



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

Report Nos.: 50-424/85-02 and 50-425/85-02

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

Docket Nos.: 50-424 and 50-425

License Nos.: CPPR-108 and CPPR-109

Facility Name: Vogtle 1 and 2

Inspection Conducted: January 29 - February 1, 1985

Inspector: *J. Blake* 2/15/85  
 W. P. Kleinsorge Date Signed

Approved by: *J. Blake* 2/15/85  
 J. J. Blake, Section Chief Date Signed  
 Engineering Branch  
 Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection entailed 30 inspector-hours on site in the areas of construction progress (92706B), safety-related heating, ventilating and air conditioning (HVAC) systems (50100), and IE Bulletins (92703B).

Results: One violation was identified - "Failure to Establish Adequate Measures to Control Drawing Change Distribution" - paragraph 6c(2)(a).

## REPORT DETAILS

### 1. Licensee Employees Contacted

- \*H. H. Gregory III, General Manager - Vogtle Nuclear Construction Department
- \*N. Brooks, Civil Engineering Manager
- \*E. D. Groover, QA Site Manager
- \*M. H. Googe, Project Construction Manager

Other licensee employees contacted included construction craftsmen, engineers, technicians, and office personnel.

NRC Resident Inspector

\*W. F. Sanders

\*Attended exit interview

### 2. Exit Interview (30703)

The inspection scope and findings were summarized on February 1, 1985, with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection findings listed below. No dissenting comments were received from the licensee.

(Open) Violation 50-424, 425/85-02-01: "Failure to Establish Adequate Measures to Control Drawing Change Distribution" - paragraph 6c(2)(a).

The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection.

### 3. Licensee Action on Previous Enforcement Matters (92702)

Not inspected.

### 4. Unresolved Items.

Unresolved items were not identified during this inspection.

### 5. Independent Inspection Effort (92706B)

Construction Progress

The inspector conducted a general inspection of power block construction site to observe construction progress and construction activities such as welding, material handling and control, housekeeping and storage.

Within the areas examined, no violations or deviations were identified.

6. Safety-Related Heating, Ventilating, and Air Conditioning (HVAC) Systems (50100)

The inspector reviewed the licensee's HVAC program to determine whether the technical requirements detailed or referenced in the facility Safety Analysis Report associated with safety-related HVAC systems had been adequately addressed in the construction specifications, drawings, and work procedures. The applicable codes for the fabrication and installation of HVAC systems are:

AWS-D1.1-77  
 AWS-D9.1-80  
 AWS-D3.0-77  
 ASME Section IX-80  
 ANSI B31.1-77

a. Review of QA Implementing Procedures

The inspector reviewed the below listed documents to determine whether: adequate inspection procedures have been established for HVAC activity; provisions have been made to ensure that those engaged in conducting inspections are qualified and have been adequately trained; means have been established to verify that the technical requirements have been specified in and are subsequently extracted from the design and procurement documents and included in appropriate work and QC inspection procedures; provisions have been made to ensure that safety-related electrical components installed in the HVAC system have or will be properly qualified in accordance with IEEE-323-1974; means have been established to verify that any significant design and field changes from approved drawings are adequately controlled and processed commensurate with the original design; provisions have been established to ensure that quality requirements are met; safety-related/nonsafety-related boundaries and equipment are clearly defined and delineated.

b. Review of Work Procedures

The inspector reviewed the below listed procedures to determine:

- Whether procedures and instructions pertaining to the installation of HVAC ductwork, seismic supports, and other safety-related aspects of the installation were reviewed and approved by AE/licensee personnel.
- Whether approved procedures and instructions were appropriate and adequate for proper installation and inspection of the safety-related HVAC system, and whether those controls incorporated the following: controls to ensure that the type and classification of seismic supports for the HVAC ductwork comply with approved drawings and/or specifications; provisions for ensuring that

required preinstallation and in-process inspections are performed at the appropriate time for HVAC safety-related equipment; means to ensure that bolts, nuts, and washers (including lubricant, if used) for supports are of the proper type and correctly installed, and where required, bolt preloading (torquing), minimum bolt embedment, and thread engagement criteria are imposed; provisions to ensure the proper location of equipment criteria, dampers, filters, and etc.

<u>Document ID</u>	<u>Title</u>
BPC-X4AJ01 Rev. 15	"Specification for HVAC Equipment Installation and HVAC Duct Fabrication and Installation for GPC A. W. Vogtle Nuclear Power Plant, Burke County, Ga."
BPC-Drawing AX2D67W001, Rev. 24	"HVAC Support Details Circular & Rectangular Ducts"
BPC-X2AP01, Division C9 Section C9.1, Revision 16	"Field Fabricated Miscellaneous Q Class Steel"
BPC-X2AP01, Division C9, Section C9.3, Revision 8	"Fabricating Category I Steel Anchor Bolt Assemblies"
BPC-X2AP01, Division C9 Section C9.6, Revision 10	"Field Fabricated Miscellaneous Stainless Steel"
Appendix VC, Revision 8	"Visual Inspection Criteria for Welds"
BPC-XAJ07, Revision 19	"Specification for Field Coatings"
BPC-X4AJ21, Revision 5	"Specification for Fire Dampers"
BPC-X4AJ20, Revision 5	"Specification for Instrumentation & Controls, Autodampers, Back Draft Dampers and Actuators Associated with ESF and Non-ESF HVAC Systems"
GPC-X4AZ01, Division P9, Revision 11	"Plant Design and Instrumentation Construction Specification, Permissible Consumable Materials for Use During Construction"
	"P/K-F Quality Assurance Manual"
P/K-F-QP 10.1, Rev. 5	"Receipt Inspection"
P/K-F QP 10.2, Rev. 10C	"Welding Inspection"

P/K-F JP 10.5, Rev. 1 WC	"On Site Fabrication and Inspection"
P/K-F QP 10.6, Rev. 2A	"Support Inspection"
P/K-F QP 10.7, Rev. 1B	"HVAC Fire Damper Cycling & Inspection"
P/K-F JP 10.8, Rev. 4A	"Installation & Inspection of Duct"
P/K-F QP 10.9, Rev. 1	"Temperature Control Inspection"
P/K-F QP 10.10, Rev. 2	"Surveillance"
P/K-F JP 10.11, Rev. 2A	"Final Walkdown Inspection"
P/K-F JP 10.14, Rev. 0A	"Inspection General Requirements"
P/K-F JP 2.2, Rev. 9	"Qualification of Inspection, Test and Examination Personnel"
P/K-F JP 2.3, Rev. 2	"Indoctrination and Training"
P/K-F JP 2.4, Rev. 0	"Visual Acuity Program"
P/K-F JP 3.1, Rev. 8	"Design Control"
P/K-F JP 3.2, Rev. 0	"Drafting"
P/K-F JP 14.1, Rev. 2WC	"Work Installation Package"
P/K-F JP 510, Rev. 2C	"Zero Defect Installation of Mechanical Equipment"
P/K-F JP 504, Rev. 1	"Installation and Inspection of Concrete Expansion Anchors"
P/K-F JP 505, Rev. 0	"Installation and Inspection of Rock Bolts"
P/K-F JP 506, Rev. 0	"Installation and Inspection of Maxi-Bolts"
P/K-F JP 513, Rev. 0	"Installation and Inspection of High Strength Bolts"
P/K-F JP 12.1, Rev. 3	"Control of Measuring and Test Equipment"

c. Observation of Work and Work Activities

(1) Personnel Interviews (Installation Practices)

The inspector interviewed four craftsmen engaged in the installation of seismic supports, duct work, isolation dampers or additional safety-related HVAC equipment to confirm the following:

- Predefined and approved procedures are followed when it becomes necessary to relocate any seismic support or other safety-related equipment from its original location specified on drawings.
- Any preinstallation field repairs or adjustments to the HVAC equipment are performed in accordance with the manufacturer's instructions and specifications to ensure that proper materials, replacement parts, and supplies are used, performance requirements are met and are reviewed by engineering for acceptance.
- Personnel engaged in the installation and inspection of safety-related supports, ductwork, and other safety-related HVAC equipment have received adequate training to understand and perform work contained in relevant work and inspection procedures and instructions.

(2) Installation Activities

- (a) The inspector witnessed portions of the installation activities indicated below to verify the following:
- The latest issue (revision) of applicable drawings or procedures is available to the installers and is being used.
  - Modifications to supports are approved by appropriate personnel before implementation.

<u>Activity</u>	<u>Component</u>
Fitting, Installation & Welding	Duct Support DS-A-113120-156
Fitting & Welding	Duction Section C-2668K

With regard to the examination above, the inspector noted that the craftsmen installing HVAC duct support No. DS-A-113120-156, were using construction aid detail drawing Nos. AX2D67W085, Revision 4, and AX2D67W071, Revision 4. Review of the list of latest drawing revisions indicated that

the latest revision to the drawings above was Revision 5 vice Revision 4 that was used in the field. The licensee indicated that they had an informal undocumented program to update the construction aid drawing to the latest revision of the official controlled drawings that the engineers and inspectors use for inspection and acceptance of duct supports. Clearly the craftsmen, in this case, were installing duct supports to drawings that were not the latest revision. The above evidences that the licensee's informal undocumented system for distribution of updated construction-aid drawings does not assure that drawings including changes are distributed and used at the location where the prescribed activity is performed. Failure to establish measures to assure that drawings including changes are distributed and used at locations where prescribed activities are performed is in violation of 10 CFR 50, Appendix B, Criterion VI. This will be identified as Violation 424, 425/85-02-01: "Failure to Establish Adequate Measures to Control Drawing Change Distribution".

- (b) The inspector witnessed portions of the installation and testing of concrete anchor bolts, on below listed components, to verify that anchor bolt type, diameter, embedment length, shoulder-to-cone measurement and torque requirements met installation requirements.

Component

Instrumentation Support                      1531-1HY-12147B

Within the areas examined, no violations or deviations were identified except as noted in paragraph 5c(2)(a).

7. IE Bulletin (IEB) (92703B)

- a. (Open) IEB No. 80-08: "Examination of Containment Liner Penetration Welds", Units 1 and 2.

The inspector has reviewed Georgia Power Company's (GPC) letter of June 26, 1980, and determined that the requested actions of the Bulletin have been acceptably addressed. The inspector held discussions with responsible engineers, reviewed supporting documentation and observed representative samples of work to verify that the actions identified in the letter of response have been completed. The

inspector selected a sample of penetration for radiographic film review. The sample is indicated below. None of the radiographs requested were available during this inspection. This matter remains open pending NRC review of the above indicated radiographs.

<u>Unit No.</u>	<u>Penetration No. &amp; Type</u>	<u>Butt Welded Intermediate Sleeve</u>	<u>Organization</u>	<u>Q-No.</u>
1	3 - I	No	PPP	72
1	15 - II	Yes	PPP	82
2	23 - I	No	CB&I	--
2	24 - II	Yes	CB&I	--
1	67A - III	Yes	PPP	122
2	67B - III	Yes	CB&I	--

- b. (Open) IEB No. 83-06: "Nonconforming Materials Supplied By Tube-Line Corp.", Units 1 and 2.

The inspector has reviewed GPC's letters of November 23, 1983, March 22, 1984, and January 14, 1985, and determined that the requested actions of the Bulletin have not been acceptably addressed. The inspector held discussions with responsible engineers, reviewed supporting documentation and observed representative samples of work to verify that the actions identified in the letters of response have been completed. The inspector noted that the response of January 14, 1985 was in error, in that the response reported 15 heats of material supplied by Tube-Line were analyzed, when in fact, 14 were analyzed. The response of January 14, 1985, also incorrectly identified the heat numbers analyzed. None of the responses addressed the generic concern of fraudulent materials. The licensee indicated that they would provide an amended response by March 4, 1985, that will address the issues indicated above. The licensee does not have a documented program in place, as of the date of this report, to account for, and control the disposition of Tube-Line materials identified. This matter remains open.

- c. (Open) IEB No. 83-07: "Apparently Fraudulent Products Sold By Ray Miller Inc.," Units 1 and 2.

The inspector has reviewed GPC's letters of March 12, 1984, June 26, 1984, and July 5, 1984, and determined that the requested actions of the Bulletin have not been acceptably addressed. The inspector held discussions with responsible engineers, reviewed supporting documentation and observed representative samples of work to verify that the



actions identified in the letters of response have been completed. The inspector noted that none of the responses addressed the generic concern of fraudulent materials. The licensee indicated they would provide a response by March 4, 1985, to address the generic concerns of the Bulletin. This matter remains open.