



GE Nuclear Energy

General Electric Company  
175 Riverside Avenue, San Jose, CA 95128

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Document Control Desk  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Attention: Charles L. Miller, Director  
Standardization and Non-Power Reactor Project Directorate

Subject: GE Response to GE/NRC Performance & Quality Control Branch  
Conference Call of April 12, 1991

Enclosed are thirty-four (34) copies of the GE response to the discussion item of the subject call.

It is intended that GE will incorporate this response in a future amendment.

Sincerely,

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Regulatory and Analysis Services  
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cc: F. A. Ross (DOE)  
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## **17.1 QUALITY ASSURANCE DURING DESIGN AND CONSTRUCTION**

### **17.1.1. Organization**

See Section 1 of Reference 1.

This section complies with Basic Requirement 1 and Supplement 1S-1 of ANSI/ASME NQA-1-1983.

The following additional information describes the relationship between GE and its technical associates.

GE, with the support of major technical associates, is designing the ABWR. This is a common engineering effort to design and specify systems and equipment from the standard plant through major purchasing specifications. The designs, specifications, and drawings are based upon various joint development and engineering studies performed by GE and its associates.

The lead responsibility to produce each specification and drawing is formally assigned to one design organization. However, the content of each document is reviewed and approved by GE. While all common engineering documents reflect the formal consensus of all parties, GE is responsible for the design and the supporting calculations and records for the ABWR project.

### **17.1.2 Quality Assurance Program**

See Section 2 of Reference 1.

This section complies with Basic Requirement 2 and Supplements 2S-1, 2S-2, and 2S-3 of ANSI/ASME NQA-1-1983 and NQA-1a-1983 as modified by the NRC-accepted alternate positions identified in Table 2-1 of Reference 1 relating to NRC Regulatory Guides: 1.28, Revision 0; 1.58, Revision 1; and 1.146, Revision 0.

The following additional information describes the relationship between GE and its technical associates.

GE and each of its associates have their own quality assurance program based on Reference 2. GE has performed a review of the QA programs of each of the associates to assure that the engineering designs and documentation produced by the associates meet the

requirements of the GE quality program. These reviews found the QA programs of the technical associates to meet GE requirements, and the applicable requirements of Appendix B to 10CFR 50.

Agreements between GE and its associates require an annual review to assure that the quality systems are being implemented. All associates are committed to correct discrepancies noted during these reviews.

The identification of safety-related structures, systems, and components (Q list) to be controlled by the quality assurance program is shown on Table 3.2-1. Additional items will be added to Table 3.2-1, as necessary.

### **17.1.3 Design Control**

See Section 3 of Reference 1.

This section complies with Basic Requirement 3 and Supplement 3S-1 of ANSI/ASME NQA-1-1983 as modified by the NRC-accepted alternate position identified in Table 2-1 of Reference 1 relating to NRC Regulatory Guide 1.64, Revision 2.

The following additional information describes the relationship between GE and its technical associates.

GE and its associates control the review and approval of ABWR design documents with a procedure using the Engineering Review Memorandum (ERM). The lead design organization prepares the document and circulates it internally for engineering review, approval, and design verification. Evidence of verification is entered into design records of the responsible design organization. Each document is distributed by ERM to the design organizations of the other parties for their review and approval of technical content and design interfaces. All comments resulting from this process are resolved to the satisfaction of all parties. After resolution of all the comments, the design verification is reviewed and, when necessary, updated to assure that changes did not invalidate the original verification. After final agreement is reached, the document is finalized by the lead design organization, circulated to the other parties for their approval signatures, and then issued.

Changes to ABWR documents are also approved