UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

Report No.: 50-424/85-58

Licensee: Georgia Power Company
P. O. Box 4545
Atlanta, GA 30302

Docket No.: 50-424 License No.: CPPR-108

Facility Name: Vogtle 1

Inspection Conducted: December 9-13, 1985

Inspector: George Hallstrom 1/9/86
G. A. Hallstrom Date Signed

Accompanying Personnel: L. G. Bruch, EG&G-Idaho, Inc.
K. K. Miller, EG&G-Idaho, Inc.

Approved by: J. J. Blake 1/9/86
J. J. Blake, Section Chief Date Signed
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection entailed approximately 110 inspector-hours at the site in the areas of Readiness Review Module 8, Structural Steel.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

D. O. Foster, Vice President, Project General Manager
*C. W. Hayes, Project Quality Assurance (QA) Manager
*C. E. Belflower, QA Site Manager, Operations
*R. W. McManns, Readiness Review (RR) Discipline Manager
G. M. Creighton, RR Team Member

Other Organization

*G. R. Trudeau, Bechtel Power Corporation (BPC), RR Special Assistant
*M. R. Thaker, BPC, RR Civil-Structural Design Team Leader

NRC Resident Inspectors

*H. Livermore, Senior Resident Inspector (Construction)
*J. Rogge, Senior Resident Inspector (Operations)
*R. Schepens, Resident Inspector

*Attended exit interview

2. Exit Interview

The inspection scope and findings were summarized on December 13, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected. NRC questions intended to clarify the Module 8 report were discussed (See Attachment). No dissenting comments were received from the licensee and it was noted that the Vogtle Project General Manager had agreed that Georgia Power Company responses would be provided by January 24, 1986.

The licensee did identify as proprietary some of the materials provided to and reviewed by the inspector during this inspection; however, details from those materials are not included in this report.

3. Licensee Action on Previous Enforcement Matters

This subject was not addressed in the inspection.

4. Unresolved Items

No unresolved items were identified during this inspection.

5. Review of Readiness Review Module 8, Structural Steel

a. General

This inspection report documents Region II's initial site inspection relative to the evaluation of GPC's Readiness Review Module 8, Structural Steel. The inspection was conducted to aid in determining whether Module 8 provided an acceptable basis for its reported conclusion, concerning Unit 1 of the Vogtle Electric Generating Plant (VEGP), that the design and construction programs, and processes associated with structural steel and welding, within the scope identified within this module were in accordance with applicable licensing commitments.

Readiness Review Module 8 is one portion (module) of a many part review being conducted by GPC to aid in assuring that VEGP Unit 1 will be operationally ready in accordance with scheduled plans for obtaining an operating license. The GPC Module 8 review activities, data and results are summarized in the Module 8 report, which was submitted to the NRC November 12, 1985. The module report consisted of eight sections: 1.0, Introduction; 2.0, Organization and Division of Responsibility; 3.0, Commitments; 4.0, Program Description; 5.0, Audits; 6.0, Program Verification; 7.0, Independent Design Review; and 8.0, Program Assessments/Conclusions.

The inspector conducted a general inspection of the Unit 1 containment and auxiliary building to observe examples of the hardware included in Module 8. The objective during this examination was an overview and familiarization with the interrelationships between the types of hardware involved. Types of hardware examined included: embeds for equipment, HVAC, raceways and piping supports; internal containment structural steel framing; carbon steel liner for containment; equipment hatch, personnel and escape locks and the containment polar crane. Added familiarization of the readiness review process for Module 8 was gained through a general presentation provided by GPC and follow-on discussions with Readiness Review personnel. The inspector identified a need for clarification regarding potential significant changes occurring after the April 30, 1985, effective date of the Module 8 report. Requested clarification is specified in Question No. 1 of the Attachment.

b. Boundaries of Module 8

The inspector completed the initial examination of the boundaries associated with Module 8 as indicated within section 1 of the report. The objective during this examination was to get a clear a understanding of the commitments, activities and hardware items included in Module 8 and to aid in determination of the extent to which important activities and commitments have been included and treated in the GPC review.

The inspector identified a need for clarification of the Module 8 report regarding inclusion of embeds for primary loop Nuclear Steam Supply System (NSSS) component supports and mechanical and electrical penetrations within containment. Requested clarification is specified in question Nos. 2 and 3 on the Attachment.

c. Commitment Implementation

Section 3.0 provides the commitments GPC identified for Module 8 and the verification of their implementation. Subsections 3.1 through 3.3 of Section 3.0 provided brief introductory information - including a definition of a commitment, information regarding the sources of the commitments, and a listing of the typical documents that were determined to implement commitments.

Subsections 3.4 and 3.5 of Section 3.0 presented respectively, a matrix listing the commitments identified and a matrix listing the documents considered to implement the commitments. In addition to providing a listing of the commitments identified, Subsection 3.4 provides an identification of all the other Readiness Review modules to which each Module 8 commitment was assigned and a determination as to whether implementation of the commitment was a design organization responsibility, a construction organization responsibility or the responsibility of both. The Subsection 3.5 matrix includes, for each commitment, an identification of design and/or construction documents that were determined to implement the commitment.

The inspector completed an initial review of the material presented in the Module 8 Subsection 3.4 and 3.5 matrices to determine whether the Readiness Review had satisfactorily identified commitments for the module and if it had satisfactorily determined their inclusion in implementing documents.

The inspector began his evaluation by examination of VEGP Final Safety Analysis Report (FSAR) entries and NRC Inspection and Enforcement Bulletins (IEBs) to identify safety-related commitments that appeared to apply to Module 8. A comparison with the Module 8 commitment and implementation matrices was made to determine if the Readiness Review had identified commitments for the FSAR entry locations and for the IEB responses that represented the commitment material on the inspector's independently selected sample. A total of 63 (over 32%) commitments were chosen for NRC verification of implementation. The sample includes over 36% of the commitments whose implementation was reportedly verified to second level design documents (Module 8 report Table 6.1-2). The inspector identified a need for clarification regarding commitment No. 1825 (Response to IEB 79-02, Pipe Support Base Plate Designs Using Concrete Expansion Anchor Bolts). Requested clarification is specified in question Nos. 4 and 5 on the Attachment.

d. Audits

Section 5.0 describes a review of past audit findings (including NRC inspection findings) that was conducted as part of the Module 8 Readiness Review. GPC performed the review to assess the adequacy of the emphasis they and placed on resolution of audit findings related to the scope of Module 8.

The inspector completed an initial review of the data and rationale presented (including material relative to NRC findings), to determine whether proper emphasis had been placed on the resolution of audit findings. The inspector identified need for clarification; relative to acceptance criteria for structural welds (NRC unresolved item 424/84-17-02) and the load tracking phases of the structural steel verification program. Requested clarification is specified in question nos. 6 and 7 on the Attachment.

ATTACHMENT:
Substance of NRC Questions of
December 12, 1985 on Module 8

ATTACHMENT

SUBSTANCE OF NRC QUESTIONS OF DECEMBER 12, 1985 ON MODULE 8

1) Section 1.1 indicates that the effective date of Module 8 is April 30, 1985. Has RR become aware of any significant changes after April 30, 1985 which should be considered in the NRC review of Module 8?

2) Table 1.1-1 indicates that embeds for equipment, HVAC, raceways and piping supports are included in Module 8. Also that primary loop (NSSS) component supports are to be included in Module 16A. Are all Category I embeds considered to be within the scope of Module 8?

3) Table 1.1-1 indicated that mechanical and electrical penetrations within containment are included within Module 8. Where is the boundary between Module 8 and Module 4 with regard to penetrations?

4) Section 3.4 indicates that commitment 1825 regarding conformance with IE Bulletin 79.02 is assigned only to Module 8. Why was commitment 1825 not also assigned to Module 11?

5) Section 3.5 indicates RRT verification that commitment 1825 was adequately implemented by DC-1000C, revision 3 and calculation X2CQ5.2.7. Table 6.1-2 indicates that implementation of commitment 1825 was verified to second

level design documents (Calcs, X2CQ5.2.7 and X2CK4.1.8 19). NRC Inspector Followup Item 424/85-21-01 notes discrepancies from vendor recommended pullout loads and those used in calculation X2CQ5.2.7 as of May 7, 1985. Please explain this discrepancy.

6) The audit matrix included on Module 8 report section 5.2 indicates RRT review of NRC inspection reports from February 6, 1979 (report no. 79-01) through May 7, 1985 (report no. 85-14) for items within the scope of Module 8. Reports 84-17, 84-36, 85-03, 85-08, and 85-14 are included. Section 5.2 states that RRT evaluated 15 violations associated with Module 8 with one violation assigned to the design team for evaluation and module assessment. This violation is reportedly concerned with discrepancies between specification X2AP01 C5.1 and AWS D1.1. The Module 8 report states that this issue was changed to an unresolved item by the NRC and is currently being evaluated by Bechtel.

(a) Are the statements within section 5.2 intended to apply to unresolved item 424/84-17-02 "Visual Acceptance Criteria?"

(b) Did RRT review of NRC inspection reports 84-36, 85-03, 85-08, and 85-14 include details regarding item 84-17-02?

(c) Are the discrepancies referred to in the Module 8 report section 5.2 those associated with 3/32" weld undercut acceptance criteria?

(d) Please provided clarification of the present status of Bechtel evaluation of this item.

7) As reported in the above referenced NRC inspection reports 85-03, 85-08, and 85-14, BPC engineering justification for 1/16" undercut for Category A welds is included in PFE-3730. Part of this justification hinges on the load tracking phase of the structural steel verification program. The review of structural adequacy referenced is in regard to investigation of Category I main frame members. Module 8 report section 6.1.3.2 states that "the project has initiated a load tracking program that, <u>if implemented as planned</u>, should ensure adequate reconciliation of platform loading data." Section 7.4.2.1.5 states that, "this load tracking and/or verification effort was not reviewed during the IDR since the project has not performed load tracking but intends to perform a verification effort after support design and installation is finalized . . . No project procedures were in existence describing how this effort would be conducted . . . The conclusions of this review are based on the initial design efforts and the presumption of a properly implemented load verification program. . . ."

In view of the above statements, please provide clarification of the present status of the load flow tracking program.