paragraph IWE-3510.1 is referenced. This paragraph requires the examinations performed by, or under the direction of a Registered Professional Engineer or another individual with equivalent experience and knowledge. There is no requirement in 10 CFR 50 Appendix J or other areas including the fracture mechanics analysis of Reactor Pressure Vessels which requires a Registered P.E.. This requirement is unnecessary as long as the personnel performing this work have the appropriate knowledge.

(B) EXAMINATION CATEGORY E-B, PRESSURE RETAINING WELDS

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(1) Item E3.10 Containment Penetration Welds and item E3.30 Nozzle-to-Shell Welds (Category D), appear to be the same thing. There is no difference in these two items. They both encompass welds of pipes which penetrate the containment shell. Item E3.30 scope includes 25% of the total number of welds, but item E3.10 includes only 25% of those welds subject to cyclic loads and thermal stresses. The entire containment structure is subject to cyclic loads and thermal stresses due to startup and shutdown of the reactor. The examination scope is unclear and additional explanation is required.

(2) Items listed in category E-B require VT-1 examination which requires the examiner access within 24" of the surface. Performance of VT-1 examinations of welds at our plants, e.g., drywell, torus shells, and containment domes, will require extensive scaffolding and due to personnel safety concerns, may be considered to be inaccessible. In such cases, remote visual examinations should be allowed.

(C) EXAMINATION CATEGORY E-C, CONTAINMENT SURFACES REQUIRING AUGMENTED EXAMINATIONS

(1) This category seems to have been developed to catch any areas of the containment which are subjected to questionable environmental conditions. Category E-C should be the only category included in the scope of IWE. The existing visual examination requirements of 10 CFR 50 Appendix J prior to each ILRT should be sufficient for all but these areas which are subject to potentially accelerated degradation.

(2) Paragraph IWE-1240 defines those surface areas which require augmented examinations per Category E-C. The areas included tend to be consistent with those already identified by the industry due to operating experience and which utilities have already established examination requirements and contingency plans in response to regulatory documentation. Efforts by ASME XI to replace regulatory documents seems prudent, but advantage should be taken for the years of operating experience and problems discovered. Category E-C addresses these problems, but an all encompassing examination program does not seem justified.

(3) Item E4.12 requires a 1'-0 x 1'-0 grid pattern for UT thickness measurements on areas identified by the owner which require augmented examinations. The physical layout of a 1'-0 square grid on the outside of a torus shell for our Hatch Plant which has reinforcing stiffeners could be virtually impossible due to interferences. Any requirements for UT thickness measurements should be left completely up to the owner based on actual conditions and engineering evaluation.

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(D) EXAMINATION CATEGORY E-D, SEALS, GASKETS AND MOISTURE BARRIERS

(1) Item E5.10 - Seals and E5.20 - Gaskets should not be included in the scope of examination. All openings containing seals or gaskets are subjected to leakrate testing on a frequency determined by the Plant Technical Specifications and/or 10 CFR 50, Appendix J which is much more subjective and capable of detecting degradation than a general VT-3 examination. These items should be deleted from IWE since this is a redundant requirement.

(2) Item E5.30 identifies visual examination requirements for accessible moisture barrier seals. If the degradation of such seals could lead to degradation of the adjacent containment surfaces, then these areas should be included with Category E-C. However, engineering evaluation should be allowed to assess the requirements for examination.

(E) EXAMINATION CATEGORY E-F, PRESSURE RETAINING DISSIMILAR METAL WELDS

(1) Item E7.10 requires the surface examination (liquid penetrant) of 50% of the total dissimilar metal welds included in the containment structure. These welds would be primarily associated with containment penetrations and would consist of flued head to penetration pipe welds and possible expansion bellows to pipe welds. When paint or coatings are removed, IWE would require that the surface be visually examined prior to the paint or coatings being removed as well as after the examination and reapplication of the paint or coatings. Visual examination should be adequate to detect any corrosion activity or degradation of the subject welds. If degradation is detected visually, IWE would require that either a supplemental surface or volumetric examinations would be performed.

(F) EXAMINATION CATEGORY E-G, PRESSURE RETAINING BOLTING

(1) Visual examination, VT-1, of bolted connections when they are disassembled seems prudent and justifiable and is probably already included in the plant's Appendix B program.

(2) Bolt torque or tension tests each interval does not seem warranted. Pressure boundary bolted connections normally require specific procedures for installation and torquing. These procedural requirements are applicable each time the connection is made. 10 CFR 50, Appendix J requires three ILRTs each 10-year interval which would identify any

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bolted connections with leakage above the acceptance criteria. Therefore an arbitrary bolt torque/tension test each inspection interval would not increase the level of containment integrity.

(G) EXAMINATION CATEGORY E-P, ALL PRESSURE RETAINING COMPONENTS

(1) Examination Category E-P seems to be a restatement of the 10 CFR 50, Appendix J leakrate testing requirements. At the present time, Appendix J requirements are separate from ASME XI and should remain that way until the NRC tasks some other organization with development of replacement requirements. The ASME O&M Code may eventually be tasked with development of an Appendix J replacement. If so, it will be included in the O&M Code. Referencing 10 CFR 50, Appendix J in IWE is repetitious and unnecessary.

(8) ARTICLE IWE-5000 - SYSTEM PRESSURE TESTS

(A) This article addresses leakrate testing of the containment and seems unnecessary since leakrate testing is required by 10 CFR 50, Appendix J. IWE-5222 allows deferral of leakage tests until the next scheduled leakage test for certain repairs/modifications. IWE should not allow the deferral of a test which might be required by 10 CFR 50. Leakrate testing requirements should be contained in only one document. Including any requirements for leakrate testing in IWE will only confuse the issue more than it already is.

(B) IWE-5240 references requirements for visual examination per IWA-5246 which has been deleted in the latest addenda to the 1992 Edition of ASME Section XI. Therefore the reference is nonexistent.

The following comments are related to Subsection IWL as applicable to our GPC Plants (applicable only to the Vogtle Nuclear Plant):

(1) IWL has been developed for application to a new plant and thus should not be applied to existing plants. If IWL is warranted to monitor containment integrity, then the requirements should only be applicable to future plants so that IWL could be considered and accounted for during original plant design and construction. Existing plants already have programs in place to maintain the integrity of the containments and these programs should be allowed to continue.

(2) IWL-2310 requires VT-1C and VT-3C examinations and the corresponding requirement for the Owner's written practice to define the qualification, etc., for these certifications. It

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does permit limited certification for examiners. IWL references IWA-2210; it would be our intent to perform these examinations using a telescope and we would be required to demonstrate that we could satisfy Table IWA-2210-1 in that a lower case character (0.105-inches tall) be seen in the telescope.

(3) IWL-2320 requires "Responsible Engineer who shall be a Registered Professional Engineer experienced in evaluating the inservice condition of structural concrete. He shall have knowledge of the design and construction Codes and other criteria used in design and construction of concrete containments in nuclear power plants."

This requirement does not correspond with other portions of Section XI in that there are no such detailed instructions or requirements for similar functions such as fracture mechanics analysis, etc. Many utilities will be forced to hire contractors to satisfy this requirement. In addition, 10 CFR 50 Appendix J has no such requirement and it appears to provide no real benefit. At least IWE-3510.1 permitted the Owner to use another individual as long as the individual had the appropriate knowledge.