UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

On the matter of	:	
	:	
GEORGIA POWER COMPANY, et al.	:	DOCKET NUMBERS
	:	50-424 and 50-425
	:	
(Vogtle Electric Generating Plant, Units 1 and 2)	:	

AFFIDAVIT OF C. W. HAYES

COUNTY OF BURKE

STATE OF GEORGIA

Before the undersigned officer duly authorized to administer oaths did appear C. W. HAYES, who after being duly sworn, did state as follows:

1. My name is Charles W. Hayes. My business address is Vogtle Electric Generating Plant, Route 2, Waynesboro, Georgia 30830. I am employed by Georgia Power Company as Vogtle Quality Assurance Manager. In that position, my primary responsibility has been to assure that the approved Quality Assurance programs are implemented by all Project participants and to manage the Vogtle Quality Assurance organization at Vogtle Electric Generating

Plant. A summary of my professional qualifications is attached as Attachment "2A."

2. I make this Affidavit in support of Applicants' Motion for Summary Disposition of Joint Intervenors' Contention No. 8 (Quality Assurance). I have personal knowledge of the matters stated herein and I believe them to be true and correct. First, I will describe the manner in which the VEGP QA Program complies with all 18 criteria of 10 C.F.R. 50, Appendix B. Second, I will describe the manner in which quality is assured by the Quality Assurance Department. This will include a discussion of the historical development of the QA Department, its present organizational structure, the QA audit program, and the QA vendor surveillance program. Third, I will describe the investigation conducted by GPC of certain allegations of intimidation by Pullman Power Products QC inspectors. Fourth, I will describe my role in resolving a potential problem with certain embed assemblies in the auxiliary building. Fifth, I will describe the VEGP program for taking corrective action in response to USNRC concerns or findings. Finally, I will discuss the incident involving 239 G.E. circuit breakers.

THE VEGP QA PROGRAM COMPLIES WITH ALL CRITERIA OF 10 C.F.R. PART 50, APPENDIX B

3. The Quality Assurance program established for VEGP provides assurance that construction will comply with regulatory requirements, applicable codes and standards, and that the facility can be operated without endangering the public health and safety. To accomplish this goal, the QA program has been structured to address each of the 18 criteria of 10 C.F.R. Part 50, Appendix B, as well as the commitments contained in the construction permits and the Preliminary Safety Analysis Report (PSAR) and Final Safety Analysis Report (FSAR). The following measures have been taken to satisfy the requirements of each of these criteria:

Organization (10 C.F.R. Part 50, Appendix B, Criterion I)

4. Criterion I requires that the Applicants retain responsibility for establishment and maintenance of an effective Quality Assurance program. Although the Applicants are permitted to delegate the work of establishing and maintaining a Quality Assurance program, the Applicants must always retain ultimate responsibility. The organizational structure must allow the persons and organizations performing Quality Assurance functions to have sufficient authority and organizational freedom to

identify quality problems; to initiate, recommend or provide solutions, and to verify implementation of solutions. It is further required that such persons and organizations performing Quality Assurance functions report to a management level such that the required authority and organizational freedom, including sufficient independence from cost and scheduling when opposed to safety consideration, are provided.

5. As lead Applicant, Georgia Power Company retains ultimate responsibility for the proper construction of VEGP, including the proper design, procurement and installation of components. The persons and organizations performing QA functions have authority and organizational freedom and are sufficiently free from cost and scheduling to identify quality problems and to provide for solutions.

6. The specific commitments to this Criterion I were historically set forth in PSAR § 17.1.1 and are presently set forth in the FSAR § 17.1.1. These commitments have been implemented by Applicants in Section 1 of the VEGP Quality Assurance Manual and the procedures and documents referenced therein.

Quality Assurance Program (10 C.F.R. Part 50, Appendix B, Criterion II)

7. Criterion II provides that the Applicants shall establish a Quality Assurance program which shall be

documented by written policies, procedures or instructions. The Applicants are required to identify structures, systems and components to be covered by the Quality Assurance program and the major organizations participating in the programs, together with the designated functions of these organizations. The program is required to take into account the need for special controls, processes, and testing of equipment, tools and skills to attain the required quality and the need for verification of quality by inspection and tests.

8. VEGP Quality Assurance Manual and the FSAR are the primary documents that define the measures which provide effective control of all project quality-related activities. The VEGP QA Manual addresses the provisions of 10 C.F.R. Part 50, Appendix B and applicable ANSI N45.2 series standards.

9. To implement the VEGP QA program, procedures are established which define the organizations within which the programs are implemented and delineate the authority and responsibility of the persons and organizations performing design, engineering, procurement and construction activities. These procedures provide a system within each discipline to assure that activities conform to the license commitments meet stipulations of applicable codes and standards, fulfill applicable regulatory agency

requirements, and implement the provisions of the VEGP QA program.

10. An audit program assures that prime contractors, subcontractors and vendors, who provide equipment, material and services under the control of the QA program, implement adequate QA programs. In addition, auditing is conducted within Georgia Power Company to verify the implementation of the VEGP QA program. This auditing program evaluates the effectiveness of the program; determines whether the program requirements, methods and procedures are fulfilled; and verifies implementation of corrective action.

11. The specific commitments to Criterion II were historically set forth in PSAR § 17.1.2 and are presently set forth in FSAR § 17.1.2. These commitments have been implemented in Section 2 of the VEGP QA Manual and the procedures and documents referenced therein.

Design Control (10 C.F.R. Part 50, Appendix B, Criterion III)

12. Criterion III requires that measures be established to assure that applicable regulatory requirements and the design basis for structures, systems and components to which Appendix B applies are correctly translated into specifications, drawings, procedures and instructions. Measures must also be established for the

identification and control of design interfaces and for coordination among participating design organizations.

13. The VEGP QA program provides for multilevel design control. Bechtel, Westinghouse, SCS and GPC each have levels of control within their respective organizations. The implementation of their engineering design control measures is verified by internal audits and by GPC through review or audit.

14. The VEGP QA program requires that the prime contractors meet applicable NRC Regulatory Guide requirements for all safety-related activities. These requirements are contained in the Regulatory Guides set forth in PSAR and FSAR Section 17.1.2. The VEGP QA program requires verification by design review, audit and surveillance that design bases, as specified in the PSAR, FSAR, and applicable NRC Regulatory Guide, have been met. The surveillance and audit functions are conducted in accordance with written procedures. Audits assure that prime contractors' design control measures include a clear definition of interfaces, review and approval of initial design and revisions, and that independent qualified personnel perform design reviews and internal audits.

15. The specific commitments to Criterion III were historically set forth in PSAR § 17.1.3 and are presently set forth in FSAR § 17.1.3. These commitments are imple-

mented by Applicants in Section 3 of the VEGP QA Manual and the procedures and documents referenced therein.

Procurement Document Control (10 C.F.R. Part 50, Appendix B, Criterion IV)

16. Criterion IV requires that measures be established to assure that applicable regulatory requirements, design bases, and other requirements which are necessary to assure adequate quality are suitably included or referenced in the documents for procurement of material, equipment and services, whether purchased by the Applicants or by contractors or subcontractors.

17. The VEGP QA program requires the control of procurement documentation to assure compliance with applicable regulatory requirements, design bases, and other appropriate requirements, such as industry codes and standards. Procurement documents and specifications for safety-related material, equipment or services establish the requirements for vendor Quality Assurance programs consistent with the importance and complexity of the material, equipment, or service procured. Such Quality Assurance programs are evaluated and appropriate actions taken to assure that they meet the pertinent provisions of 10 C.F.R. Part 50, Appendix B. In addition, planned, periodic and documented evaluations and audits are performed as required by VEGP to provide assurance that the

procurement activities are carried out in accordance with approved procedures.

18. The specific commitments to Criterion IV were historically set forth in PSAR § 17.1.4 and are presently set forth in FSAR § 17.1.4. These commitments are implemented by Applicants in Section 4 of the VEGP QA Manual and the documents and procedures referenced therein.

Instructions, Procedures and Drawings
(10 C.F.R. Part 50, Appendix B, Criterion V)

19. Criterion V requires that activities affecting quality shall be prescribed by documented instructions, procedures or drawings of a type appropriate to the circumstances, and shall be accomplished in accordance with these instructions, procedures, or drawings. Instructions, procedures or drawings are required to include appropriate quantitative or qualitative acceptance criteria for determining that important activities have been satisfactorily accomplished.

20. Appropriate requirements have been established by the VEGP QA program to assure that quality-related activities are prescribed by documented instructions, procedures, or drawings, accomplished in accordance with such documents, and that approved acceptance criteria are met. The various participating organizations are responsible for implementing these requirements. The VEGP QA program

requires that approved changes are promptly reflected in instructions, procedures and drawings. Implementation is verified by QA audits.

21. In its review and audit activities, the VEGP QA program assures that instructions, procedures and drawings contain appropriate quantitative (such as dimensions, tolerances and operating limits) or qualitative (such as workmanship samples) acceptance criteria for determining that controlled activities have been satisfactorily accomplished.

22. The specific commitments to Criterion V were historically set forth in PSAR § 17.1.5 and are presently set forth in FSAR § 17.1.5. These commitments have been implemented by Applicants in Section 5 of the VEGP QA Manual and the procedures and documents referenced therein.

Document Control (10 C.F.R. Part 50, Appendix B, Criterion VI)

23. Criterion VI requires that measures be established to control issuance of documents, such as instructions, procedures and drawings, including changes thereto which prescribe all activities affecting quality.

24. The VEGP QA program assures that documents, including changes, are reviewed for adequacy and approved for release by authorized personnel. It requires a system to control the issuance of design and procurement documen-

tation (i.e., specifications, drawings, instructions, procedures and changes thereto) for all activities affecting quality. It further requires that manufacturing and construction documents and records required for traceability, evidence of quality, and substantiation of the "as built" configuration be maintained in accordance with applicable regulatory requirements. Procedures have been designed to identify those individuals or groups responsible for reviewing, approving and issuing documents and document revisions. The effectiveness of document control methods is evaluated by VEGP QA through review and audit.

25. The specific commitments to Criterion IV were historically set forth in PSAR § 17.1.6 and are presently set forth in FSAR § 17.1.6. These commitments have been implemented by Applicants in Section 6 of the VEGP QA Manual and the documents and procedures referenced therein.

Control of Purchased Material, Equipment and Services (10 C.F.R. Part 50, Appendix B, Criterion VII)

26. Criterion VII requires that measures be established to assure that purchased material, equipment and services, whether purchased directly or through contractors or subcontractors, conform to the procurement documents. These measures must include provisions, as appropriate, for source evaluation and selection, objective evidence of quality furnished by the contractor or sub-

contractor, inspection of the contractor or subcontractor source, and examination of products upon delivery.

27. Control of purchased material, equipment and services is required by the VEGP QA program. Potential vendors are evaluated in accordance with established procedures prior to placing them on the approved vendors list. The evaluation involves, as appropriate, the review of historical data on vendor performance and capability, the review of the vendor's quality assurance program and/or the results of shop surveys, inspections and audits. Vendors eligible to supply material, equipment and services for Q-listed (quality controlled) items are selected from the approved vendors list. This list is maintained in accordance with established procedures.

28. The VEGP QA program requires that suppliers provide a quality verification package commensurate with the complexity and importance to safety of the purchased material, equipment or service. Documented, objective evidence (i.e., certifications, chemical and physical analyses, inspection reports, test results, personnel and process qualification results, code stampings and nondestructive test reports) is required for evaluation by GPC or SCS or the prime contractors to assure conformance to design requirements, drawings, specifications, codes,

standards, regulatory requirements and other applicable criteria.

29. The specific commitments to Criterion VII were historically set forth in PSAR § 17.1.7 and are now set forth in FSAR § 17.1.7. These commitments are implemented by Applicants in Section 7 of the VEGP QA Manual and the procedures and documents referenced therein.

Identification and Control of Materials, Parts and Components (10 C.F.R. Part 50, Appendix B, Criterion VIII)

30. Criterion VIII requires that measures be established for the identification and control of materials, parts and components, including partially fabricated assemblies. These identification and control measures must be designed to prevent the use of incorrect or defective material, parts and components.

31. The VEGP QA program requires identification and control of materials, parts and components. Contractors and vendors are required to utilize procedures which establish and document a system for identifying "Q" material and equipment. Upon receipt of such material and equipment on site, QC inspections are performed and documented. Site procedures and instructions for the storage and handling of "Q" material and equipment require nonconforming items to be tagged with the appropriate

status tag (i.e., "hold" or "reject" or "segregated") and controlled to prevent inadvertent use.

32. The VEGP QA program requires that contractors and suppliers establish specific measures to assure compliance with approved procedures for identification and control of materials, parts and components. VEGP QA verifies conformance to those procedures by one or more of the following methods: (1) review and approval of contractors and suppliers' Quality Assurance programs; (2) surveillance of selected manufacturing, fabrication, construction and installation activities; (3) auditing of contractors and suppliers for satisfactory performance of quality program commitments; and (4) review of documentary evidence of audits performed by contractors and suppliers.

33. The specific commitments to Criterion VIII were historically set forth in PSAR § 17.1.8 and are presently set forth in FSAR § 17.1.8. These commitments are implemented by Applicants in Section 8 of the VEGP QA Manual and the procedures and documents referenced therein.

Control of Special Processes (10 C.F.R. Part 50, Appendix B, Criterion IX)

34. Criterion IX requires that measures be established to assure that special processes, including welding, heat treating and nondestructive testing are controlled and accomplished by qualified personnel using

qualified procedures in accordance with applicable codes, standards, specifications, criteria and other special requirements.

35. The VEGP QA program requires prime contractors to have written procedures and controls to assure that special processes, including welding, heat treating, casting, coating applications, nondestructive testing and concrete batching, are accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards and specifications. These procedures describe, as appropriate, the operations to be performed and their sequence, the characteristics involved and their limits, process controls, measuring and testing equipment utilized, and documentation required.

36. Written procedures also are required to cover training, examination, qualification, and certification of personnel, as well as the maintenance of required personnel records. Compliance with these procedures by prime contractors and vendors is verified through review, audit and/or inspection.

37. The specific commitments to Criterion IX were historically set forth in PSAR § 17.1.9 and are presently set forth in FSAR § 17.1.9. These commitments are implemented by Applicants in Section 9 of the VEGP QA Manual and the procedures and documents referenced therein.

Inspection (10 C.F.R. Part 50, Appendix B, Criterion X)

38. Criterion X requires that a program for inspection of activities affecting quality be established and executed by or for the organization performing the activity to verify conformance with the documented instructions, procedures and drawings for accomplishing the activity. Such inspection must be performed by individuals other than those who performed the activity being inspected.

39. The VEGP QA program requires inspections of activities affecting quality. GPC ensures that organizations providing quality-related services, structures, components, systems and materials have inspection programs which meet applicable regulatory and QA program requirements. VEGP performs reviews, surveillances or audits of the inspection procedures utilized by these organizations.

40. Inspections are performed by independent, trained and qualified individuals not responsible for the activity being inspected. VEGP verifies by review, audit or inspection that inspectors are trained, qualified and certified in conformance with regulatory requirements.

41. The specific commitments to Criterion X were historically set forth in PSAR § 17.1.10 and are presently set forth in FSAR § 17.1.10. These commitments are imple-

mented by Applicants in Section 10 of the VEGP QA Manual and the procedures and documents referenced therein.

Test Control (10 C.F.R. Part 50, Appendix B, Criterion XI)

42. Criterion XI requires that a test program be established to assure that all testing required to demonstrate that structures, systems and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents.

43. The VEGP QA program requires that appropriate tests be performed and documented at specific stages of manufacturing, fabrication and construction. Testing is conducted in accordance with written procedures with well-defined acceptance limits. The VEGP test program covers safety-related activities such as prototype, qualification, production, in-process, performance and hydrostatic testing. Test results are evaluated to assure test requirements have been satisfied. Compliance with the testing program is verified by the VEGP QA organization through review, inspection and audit.

44. The specific commitments to Criterion XI were historically set forth in PSAR § 17.1.11 and are now set forth in FSAR § 17.1.11. The commitments are implemented

by Applicants in Section 11 of the VEGP QA Manual and the procedures and documents referenced therein.

Control of Measuring and Test Equipment
(10 C.F.R. Part 50, Appendix B, Criterion XII)

45. Criterion XII requires that measures be established to assure that tools, gauges, instruments and other measuring and testing devices used in activities affecting quality are properly controlled, calibrated and adjusted at specified periods to maintain accuracy within necessary limits.

46. The VEGP QA program requires that organizations using measuring and test equipment have written procedures to assure that only properly calibrated equipment is used. The program requires that the standards used for accuracy verification be traceable to the United States Bureau of Standards or other appropriate sources. A calibration system has been established which ensures that records of calibrations are maintained, and equipment is properly marked with the date of calibration and/or the due date of the next calibration. VEGP QA performs reviews, surveillances and audits of the various participants to ensure that approved calibration control procedures are being implemented.

47. The specific commitments to Criterion XII were historically set forth in PSAR § 17.1.12 and are presently

set forth in FSAR § 17.1.12. These commitments are implemented by Applicants in Section 12 of the VEGP QA Manual and the procedures and documents referenced therein.

Handling, Storage and Shipping (10 C.F.R. Part 50, Appendix B, Criterion XIII)

48. Criterion XIII requires that measures be established to control the handling, storage, shipping, cleaning and preservation of material and equipment in accordance with work and inspection instructions to prevent damage or deterioration.

49. The VEGP QA program requires the establishment of procedures for cleaning, handling, storage, shipping and preservation of materials and equipment to prevent damage or deterioration. VEGP QA verifies through review, surveillances and audits that these procedures are being properly implemented. When necessary, these procedures may require special environmental facilities such as storage areas that are inerted, humidity controlled, or temperature controlled.

50. The specific commitments to Criterion XIII were historically set forth in PSAR § 17.1.14 and are presently set forth in FSAR § 17.1.14. These commitments are implemented by Applicants in Section 13 of the VEGP QA Manual and the procedures and documents referenced therein.

Inspection, Test and Operating Status
(10 C.F.R. Part 50, Appendix B, Criterion XIV)

51. Criterion XIV requires that measures be established to indicate, by the use of markings such as stamps, tags, labels, routing cards or other suitable means, the status of inspections and tests performed upon individual items of the Plant. These measures must provide for the identification of items which have satisfactorily passed required inspections and tests, when necessary, to preclude inadvertent bypassing of such inspections and tests.

52. The VEGP QA program requires procedures to identify the inspection, test and operating status of safety-related structures, systems and components. The inspection and test status of items are maintained through the use of status indicators such as tags, markings, shop travelers, stamps or inspection records. This assures that only items that have received the required inspections and tests are used. The method for controlling status indicators, including the authority for application and removal of tags, markings, labels or stamps, is established in approved procedures. VEGP QA performs reviews, surveillances and audits to assure implementation of these procedures.

53. The specific commitments to Criterion XIV were historically set forth in PSAR § 17.1.14 and are presently

set forth in FSAR § 17.1.14. These commitments are implemented by Applicants in Section 14 of the VEGP QA Manual and the procedures and documents referenced therein.

Nonconforming Materials, Parts or Components
(10 C.F.R. Part 50, Appendix B, Criterion XV)

54. Criterion XV requires that measures be established to control materials, parts or components which do not conform to requirements in order to prevent their inadvertent use or installation.

55. The VEGP QA program requires the identification, documentation and disposition of nonconforming material, parts or components. Procedures require evaluation and documented disposition of nonconforming items and also control of further processing, fabrication, delivery or installation of items for which disposition is pending. Reports documenting actions taken on nonconforming items are reviewed and audited by VEGP QA. Nonconformances are reviewed for reportability to the NRC pursuant to the requirements of 10 C.F.R. 50.55(e) and 10 C.F.R. 21.

56. The VEGP QA program procedures require that departures from design specifications and drawing requirements that are dispositioned "use as is" and "repair" be reviewed and approved by design engineering. VEGP QA performs reviews, surveillances and audits to assure compliance with this requirement.

57. The specific commitments to Criterion XV were historically set forth in PSAR § 17.1.15 and are presently set forth in FSAR § 17.1.15. These commitments are implemented by Applicants in Section 15 of the VEGP QA Manual and the procedures and documents referenced therein.

Corrective Action (10 C.F.R. Part 50, Appendix B, Criterion XVI)

58. Criterion XVI requires that measures be established to assure that conditions adverse to quality are promptly identified and corrected. In the case of significant conditions adverse to quality, it is required that measures shall assure that the cause of the condition is determined and corrective action is taken to preclude repetition. The identification of the significant condition adverse to quality, the cause of the condition, and the corrective action taken is to be documented and reported to appropriate levels of management.

59. The VEGP QA program requires that conditions adverse to quality are promptly identified, reported and corrected. Contractors and vendors are responsible for performing corrective actions within their own areas of activity. In the case of significant conditions adverse to quality, the cause of the condition is determined and corrective action implemented to preclude repetition. Corrective action procedures require thorough investi-

gation and documentation of significant conditions adverse to quality. The cause and corrective action is reported in writing to the appropriate levels of management and to the USNRC.

60. The specific commitments to Criterion XVI were historically set forth in PSAR § 17.1.16 and are presently set forth in FSAR § 17.1.16. These commitments are implemented by Applicants in Section 16 of the VEGP QA Manual and the procedures and documents referenced therein.

Quality Assurance Records (10 C.F.R. Part 50, Appendix B, Criterion XVII)

61. Criterion XVII requires that sufficient records be maintained to furnish evidence of activities affecting quality. The records are to include at least the following: operating logs; the results of reviews, inspections, tests and audits; and monitoring of work performance and materials analysis.

62. The VEGP QA program requires a quality records system which provides documented evidence of the performance of activities affecting quality. VEGP QA verifies conformance to the record system requirements by reviewing methods for record keeping, by auditing record systems, and by selective review of quality records for completeness and accuracy.

63. The specific commitments to Criterion XVII were historically set forth in PSAR § 17.1.17 and are presently set forth in FSAR § 17.1.17. These commitments are implemented by Applicants in Section 17 of the QA Manual and the procedures and documents referenced therein.

Audits (10 C.F.R. Part 50, Appendix B, Criterion XVIII)

64. Criterion XVIII requires that a comprehensive system of planned and periodic audits be carried out to verify compliance with all aspects of the Quality Assurance program and to determine the effectiveness of the program. The audits are to be performed in accordance with written procedures or checklists by appropriately trained personnel not having direct responsibility in the areas being audited. Audit results are to be documented and reviewed by management having responsibility in the area audited. Followup action, including re-audit of deficient areas, is to be taken where indicated.

65. The VEGP QA program requires that planned and periodic audits be performed to verify compliance with all aspects of the QA program and to determine the program's effectiveness.

66. The specific commitments to Criterion XVIII were historically set forth in PSAR § 17.1.18 and are presently set forth in FSAR § 17.1.18. These commitments are imple-

mented by Applicants in Section 18 of the VEGP QA Manual and the procedures and documents referenced therein.

THE ASSURANCE OF QUALITY BY THE QUALITY ASSURANCE DEPARTMENT

67. The assurance of quality at VEGP is a comprehensive concern which permeates all stages of design, procurement and construction. It involves the selection and implementation of appropriate design and procurement construction procedures and methods. Quality is further assured by a programmatic system of Quality Control inspections and tests, together with audits and other checks used by the Quality Assurance Department.

Historic Development of the VEGP Quality Assurance Program

68. During the initial design process of VEGP, the Bechtel Power Corporation ("BPC") project quality assurance engineer directed the QA program from the BPC Los Angeles Power Division for all quality-related activities applicable to that phase of the Vogtle Project. The BPC project quality assurance engineer received Project direction from the BPC Vogtle Project manager and functional and administrative direction through the BPC Divisional Quality Assurance Department. The contract with BPC was administered by SCS Quality Assurance Department, and GPC Corporate QA conducted periodic audits of the BPC QA program.

69. Construction began on the Vogtle Project in the spring of 1974. As this construction began, GPC had progressed to the final stages of its construction of Hatch Nuclear Plant near Baxley, Georgia. The eight years of experience gained from construction of Plant Hatch were utilized to positively shape the overall quality programs for VEGP. Key positions in the VEGP QA program (both corporate and field) have, from the beginning, been filled with personnel with Plant Hatch experience. In 1975, two GPC Quality Assurance field representatives were assigned to the construction at VEGP. The field representatives were directed by the Quality Assurance field supervisor who divided his time between the Plant Hatch and Plant Vogtle job sites. The Quality Assurance field supervisor reported to the Quality Assurance engineer located in the GPC general office, who reported to the executive vice president.

70. Construction was temporarily suspended on the Vogtle Project in late fall 1974. The Quality Assurance field representatives were transferred to Plant Hatch and Plant Scherer, a fossil plant under construction near Macon, Georgia.

71. In the fall of 1976, the Vogtle Project organization was developed. A Project Quality Assurance manager was assigned to provide the interface between QA and

Project management. Construction was resumed on the Project in the fall of 1976.

72. In early 1977, the scope of construction had become, as anticipated, more complex. As always, as the complexity of the construction expanded, the Quality Assurance organization expanded to meet the increasing needs. In February 1977, a Project Quality Assurance engineer from SCS was added to the Vogtle Project Quality Assurance organization. The SCS Project Quality Assurance engineer reported to the Project Quality Assurance manager in the Vogtle Project organization and received functional and administrative direction from the SCS Manager-Quality Assurance. Responsibilities of the SCS Project Quality Assurance engineer included monitoring and auditing BPC procurement and Quality Assurance programs and maintaining an interface with the Bechtel Project Quality Assurance engineer. A short time later, the SCS quality assurance engineer, reporting to the Bechtel Project Quality Assurance engineer, was added to the Vogtle Project QA organization to monitor SCS design activities.

73. Two Quality Assurance field representatives were again assigned to the Vogtle job site in August 1977. In the period between the resumption of construction and this assignment, QA audits were conducted on a regular basis by the Quality Assurance field supervisor and a Quality

Assurance field representative from Plant Hatch. The new field QA staff received Project direction from the Project Quality Assurance manager and functional/administrative direction from the Quality Assurance field supervisor. The Project Quality Assurance manager received Project coordination from the Vogtle Project general manager and functional/administrative direction from the Quality Assurance manager and was located in the GPC general office. The Quality Assurance field supervisor received direction from the Quality Assurance manager (who was the QA engineer prior to a title change and upgrade) and resumed alternating his time between the Hatch and Vogtle sites. The Quality Assurance manager reported directly to the executive vice president.

74. By August 1978, one of the Quality Assurance field representatives was promoted to Quality Assurance site supervisor and the Quality Assurance field audit staff grew to three.

75. In spring 1979, the GPC field QA audit staff had grown to three Quality Assurance field representatives and three Quality Assurance engineers.

76. In summer 1982, the general manager of Quality Assurance and radiological health and safety was added to the GPC corporate QA organization. The general manager reported directly to the executive vice president-power

supply and gave direction to the Quality Assurance manager. A few months later the project general manager, from which the Project Quality Assurance manager received Project coordination, was promoted to vice president. By this time, the GPC field QA audit staff was twelve.

77. In spring 1983, the Quality Assurance manager and Quality Assurance field supervisor positions were deleted. The Project Quality Assurance manager became Vogtle Quality Assurance manager and was assigned functional/administrative, as well as Project direction to the GPC field Quality Assurance staff and Project direction to both SCS and Bechtel Project Quality Assurance engineers. The Quality Assurance site supervisor became Quality Assurance site manager over a QA audit staff of fourteen.

78. During summer 1983, a GPC Project Quality Assurance engineer was added to the Project staff to serve as the daily Project interface with the Vogtle Quality Assurance manager. Quality Assurance engineering/support groups were installed in the general office and in the field QA office. There were eighteen members of the field staff.

79. In February 1984, the entire GPC/SCS Vogtle Project management staff, including the Vogtle Quality Assurance manager and the GPC project Quality Assurance

engineer, moved to the job site to better support and direct the construction and pre-operational testing effort.

80. A Quality Assurance site manager for nuclear operations was added to the Vogtle Project Quality Assurance organization in summer 1984. Two auditors were assigned to the Quality Assurance site manager-operations. The Bechtel Project Quality Assurance engineer was moved to the job site from the Bechtel home office in Los Angeles. A Bechtel Vogtle Project Quality Assurance supervisor was assigned to continue audit coverage of BPC home office activities. The SCS supplier surveillance administrator was added to the SCS Vogtle Project Quality Assurance organization to more effectively direct vendor surveillance programs. In the winter of 1984, the general manager of Quality Assurance and radiological health and safety was promoted to vice president and general Manager-Quality Assurance. The deputy general Manager-Quality Assurance was added to the GPC corporate QA staff.

Organizational Responsibility for Quality Assurance

81. Presently, Georgia Power Company is the construction permit/operating license applicant, a plant co-owner, agent for the other co-owners and construction manager of the VEGP. In this position, GPC is responsible

for the overall VEGP QA program. The GPC Executive Vice President-Power Supply has specific responsibility for the GPC QA program, including the VEGP program, and has the final authority on decisions affecting the program. The Senior Vice President-Nuclear Power reports to the Executive Vice President-Power Supply and is responsible for GPC nuclear-related activities. The Vice President and Project General/Manager-Vogtle Project reports to the senior vice president and is responsible for the development and implementation of the Vogtle Project QA program.

82. As part of the VEGP QA program responsibility, GPC is also responsible for the VEGP QA audit program. The key positions and general responsibilities of the GPC Quality Assurance Department are:

83. The Vice President and General Manager-Quality Assurance reports directly to the Executive Vice President-Power Supply and is responsible for ensuring the proper development and implementation of the GPC corporate QA programs.

84. The Vogtle Quality Assurance Manager reports to the Vice President and General Manager-Quality Assurance for functional and administrative direction and to the Vice President and Project General Manager-Vogtle Project coordination. The Vogtle Quality Assurance Manager is responsible for ensuring the proper development and implementation of the Vogtle Project QA program.

85. The Quality Assurance Site Managers report to the Vogtle Quality Assurance Manager. The Quality Assurance Site Manager-Construction is responsible for verifying the proper implementation of the VEGP site QA program from commencement of construction through pre-operational testing. The Quality Assurance Site Manager-Operations has this responsibility from pre-operational testing through the 40-year operating life of the Plant.

86. The Project Quality Assurance Engineer reports to the Vogtle Quality Assurance Manager and maintains overall surveillance of Project QA activities and coordinates QA activities with the Vogtle Quality Assurance Manager.

87. The Quality Assurance Engineering/Support Supervisors report to the Quality Assurance Site Managers and are responsible for the direction of special QA support activities such as document reviews, investigative evaluations and assessments, trend analyses, and prevention-oriented activities.

88. Southern Company Services serves as the VEGP engineer and designer of certain non-safety-related systems and structures under the direction of Bechtel. SCS is also responsible for coordinating licensing activities, ensuring the proper implementation and compliance of the Bechtel Vogtle Project QA program, and ensuring the proper implementation and execution of the supplier surveillance program.

89. SCS is responsible for ensuring that Vogtle Project QA program requirements relative to the SCS scope of work are effectively implemented and for ensuring the adequate and consistent application of the Vogtle Project QA program by the Project architect-engineer, Bechtel. GPC review and approval of the SCS Vogtle Project QA program is accomplished through review and approval of Appendix 17C of the Vogtle FSAR and through periodic QA audits of the SCS QA program attributes applicable to services performed on behalf of the Vogtle Project. The key positions and general responsibilities of the SCS Vogtle Project QA organization are:

90. The SCS Manager-Quality Assurance is responsible for ensuring the proper development and implementation of the SCS corporate QA program.

91. The SCS Project Quality Assurance Engineer receives project direction from the Vogtle Quality Assurance Manager and receives functional and administrative direction from the SCS Manager-Quality Assurance. The SCS Project Quality Assurance Engineer is responsible for ensuring the proper implementation of the Bechtel Vogtle Project QA program and the Project supplier surveillance program.

92. The SCS Quality Assurance Engineer receives Project and functional direction from the Bechtel Project

Quality Assurance Engineer and receives administrative direction from the SCS Manager-Quality Assurance. The SCS Quality Assurance Engineer coordinates with the SCS Project Engineering Manager in ensuring the proper implementation of the Bechtel Vogtle Project QA program for those engineering and design activities assigned to SCS by Bechtel.

93. The SCS Supplier Surveillance Administrator receives Project direction from the BPC Project Engineering Manager and functional and administrative direction from the SCS Manager-Quality Assurance. The Supplier Surveillance Administrator is responsible for coordinating supplier surveillance activities among Bechtel engineering, the supplier, and the job site for Bechtel-originated purchases.

94. Bechtel is the architect-engineer and N-stamp holder. Bechtel is also responsible for the development of purchase recommendations for balance-of-plant (BOP) equipment and materials; the administration of purchase orders (including the nuclear steam supply system purchase order); the management of SCS design assistance for designated systems; support of the supplier surveillance program; and aiding GPC in preparing plans, schedules and specifications for the pre-operational testing program.

95. Bechtel's QA audit responsibilities include continuing individual audits of project engineering activities; periodic audits of suppliers and contractors performing Q-list work subject to quality surveillance; formal audits of project engineering design and procurement activities; annual audits of Western Power Division technical staff and services activities; and audits of Bechtel procurement supplier quality activities, SCS supplier surveillance activities, and Bechtel Materials and Quality Services activities. GPC review and approval of the Bechtel Vogtle Project QA program is accomplished through review and approval of Appendix 17A of the Vogtle FSAR and through participation in periodic QA audits conducted by SCS of the Bechtel QA program attributes applicable to the services performed on behalf of the Vogtle Project. The key positions and general responsibilities of the Bechtel Vogtle Project QA organization are:

96. The Western Power Division Quality Assurance Manager is responsible for ensuring the proper development and implementation of the Division's corporate QA program.

97. The Quality Assurance Manager-Projects reports to the Division Quality Assurance Manager and is responsible for ensuring the proper development and implementation of the QA programs for selected domestic and international projects.

98. The Bechtel Project Quality Assurance Engineer receives Project direction from the Vogtle Quality Assurance Manager and receives functional and administrative direction from the Bechtel Quality Assurance Manager-Projects. The Bechtel Project Quality Assurance Engineer is responsible for monitoring and/or participating in audits of all Bechtel quality-related functions applicable to the Vogtle Project. He is also responsible for auditing of the Nuclear Steam Supply System (NSSS) supplier, Westinghouse Electric Corporation.

99. Westinghouse is the NSSS designer and supplier for the Vogtle Project. Westinghouse is responsible for providing a comprehensive system of QA audits of activities affecting the quality of the NSSS. The audit program is directed by the Manager-Product Assurance, Nuclear Technology Division. The Manager-Southern Company Projects is the Vogtle Project interface with Westinghouse. GPC review and approval of the Westinghouse QA program is accomplished through review and approval of Appendix 17B of the Vogtle FSAR and the Westinghouse Quality Assurance Plan (WCAP 8370) and by participation in Bechtel audits of the Westinghouse QA program attributes applicable to the Westinghouse scope of work.

100. The following contractor organizations perform activities affecting quality at the VEGP site and maintain

their own GPC approved QA programs as applicable to their scope of work:

Pullman Power Products - Piping System Fabrication and Installation;

Chicago Bridge and Iron - Containment Liner and Tank Fabrication and Installation; Lock and Hatch Installation;

Pullman/Kenith-Fortson - HVAC System Installation;

Williams Contracting - Coatings Application;

Nuclear Installation Services Company - NSSS Installation;

101. A system of comprehensive QA audits of these organizations are performed on a routine basis by the VEGP site QA organization under the direction of the Quality Assurance Site Manager-Construction.

102. The following contractor organizations, which perform activities affecting quality at the VEGP site, have committed to and work directly under the applicable requirements of the VEGP QA program:

Walsh Construction Company - General Contractor (Civil);

Cleveland Consolidated, Inc. - Electrical Contractor;

Ingalls Iron Works (Mosher Steel) - Miscellaneous and Structural Steel Fabrication and Installation.

Fundamental Materials - Concrete Batch Plant Operation.

103. A system of comprehensive QA audits of these organizations are performed on a routine basis by the VEGP site QA organization under the direction of the Quality Assurance Site Manager-Construction.

A DESCRIPTION OF THE QUALITY ASSURANCE AUDIT PROGRAM

Overview

104. Quality Assurance audit programs have been developed and implemented by all major Vogtle Project larticipating organizations to meet the requirements of ANSI/ASME N45.2.12-1977. Although specific implementing details may vary slightly within each organization, the basic structure of audit programs used in the design, construction, pre-operational testing and operation of the VEGP will be consistent. The audit programs are planned, documented and implemented to verify compliance with the elements of the VEGP QA program as applicable to the work being audited. Audit programs are described in approved, written policies, plans or procedures, as appropriate.

105. The objectives of the Vogtle Project audit programs are:

> To determine that a QA program has been developed and documented in accordance with specified requirements;
>
> To verify by examination and evaluation of objective evidence that the documented QA program has been implemented;

To assess the effectiveness of the QA program;

To identify nonconformances and QA program deficiencies; and

To verify correction of identified QA program deficiencies.

The Audit Procedure

106. Vogtle Project audit programs undergo careful planning to assure coverage of all applicable VEGP QA program elements and overall coordination and scheduling of audit activities. This is essential since the audit programs of the various project participants often overlap and since audit teams are frequently made up of representatives from two or more participating organizations. Audit plans are periodically reviewed and revised, as necessary, to assure that coverage and schedules reflect current activities.

107. Auditing is initiated as early in the life of a quality-related activity, as practicable, consistent with the schedule for accomplishing the activity to assure timely implementation of VEGP QA program requirements. Audits are regularly scheduled on the basis of the status and importance of the activities to assure the adequacy of, and conformance with, applicable VEGP QA program controls.

108. Regularly scheduled audits are supplemented by special unscheduled audits when any of the following conditions arise:

> When it is necessary to assess the capability of a contractor's QA program prior to awarding a contract or purchase order.
>
> When, after award of a contract, sufficient time has elapsed for implementing the QA program and it is appropriate to determine that the organization is adequately performing the functions as defined in the QA program description, codes, standards and other contract documents.
>
> When significant changes are made in functional areas of the QA program such as significant reorganization or procedure revisions.
>
> When it is suspected that the quality of the item is in jeopardy because of deficiencies in the QA program.
>
> When a systematic, independent assessment of program effectiveness is considered necessary.
>
> When necessary to verify implementation of required corrective action.

109. Audit preparation usually begins with the selection of the audit team by the responsible manager or supervisor. Team members are selected based on their knowledge of and experience in the area to be audited, special abilities or technical training, personal characteristics and education. Team members must not be directly responsible for work in the area being audited.

110. A qualified lead auditor is appointed as an audit team leader. His responsibilities include orientation of the team, coordinating the audit process, establishing the pace of the audit, assuring communications within the team and with the organization being audited, participation in the audit performance, and coordinating the preparation and issuance of reports.

111. The next step in preparing an audit is usually the development of a written audit plan by the audit team or other responsible personnel within the auditing organization. In some cases, audit plans are prepared in advance. The audit plan identifies the audit scope, the applicable requirements, the activities to be audited, organizations to be notified, applicable documents, the audit schedule, and the audit procedure or checklist.

112. The audit team leader is responsible for assuring that the audit team is prepared prior to initiation of the audit. Applicable policies, procedures, standards, instructions, codes, regulatory requirements, and prior audit reports are made available and reviewed by the audit team. Each auditor is given a copy of the audit plan. The audit procedure or checklist is reviewed to assure orderly completion of the audit.

113. Involved organizations are notified of an upcoming audit a reasonable time before the audit is to be

performed. This notification is usually in writing and includes such information as the scope and schedule of the audit and the name of the audit team leader. On the Vogtle Project, unannounced audits have been performed when directed by the Vogtle Quality Assurance Manager.

114. Immediately prior to starting an audit, a brief meeting is held by the audit team with cognizant management of the audited organization to confirm the audit scope, present the audit plan, introduce the auditors, meet counterparts, discuss the audit sequence, establish channels of communication, and make tentative plans for the post-audit conference.

115. Audit procedures or checklists are used during audits to ensure depth and continuity are maintained. The audit checklist is intended for use as a guide and does not restrict auditors from conducting further investigations when the audit raises questions that are not specifically included in the checklist.

116. Auditors examine objective evidence to determine whether Quality Assurance program requirements are properly implemented. Quality Assurance program elements are audited to the depth necessary to determine the effectiveness of quality controls in ensuring compliance with VEGP QA program requirements.

117. When a nonconformance or VEGP QA program deficiency is identified as a result of an audit, a member

of the audited organization is notified. The audited organization is then required to work with the audit team to identify the cause and effect of the deficiency and to determine the extent of the corrective action required.

118. Deficient conditions requiring immediate corrective action are reported immediately to the management of the audited organization. VEGP QA personnel have the authority to stop in an expeditious manner any work or activity conducted in violation of Project VEGP QA program requirements.

119. At the conclusion of the audit, another meeting is held with cognizant management of the audited organization to present the audit findings and to clarify misunderstandings. This meeting is often also used to receive corrective action commitments from the audited organization.

120. Each VEGP QA audit is fully documented in a report. The audit team leader is responsible for coordinating the development of the audit report which includes the identification of any VEGP QA program deficiency which might have been found and recommendations for correcting program deficiencies or improving the VEGP QA program, as appropriate.

121. The audit report is signed by the audit team leader and is distributed to responsible management of both the audited and auditing organizations. The Vogtle

Quality Assurance Manager receives copies of VEGP QA audit reports.

122. Management of the audited organization or activity is required to review and investigate any adverse audit findings to determine and schedule corrective action, including action to prevent recurrence, and responds as requested by the audit report, giving results of the review and investigation. The response states the corrective action taken or planned to prevent recurrence. In the event that corrective action cannot be completed within 30 days, the audited organization's response should include a scheduled date for the corrective action. The audited organization provides a followup report stating the corrective action taken and the date corrective action was completed. They also must take appropriate action to assure that corrective action is accomplished as scheduled.

123. When an audit identifies nonconformances or VEGP QA program deficiencies, the auditing organization follows up the audit by obtaining a written response when required by the audit report (usually within 30 days of report date) and by evaluating the adequacy of the response. The auditing organization also assures that corrective action is identified and scheduled for each adverse finding, and it confirms that corrective action is accomplished as scheduled. This followup action is accomplished through

written communication, re-audit, or other appropriate means.

124. Records generated during VEGP QA audits are retained as permanent Plant records. Records include audit procedures, audit plans, audit reports, responses to audit reports, and records of completed corrective actions.

Qualification of Auditors

125. Each auditing organization participating in the Vogtle Project is responsible for selecting and assigning personnel as auditors who are independent of any direct responsibility for performance of the activities they will audit. Lead auditors in each organization are responsible for assuring that members of their audit teams have the necessary experience and training to perform the audits based on the scope, complexity and nature of the activities to be audited.

126. Each organization participating in the Vogtle Project has established audit personnel qualifications and requirements for the use of technical specialists. These technical specialists accomplish the auditing program commensurate with the scope, complexity and nature of the activities within its scope of work. The competence of personnel performing the various auditing functions has been developed by several methods.

127. The individual may attend orientation to provide a working knowledge and understanding of applicable nuclear industry standards and the auditing organization's procedures for the performance of Quality Assurance audits.

128. He may also attend training programs to provide general and specialized training in audit performance. General training includes fundamentals, objectives, characteristics, organization, performance and results of quality auditing. Specialized training includes methods of examining, questioning, evaluating, documenting specific audit items and methods of closing out audit findings.

129. The auditor may also receive on-the-job training, guidance and counseling under the direct supervision of a lead auditor. Such training includes planning, performing, reporting and followup action involved in conducting audits.

130. To be certified as a lead auditor, a candidate must meet the minimum requirements established in ANSI/ASME N45.2.23-1978. Other performance factors applicable to auditing, such as leadership, sound judgment, maturity, analytical ability, tenacity, past performance, and QA training courses may be recognized by the auditor's employer in meeting a portion of the education and experience requirements. Lead auditors must also have

the capability to communicate effectively, both in writing and orally. Finally, lead auditors must receive training to the extent necessary to assure their competence in auditing skills.

131. Before one is certified a lead auditor, one must have participated in a minimum of five QA audits within three years prior to certification. One of these audits must have been in nuclear QA within one year prior to the certification date.

A Description of QA Surveillance Programs

132. The VEGP QA surveillance programs are reviews of selected activities for the purpose of providing additional assurance that the activities are adequately controlled in accordance with Project QA program requirements. These surveillance activities are over and above regulatory requirements and complement the audit programs. Surveillances are often used to gather inputs for audits or to determine if an audit is needed in a particular area. Quality Assurance program deficiencies identified during surveillances are documented and tracked until resolved.

133. The program of supplier surveillance is conducted by the SCS Supplier Surveillance Administrator, who works with BPC engineering to develop surveillance plans

and assignments for supplier quality representatives stationed in selected vendor fabrication shops. The supplier quality representatives carry out surveillance plans to monitor and witness vendor quality controls to assure the vendor's compliance with the quality and technical requirements of the procurement documents. Results of vendor surveillances are reported to BPC engineering (which is responsible for resolving any identified deficiencies), the SCS supplier surveillance administrator, and the Vogtle Quality Assurance manager. The SCS Project Quality Assurance engineer reviews supplier surveillance reports and other inputs to conduct periodic supplier evaluations which determine if supplier audits are required.

134. BPC recommends which equipment should receive vendor surveillance. These recommendations are reviewed and approved by the SCS Project Quality Assurance engineer.

135. Surveillance of BPC home office (Los Angeles) design and procurement activities is conducted by the BPC Vogtle Project QA personnel located at the home office. Surveillance results are reported to the BPC Project Quality Assurance engineer.

136. Surveillance of Project field engineering design and engineering activities is conducted by the BPC Vogtle Project Quality Assurance group located at the job site

under the direction of the BPC Project Quality Assurance engineer.

137. Surveillance of selected construction site activities is conducted by the GPC field Quality Assurance group under the direction of the Quality Assurance site managers.

THE ALLEGATIONS OF INTIMIDATION OF PULLMAN QC INSPECTORS

138. On August 22, 1983, a meeting was called by Georgia Power Company at its Headquarters Building in Atlanta to discuss the results of a GPC special task force review with the NRC Region II staff. That task force had been formed to address some concerns registered by Pullman Power Products ("PPP") QC personnel concerning intimidation by management.

139. As a result of the concerns expressed to Georgia Power Company by the NRC on June 24, 1983, Georgia Power Company senior management formed a task force to address the concerns and to provide further assurance that the GPC's overall commitment to constructing a quality facility were being implemented. The members of the task force included, among others, Mr. W. E. Eherensberger, a consultant and retired GPC senior officer; Mr. W. M. Wright, a senior project engineer-mechanical, Southern Companies Services, and myself.

140. The task force reviewed, over a two-week period, the Vogtle piping QA/QC program. It conducted a series of personal interviews, observed work in progress, and reviewed relevant documents. The investigation covered mainly PPP activities, but considerable time was also spent interviewing GPC and Bechtel personnel. A total of approximately eighty interviews and meetings were documented involving nearly seventy different people. Several persons were interviewed on more than one occasion. Interviews were mainly conducted at the individual's job location but, on occasion, some personnel were called to an office for the interview. Most interviews were planned but some spontaneous interviews were conducted with craft workers while observing piping installation activities. The goal of each interview was to record the individual's attitude toward the production of quality work and to identify potential problem areas pertaining to the individual activities and/or the overall Vogtle piping program. Interviews were also conducted in the Pullman Home Office in Williamsport, Pennsylvania and Duke Power Company Offices in Charlotte, North Carolina.

141. From a technical perspective, the task force found that the Quality Control program being used at that time to monitor the installation of the piping and support work at VEGP was effective. As might occur with any

review of this magnitude, improvements were suggested. However, the quality of piping was already assured by the procedures then being implemented. The inspection personnel were qualified, adequately trained, and diligent in the performance of their duties. The entire QC process appeared generally to be well-defined by procedures, and the inspectors made effective use of checklists and similar aids in performing their duties. The task force received a very positive impression from PPP QC inspectors in every instance although there were frustrations expressed at the problems of coping with the complicated task being performed. The inspectors felt pressure from having craftsmen wait for several hours at hold points before the inspectors checked the work. However, there was no indication that "short cuts" were being taken, or that the inspectors were being called upon by their supervisors to overlook problems.

142. It appeared that most of the charges of QC inspector intimidation related to personnel practices of PPP. Specifically, salary increases which were granted to PPP personnel in May of 1983 were apparently a considerable source of dissatisfaction. The task force found no indication that the salary increases had been used to intimidate the QC inspectors or other employees. However, there was lack of understanding by the PPP employees as to how their salary increases had been determined. PPP

management apparently did not use the performance evaluations which had been prepared during the third quarter, 1982 or other specific criteria which could be used to establish a rationale for the increases. This practice, however, was not unique to VEGP site but was apparently the manner in which PPP handled salary increases in the past and at other sites. Rather than basing salary increases on individual performance, PPP appeared to have based salary increases on an attempt to equalize pay scales between employees at an annualized percentage. No disparate salary increases could be detected within the QC organization or between QC and other departments. Other personnel practices, including discipline and alleged favoritism in job assignments, were reviewed. There appeared to be no improper action on behalf of PPP management at VEGP which could be construed as intimidation of QC inspectors.

EMBED ASSEMBLIES IN THE AUXILIARY BUILDING

143. The question concerning embeds in the Auxiliary Building was first identified by Georgia Power Company Quality Control inspection personnel who noted the problems on deviation reports. On November 21, 1978, I first notified the NRC of a potentially reportable condition involving these embeds.

CORRECTIVE ACTION PROGRAM IN RESPONSE TO USNRC CONCERNS

During Inspection

144. The Vogtle QA manager, responsible QA site manager (construction or operations) and/or QA Engineering/Support supervisor (construction or operations) normally have daily contact with NRC inspectors while they are on site. This includes, when it can be arranged, a brief meeting with the inspector at the end or beginning of each day to gather information relative to any concerns or problems the inspector may have. QA then interfaces with the Construction and/or Operations Departments to make every effort to resolve the inspector's concerns before he completes his inspection.

Exit Interview Meeting

145. At the conclusion of each NRC inspection, an exit meeting is held so that the inspector may present his findings and give the licensee (GPC) a final opportunity to provide evidence or discussion toward the resolution of any concerns the inspector may have. The exit meetings are attended by appropriate project management personnel normally including the responsible General Manager (construction or operations as appropriate) or his assistant, the Vogtle QA Manager, the appropriate QA Site Manager, and any supervisory personnel deemed appropriate by management depending on the areas covered in the NRC inspection.

146. The Vice President and Project General Manager-Vogtle Project, the Deputy Project General Manager, the Vice President and General Manager-Quality Assurance, and other upper management personnel occasionally attend NRC inspection exit meetings when the inspections result in significant or non-routine findings. The Project Compliance Coordinator also attends every NRC exit meeting.

147. At the exit meeting, any concerns which were not resolved during the inspection are identified as violations, deviations, unresolved items, or inspector followup items by the inspector depending on the nature and severity of the concerns. Often, corrective actions have already begun by the time the exit meeting takes place. In some cases, the exact nature of the inspectors concern is not known until the exit meeting.

Interim Corrective Action

148. Interim corrective action is initiated as soon as the inspector's concerns are understood. As indicated above, this usually occurs as a result of the daily contact meetings with QA management/supervisor , but occasionally does not come about until immediately following the exit meeting.

149. Interim corrective actions may include initiating a deviation report for some hardware deficiency, initiating an interim procedure change or drawing change

document (Field Procedure Change Notice, Drawing Change Notice, Field Change Request or Construction Specification Change Notice), correction of Quality Assurance records, re-instruction of personnel, work stoppage or any other action deemed necessary to resolve the immediate problem or prevent the problem from continuing.

Evaluation and Long-Term Corrective Action

150. When the NRC inspection report is received, it is reviewed by QA and the Project Compliance Coordinator. QA notifies the Project Compliance Coordinator in writing of any violations or deviations which require a written response from the Project to the NRC and the date the response information is required. The Project Compliance Coordinator notifies the responsible individuals in writing of the findings they should respond to and the date the response is requested.

151. The responsible individual or organization, upon receipt of the response assignment, conducts an evaluation of the finding to determine the nature and extent of the concern. Interim corrective actions are reviewed for adequacy and completeness. The cause of the concern is determined and any long-term corrective actions to fully address the concern and prevent recurrence are initiated. These actions may include additional procedure, specification or drawing changes; reassignment of personnel; re-training of personnel; re-inspection programs; develop-

ment of new procedures or programs; or any other actions necessary to ensure that all applicable regulatory requirements are met.

Response

152. After the responsible organization or individual completes the evaluation of the NRC inspection finding, a written response is prepared and sent to the Project Compliance Coordinator. The response delineates all interim and long-term corrective actions and a plan and schedule for completing the corrective actions. The Project Compliance Coordinator reviews the response for adequacy and completeness, ensuring that all aspects of the NRC inspection finding are addressed. The response is then forwarded to QA.

153. Quality Assurance also reviews the response for adequacy and completeness and ensures that all NRC concerns are addressed. Any discrepancies or omissions are resolved through the Project Compliance Coordinator. If the NRC finding is a violation or deviation, a written response to the NRC is prepared by QA for the Vice President and Project General Manager-Vogtle Project.

154. If the NRC finding is not a violation or deviation, QA holds the response for review by the NRC inspector in subsequent inspections.

Follow Up

155. When corrective actions are verified to be complete and adequate by the NRC inspector, the finding is closed.

156. VEGP QA includes in its audit program verifications that commitments and corrective actions submitted in responses to NRC inspection findings are carried out until such time that the affected activity is completed or that the commitment/corrective action is no longer appropriate or applicable.

INCIDENT INVOLVING 239 CIRCUIT BREAKERS

157. Intervenors have alleged that GPC purchased 239 defective circuit breakers from General Electric. This incident involves a GPC report to USNRC pursuant to 10 C.F.R. 50.55(e). All circuit breakers involved in this incident have been or will be modified. There has been no adverse impact upon the safety of VEGP.

PROCUREMENT OFFICE "MADE UP" QA LETTERS

158. Intervenors have alleged that the Procurement Office "made up" Quality Assurance letters. 159. The particular concern expressed by Intervenors in this regard appears to be that qualifying letters were written and put in the file with regard to some qualified vendors who supplied commercial grade "off the shelf" material.

160. There is nothing in this incident which compromised the safety of VEGP.

Further Affiant sayeth not.

C. W. HAYES

Sworn to and subscribed before me this 20th day of June, 1985.

Notary Public State of Del.
My Comm. expires 6/23/86

RESUME

Charles Wesley Hayes

PROFESSIONAL EXPERIENCE:

Georgia Power Company — Vogtle Quality Assurance Manager
Atlanta/Waynesboro, Georgia — February, 1983 to Present

Responsible to assure that approved quality programs are implemented by all project participants and to coordinate QA program activities among the members of Project staff and the QA personnel of participating organizations responsible to assure implementation and fulfillment of QA program requirements. Specific responsibilities include:

- Management of the Vogtle QA organization.
- Assuring that proper coordination is maintained among project and QA management.
- Review and concurrence with QA programs of architect/engineers and contractors.
- Auditing or verifying accomplishment of delegated audits of the QA program of architect/engineers and contractors.
- Processing correspondence to and from the USNRC Directorate of Inspection and Enforcement.
- Reporting to the USNRC identified significant deficiencies pursuant to the requirements of 10 CFR 50.55(e) and 10 CFR 21.
- Assuring that site activities conform to QA program requirements.
- Assuring that audit, surveillance and monitoring requirements are carried out on project quality-related functions.
- Maintenance and control of the Vogtle Quality Assurance Manual.
- Assuring proper implementation of the supplier quality surveillance program.

Project Quality Assurance Manager
February, 1977 to February, 1983

Project Quality Assurance Manager and Qualified Lead Auditor per ANSI N45.2.23 responsible for managing and coordinating the QA activities for Vogtle Nuclear Generating Plant. Responsible for:

- Preparing, maintaining, and controlling the Vogtle Project Quality Assurance Manual.
- Assuring that satisfactory QA programs are established and maintained by all project participants.
- Assuring the proper implementation of the supplier surveillance program.
- Assuring through a comprehensive audit program the acceptability and implementation of the architect/engineer's, Nuclear Steam System Supplier's, site contractor's, and material/equipment supplier's Quality Assurance Programs.

Quality Assurance Engineer
March 1970 to February, 1977

Quality Assurance Engineer responsible for the QA review/approval of Quality Assurance Manuals, design specifications, procurement documents. Responsible for:

- Conducting design audits of architect/engineers.
- Conducting corporate audits of construction site quality assurance at Hatch Nuclear Generating Plant.
- Conducting supplier audits.
- Generating quality assurance procedures.

Lockheed-Georgia Company — Material and Process Engineer
Marietta, Georgia — October, 1965 to January, 1970

Material and Process Engineer responsible for:

- Providing liaison, information, guideance to Manufacturing, Quality Assurance, Material, vendors, subcontractors, and the Air Force.
- Providing technical control and direction of Material and Process specifications and other materials and documents related to finishes and processes.
- Maintaining engineering control of materials used on Lockheed products to assure meeting military and FAA requirements.

EDUCATION:

University of Texas at El Paso, 9/61 - 8/65, BS Degree - Physics

Special Courses:	Date Taken:
- NUS, Introduction to Nuclear Power	March 1973 - Nov., 1973
- Bechtel, Auditor Training	May, 1976

Special Courses (Continued):	Date Taken:
- Georgia Power, Principles of Management	May, 1977
- Westinghouse, PWR Information Course	April, 1978
- Georgia Power, Effective Communication	October, 1979
- Georgia Power, Foundations of Management	February, 1980
- Georgia Power, Understanding Organization	May, 1982
- Georgia Power, Creative Problem Solving	September, 1983