



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

Report No.: 50-424/87-70

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

Docket Nos.: 50-424

License Nos.: NPF-68

Facility Name: Vogtle 1

Inspection Conducted: November 21 - December 18, 1987

Inspectors:	<u>Peter A Balmain</u>	<u>1/15/88</u>
	for F. Rogge, Senior Resident Inspector	Date Signed
	<u>Peter A Balmain</u>	<u>1/15/88</u>
	for J. Schepens, Senior Resident Inspector	Date Signed
	<u>Peter A Balmain</u>	<u>1/15/88</u>
	for W. Burger, Resident Inspector	Date Signed
Approved By:	<u>M V Sinkule</u>	<u>1/15/88</u>
	M. V. Sinkule, Section Chief	Date Signed
	Division of Reactor Projects	

SUMMARY

Scope: This routine, unannounced inspection entailed resident inspection in the following areas: plant operations, radiological controls, surveillance, fire protection, security, NRC Bulletin No. 87-02, and quality programs and administrative controls affecting quality.

Results: No violations or deviations were identified.

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

- \*G. Bockhold, Jr., General Manager Nuclear Operations
- \*T. V. Greene, Plant Support Manager
  - R. M. Bellamy, Plant Manager
  - C. C. Echert, Technical Assistant to Plant Manager
- \*J. E. Swartzwelder, Nuclear Safety & Compliance Manager
- \*W. F. Kitchens, Manager Operations
  - R. E. Lide, Engineering Support Supervisor
- \*H. Varnadoe, Plant Engineering Supervisor
- \*R. E. Spinnatu, ISEG Supervisor
  - C. W. Hayes, Vogtle Quality Assurance Manager
- \*G. R. Frederick, Quality Assurance Site Manager - Operations
  - W. E. Mundy, Quality Assurance Audit Supervisor
  - M. A. Griffis, Maintenance Superintendent
- \*R. M. Odom, Plant Engineering Supervisor
- \*C. L. Cross, Senior Regulatory Specialist
  - S. F. Goff, Regulatory Specialist
- \*A. L. Mosbaugh, Assistant Plant Support Manager
- H. M. Haidfinger, Assistant Plant Support Manager
- F. R. Timmons, Nuclear Security Manager

Other licensee employees contacted included craftsmen, technicians, supervision, engineers, operations, maintenance, chemistry, inspectors, and office personnel.

#### \*Attended Exit Interview

### 2. Exit Interviews - (30703)

The inspection scope and findings were summarized on December 18, 1987 with those persons indicated in paragraph 1 above. The inspector described the areas inspected and discussed in detail the inspection results. No dissenting comments were received from the licensee. The licensee did not identify as proprietary any of the materials provided to or reviewed by the inspector during this inspection. Region based NRC exit interviews were attended during the inspection period by a resident inspector.

### 3. Operational Safety Verification - (71707)(93702)

The plant began this inspection period in Power Operation (Mode 1) at 99% power and remained at this power level throughout the inspection period except for power reductions to repair condenser tube leaks. Reactor Engineering continued to resolve the issue in regard to exceeding the 3411

MWT power limit. The licensee contacted EPRI regarding the condenser tube leaking problems and learned that a waterbox cannot be removed from service while maintaining the plant at 100% power due to thermal limitations and excessive vibration of the tubes. The unit now reduces power below 67% when a waterbox is removed from service.

a. Control Room Activities

Control Room tours and observations were performed to verify that facility operations were being safely conducted within regulatory requirements. These inspections consisted of one or more of the following attributes as appropriate at the time of the inspection.

- Proper Control Room staffing
- Control Room access and operator behavior
- Adherence to approved procedures for activities in progress
- Adherence to Technical Specification (TS) Limiting Conditions for Operations (LCO)
- Observance of instruments and recorder traces of safety related and important to safety systems for abnormalities
- Review of annunciators alarmed and action in progress to correct
- Control Board walkdowns
- Safety parameter display and the plant safety monitoring system operability status
- Discussions and interviews with the On-Shift Operations Supervisor, Shift Supervisor, Reactor Operators, and the Shift Technical Advisor to determine the plant status, plans and to assess operator knowledge
- Review of the operator logs, unit log and shift turnover sheets

No violations or deviations were identified.

b. Facility Activities

Facility tours and observations were performed to assess the effectiveness of the administrative controls established by direct observation of plant activities, interviews and discussions with licensee personnel, independent verification of safety systems status and LCO's, licensee meeting and facility records. During these inspections the following objectives were achieved:

- (1) Safety System Status (SSS) - Confirmation of system operability was obtained by verification that flowpath valve alignment, control and power supply alignments, component conditions, and support systems for the accessible portions of the ESF trains were proper. The inaccessible portions are confirmed as availability permits. Additional indepth inspection of the AC electrical power distribution system was performed to review the system lineup procedure with the plant drawings and as-built configurations, compare breaker valve

remote and local indications, walkdowns were expanded to include hangers and supports, and electrical equipment interiors. The inspector verified that the lineup was in accordance with license requirements for system operability.

- (2) Plant Housekeeping Conditions - Storage of material and components and cleanliness conditions of various areas throughout the facility were observed to determine whether safety and/or fire hazards existed.
- (3) Fire Protection - Fire protection activities, staffing and equipment were observed to verify that fire brigade staffing was appropriate and that fire alarms, extinguishing equipment, actuating controls, fire fighting equipment, emergency equipment, and fire barriers were operable.
- (4) Radiation Protection (71709) - Radiation protection activities, staffing and equipment were observed to verify proper program implementation. The inspection included review of the plant program effectiveness. Radiation work permits and personnel compliance were reviewed during the daily plant tours. Radiation Control Areas (RCAs) were observed to verify proper identification and implementation.

The inspector reviewed the results of the IPM-7 alarm setpoint survey. This survey consisted of comparing Vogtle to other nuclear plant users of the IPM-7. Calibration sources, check sources, count times, and alarm points for thirteen other plants were presented. The results indicated that Vogtle is conservative with respect to the average of these plants for body, hand, and foot setpoints. The hand setpoint of Vogtle is the lowest. The inspector noted that this was an observational study and not a controlled study. This report will be presented at the Regional office in January 1988.

- (5) Security (71881) - Security controls were observed to verify that security barriers were intact, guard forces were on duty, and access to the Protected Area (PA) was controlled in accordance with the facility security plan. Personnel within the PA were observed to verify proper display of badges and that personnel requiring escort were properly escorted. Personnel within vital areas were observed to ensure proper authorization for the area. Equipment operability of proper compensatory activities were verified on a periodic basis.
- (6) Surveillance (61726)(61700) - Surveillance tests were observed to verify that approved procedures were being used; qualified personnel were conducting the tests; tests were adequate to verify equipment operability; calibrated equipment was utilized; and TS requirements were followed. The inspectors observed

portions of the following surveillances and reviewed completed data against acceptance criteria:

<u>Date</u>	<u>Surv. No.</u>	<u>Dept.</u>	<u>Title</u>
11/23/87	14600-1 & 14601-1	Ops	ESFAS Slave Relay and Final Device Test
12/1/87	14980-1	Ops	Diesel Generator Operability Test
12/3/87	14425-1	Ops	Power Range Quarterly Analog Channel Operational Test
12/14/87	14546-1	Ops	Turbine Driven Auxiliary Feedwater Pump Operability Test
12/14/87	14495-1	Ops	Auxiliary Feedwater System Flowpath Verification
12/14/87	14803-1	Ops	CCW Pump and Discharge Check Valve Inservice Test

- (7) Cold Weather Preparations (71714) - The inspector reviewed implementation of the cold weather preparation program. Maintenance and engineering activities were reviewed to ensure that proper equipment and sensitive systems had been identified. Operational activities implemented when cold weather is pending (temperatures less than 40 degrees F) were reviewed. The Safety Evaluation Report, Section 7.5.2.6 and FSAR Question 420.11 were reviewed as they pertain to area of freeze protection. Operations Procedure 11877-1, Cold Weather Checklist, Rev 0 was reviewed. During the inspection the inspectors questioned the lack of a completed lineup procedure. Since this inspection area is not complete as the end of the inspection, this issue will be followed up in the next report.

No violations or deviations were identified.

4. Review of Licensee Reports (90712)(90713)(92700)

a. In-Office Review of Periodic and Special Reports

This inspection consists of reviewing the below listed reports to determine whether the information reported by the licensee is technically adequate and consistent with the inspector knowledge of the material contained within the report. Selected material within the report is questioned randomly to verify accuracy to provide a

reasonable assurance that other NRC personnel have an appropriate document for their activities.

Monthly Operating Reports - The reports dated November 10 and December 9, 1987 were reviewed. The inspector had no significant comments regarding these reports. The inspector noted that the November 10 report contains a request to reflect the correct corporate address and the commercial status. These requests were noted to the Regional database manager and appropriate corrections have been made.

b. Licensee Event Reports (LERs) and Deficiency Cards (DCs)

Licensee Event Reports and Deficiency Cards were reviewed for potential generic impact, to detect trends, and to determine whether corrective actions appeared appropriate. Events which were reported pursuant to 10 CFR 50.72, were reviewed as they occurred to determine if the technical specifications and other regulatory requirements were satisfied. In-office review of LERs may result in further followup to verify that the stated corrective actions have been completed, or to identify violations in addition to those described in the LER. Each LER is reviewed for enforcement action in accordance with 10 CFR Part 2, Appendix C. Review of DCs was performed to maintain a realtime status of deficiencies, determine regulatory compliance, follow the licensee corrective actions, and assist as a basis for closure of the LER when reviewed. Due to the numerous DCs processed only those DCs which result in enforcement action or further inspector followup with the licensee at the end of the inspection are discussed as listed below. The LERs denoted with an asterisk indicates that reactive inspection occurred at the time of the event prior to receipt of the written report.

(1) Deficiency Card reviews:

DC 1-87-3093 "Control Room Operators permitted Reactor Power to exceed 99.9% power in conflict of Standing Order 1-87-58" On December 1, 1987 this deficiency noted that despite a management direction not to exceed a certain power level by the highest indicated NI the operators did not execute the order. This deficiency resulted in an LER which will be followed up subsequently to the report issuance.

DC 1-87-3094 "Following Calorimetric Personnel Failed to Readjust Nuclear Instrument Per the Procedure." On December 1, 1987 this deficiency noted that despite a procedure change to require NI adjustment operations failed to follow this new procedure. This deficiency resulted in an LER which will be followed up subsequently to the report issuance.

The two deficiencies above represent a communication breakdown between operations and management. Since discovery of problems regarding calorimetrics had been identified, numerous procedure changes and management attention had occurred, however the



operators (working level) were not apprised of the technical problems nor the corrective actions.

- (2) The following LERs were reviewed and are ready for closure pending verification that the licensee's stated corrective actions have been completed.
  - (a) \*50-424/87-63 Rev 0 "Reactor Trip Following Turbine Trip Caused by Vibration Monitor Cable Movement." On November 5, 1987 the reactor tripped from 100% power when a mechanic performing work disturbed a turbine vibration sensor. The inspection included post trip review and corrective action identification. The corrective actions are not expected to be complete until January 15, 1988. Interim actions are in place to prevent recurrence.
  - (b) 50-424/87-64 Rev 0 "Auxiliary Feedwater Pump Actuation Following a Condensate Pump Work Activity." On November 5, 1987, an AFW actuation resulted when an operator closed the discharge valve on the running condensate pump. This resulted in a trip of the main feedwater pump B (reset but not running) which results in the AFW actuation signal. Since both electrical AFW pumps were running, the only remaining system action was to open the AFW discharge valves. For the mode that the plant was in this actuation is not required by Technical Specifications. The cause of the actuation was due to poor labeling for this panel. Corrective action planned includes a review of other panels and necessary modification by April 1, 1988, and storage locations for portable lifts by January 30, 1988.
- (3) The following LER was reviewed and is considered closed.
  - (a) 50-424/87-55, Rev 1 "Closure of RHR System Valves Causes Loss of Availability of one RHR pump". This item was reviewed in detail during the enforcement conference associated with the findings of NRC Rpt 50-424/87-56. The inspector has no further question regarding this event.
- (4) The following Construction deficiency report is closed based on NRC Regional review.
  - (a) CDR 50-424/86-130, "Main Steam Isolation Valve" - Reportable per January 9, 1987 letter. Supplemental reports dated December 3 and January 9, 1987. This item was reviewed in Inspection Report No. 50-424/87-17 and inspected in conjunction with IFI 50-424/86-65-03. Based upon the results of those inspections, this item is closed.

5. NRC Bulletin No. 87-02 Fastener Testing To Determine Conformance With Applicable Material Specifications - (525026)

On November 6, 1987, the NRC issued Bulletin No 87-02 which requires the licensee to review their receipt inspection requirements and internal controls for fasteners and to independently determine, through testing, whether fasteners in stores meet required mechanical and chemical specification requirements.

On December 12, 1987, the inspector participated in the licensee selection of samples located in the Nuclear Operations warehouse. The licensee prepared a selection plan based on in-stock levels. During the sampling the inspector witnessed the selection and data form completion. The inspector looked for special vendor markings and determined that the "J" manufacturer's mark existed on one sample. The inspector requested that one companion nut be added to one of the samples. These samples are part of the site sample. The other portion of the sample was taken on the construction side of the site (Unit 2) and will be discussed in NRC report 50-425/87-51.