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

Report No.: 50-424/87-49

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

Docket No.: 50-424 License No.: NPF-68

Facility Name: Vogtle 1

Inspection Conducted: July 25 - September 4, 1987

Inspectors: Roy J. Schepens for — 9/16/87
J. F. Rogge, Senior Resident Inspector — Date Signed

Roy J. Schepens — 9/16/87
R. J. Schepens, Resident Inspector — Date Signed

Roy J. Schepens for — 9/16/87
C. W. Burger, Resident Inspector — Date Signed

Approved By: M V Sinkule — 9/16/87
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, maintenance, surveillance, fire protection, emergency preparedness, security, quality programs and administrative controls affecting quality, and follow-up on previous inspection identified items.

Results: No violations or deviations were identified.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*G. Bockhold, Jr., General Manager Nuclear Operations
*E. M. Dannemiller, Technical Assistant to General Manager
*T. V. Greene, Plant Manager
*W. F. Kitchens, Manager Operations
*J. E. Swartzwelder, Deputy Manager - Operations
C. W. Hayes, Vogtle Quality Assurance Manager
*C. E. Belflower, Quality Assurance Site Manager - Operations
*G. R. Frederick, Quality Assurance Engineer/Support Supervisor
W. E. Mundy, Quality Assurance Audit Supervisor
M. A. Griffis, Maintenance Superintendent
J. F. D'Amico, Nuclear Safety & Compliance Manager
*R. M. Odom, Plant Engineering Supervisor
*C. L. Cross, Senior Regulatory Specialist
*W. C. Gabbard, Regulatory Specialist
S. F. Goff, Regulatory Specialist
A. L. Mosbaugh, Assistant Plant Support Manager
*H. M. Handfinger, Assistant Plant Support Manager
M. P. Craven, Nuclear Security Manager
R. E. Spinnatu, ISEG Supervisor
R. D. Baker, Nuclear Licensing 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 September 4, 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. This inspection closed one Inspector Followup Item (IFI), and one Violation. The item identified during this inspection is:

Unresolved Item 50-424/87-49-01 "Review Licensee Evaluation and Corrective Action Regarding the Closure of either the RHR Cold Leg Isolation (1HV-8809 A & B) or Crossover Isolation (1HV-8716A & B) Valves which Renders the System Inoperable" - paragraph 4.

The following previous inspection item remains open due to incomplete licensee action:

IFI 50-424/87-31-04 "Review Methodology for Control of Throttle Valves" - paragraph 7.

3. Licensee Action on Previous Enforcement Matters (92702)

(Closed) Violation 50-424/87-12-01. "Failure to Maintain Control of Locked Valves". This violation identified two (2) examples of where locked valves were found to be mispositioned. Georgia Power Company's response contained in letter no's. SL-2450 and SL-2636 dated May 1, 1987 and June 4, 1987 respectively, outlined the corrective actions to be taken. An NRC Enforcement Conference was held with the licensee in Region II on May 20, 1987, regarding proper system alignment and attention to detail. The licensee's presentation discussed six (6) component alignment events and a summary of both short and long term corrective actions. While it was noted that the licensee could not identify the root cause in some of the component alignment events, the licensee felt that the establishment of additional measures for valve manipulations would be helpful in identifying the root cause for future cases should one occur. The inspector has reviewed the following corrective steps taken and results achieved by the licensee: 1.) Operations Procedure 10019-C, "Control of Safety-Related Locked Valves" was revised and reissued as Revision 2 on June 22, 1987, 2.) Operations Procedure 11867-C, "Locked Valve Verification Checklist" was issued as Revision 0 on June 22, 1987, which requires the verification and documentation of the position and lock status of each locked valve every six (6) months, 3.) Operations Procedure 11888-1, "Locked Valve Manipulation Log" was revised and reissued as Revision 1 on May 14, 1987, which requires the documentation of status changes in the positions of locked valves, 4.) Operations Procedure 13601-1, "Steam Generator and Main Steam System Operation was revised and reissued as Revision 2 on August 2, 1987 to require the documenting of a for information LCO when closing the TDAFW pump steam supply valves for placing the steam generators in wet layup and reopening the TDAFW pump steam supply valves when lowering the steam generator level in preparation for unit startup, and 5.) implementation of the the locked valve verification checklist and locked valve manipulation log and the documenting of mispositioned valves on deficiency cards as required per procedure 10019-C. In addition, the inspector has conducted random inspections of locked valve control and has not identified any examples of mispositioned locked valves. Based on this review the inspector has determined that the licensee has taken the appropriate corrective action; therefore, this item is considered to be closed.

(Open) Violation 50-424/87-12-02 "Failure To Establish an Adequate Program for Collection/Evaluation of Transient or Operating Cycles" The inspector started to review this item at the end of the inspection period but was not able to complete the review. This item is being carried forward into the next report period.

4. Unresolved Items (92701)

Unresolved items are matters about which more information is required to determine whether they are acceptable or may involve violations or deviations. The new unresolved item identified during this inspection is discussed in Paragraph 6.

5. Operational Safety Verification (71707)(93702)

The plant began this inspection period in Power Operation (Mode 1) at 100% power until July 28 when the reactor tripped on a turbine trip as a result of a power load imbalance which was sensed when technicians inadvertently shorted the sensor. The unit entered the Startup (Mode 2) operating mode late on July 28 and returned to Mode 1 on July 29. From July 29 the unit remained in Mode 1 at 100% power.

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 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 meetings and facility records. During these inspections the following objectives are achieved:

(1) Safety System Status (71710) - 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 Train "A" Nuclear Service Cooling Water System was performed to review the system lineup procedure with the plant drawings and as-built configurations, compare valve remote and local indications, and walkdown of hangers, supports, snubbers 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.

(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 and 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:

Surveillance	Date	Title
14000-1,Rev 7	Numerous	Operations Shift and Daily Surveillance Logs
14225-1,Rev 2	8/20	Operations Weekly Surveillance Logs
14905-1, Rev. 1	8/20	RCS Leakage Calculation (Inventory Balance)

(7) Maintenance Activities (62703) - The inspector observed maintenance activities to verify that correct equipment clearances were in effect; work requests and fire prevention work permits, as required, were issued and being followed; quality control personnel were available for inspection activities as required; retesting and return of systems to service was prompt and correct; TS requirements were being followed. Maintenance backlog was reviewed. Maintenance was observed and work packages were reviewed for the following maintenance activities:

The inspection also included a review of the outage planning effort being conducted for the ten day outage starting on October 10, 1987.

(8) Emergency Preparedness - The inspectors participated in the licensee drill conducted on July 28, 1987. Positions manned were in the Control Room (Simulator) and Technical Support Center.

6. 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 users have an appropriate document for their activities.

(1) Monthly Operating Reports - The reports dated March 13, May 7, May 22, June 15, July 13, and August 12, 1987 were reviewed. The inspector had no significant comments regarding these reports.

(2) INPO Trip Report - Special Assistance Visit to Vogtle Electric Generating Plant dated July 6, 1987. This report contains the evaluations in the areas of control room activities, maintenance, and surveillance. In each area evaluated the

report documents substandard performance. The inspector agrees with the comments in the report and has noted that licensee action was taking place to address the issues.

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

Licensee Event Reports (LERs) and Deficiency Cards (DCs) 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 real time 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 items 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 1-87-1978 - This deficiency involves the discovery that two Auxiliary Feedwater flow transmitters (FT-15150 & FT-15152) had been inoperable which constituted a violation of TS 3.3.3.6 which requires restoration within 7 days. These two transmitters provide indication on the ERF computer and Plasma displays. The plant had noted that the readouts were improper and troubleshooting indicated that the transmitters failed. On June 20, these failures were documented on deficiency cards, however during processing the plant did not correctly determine TS applicability. This condition existed until work planning noted that these were TS related on August 6. Corrective actions are to include the development of an operator aid to cross reference TS to plant instrument applicability. These actions could prevent recurrence. Further corrective action will be documented in an LER. This item is identified as a licensee identified violation (LIV) which meets the criteria for not issuing a Notice Of Violation (NOV) and will be identified as:

50-424/LIV87-03 "DC 1-87-1978 - Failure to comply with TS 3.3.3.6 action requirement regarding inoperable flow transmitters".

DC 1-87-2018,1-87-2057, and 1-87-2241 - These deficiency cards documented a problem where the plant was placed in an unanalyzed

condition outside the established design basis when the RHR crossover isolation valves (1HV-8716 A & B) were closed on several occasions for surveillance testing. With either of these valves closed the RHR subsystems are not capable of injection into all four RCS loops per the ECCS analysis. This condition was described in NRC IE Information Notice 87-01 dated January 6, 1987 which the licensee had received on site on January 12, 1987. The licensee formed an event critique task force on August 31, 1987, per their administrative procedures to conduct a root cause determination of why this information was not effectively processed to prevent the condition. The task force is reviewing plant procedures to determine a complete account of when and for how long the plant was in an unanalyzed condition. To date the task force has identified six (6) times when the RHR crossover isolation valves were closed. Three times were for valve stroking on April 3, 1987, July 3, 1987, and August 8, 1987 per the quarterly inservice valve test surveillance procedure 14825-1 and the other three times were for RHR pump testing on February 24, 1987, April 16, 1987, and July 30, 1987, per the RHR pump and check valve inservice test surveillance procedure 14805-1. The licensee estimates that the valves were closed for a maximum time of three minutes during the performance of the valve stroking surveillance and preliminary review of the maximum time which they were closed during the RHR pump inservice testing surveillance indicates it to be less than one hour. The task force has also identified that the RHR cold leg isolation valves (1HV-8809A & B) were closed during the performance of the RCS pressure isolation valve leak test surveillance procedure 14450-1 which is performed in Mode 3. The licensee's task force is presently reviewing these events to determine the duration for which these valve were closed. The task force also conducted a complete review of all maintenance work orders and clearances since initial fuel which did not identify any other instances were these valves were closed. The licensee's immediate corrective action has consisted of but was not limited to the following: 1.) surveillance procedures 14805-1 and 14825-1 have been revised to no longer require closing of the RHR crossover isolation valves in Modes 1, 2 or 3. 2.) A night order has been issued to the shifts describing the concern with closing either the RHR crossover or cold leg isolation valves and a copy of NRC IE Information Notice 87-01 has been placed in the operations required reading book and 3.) Administrative Controls have been placed on the RHR crossover and cold leg isolation valves by hanging a for information tag on the handswitches on the main control board instructing operators not to close these valves when in Mode 1, 2, or 3 and that if any of these valves are found to be closed then they should be opened immediately or if they can not be opened then comply with Technical Specification 3.0.3. The inspector has been and will continue to follow the event critique task force actions regarding this matter and has

verified the administrative controls placed into effect by the licensee. Pending completion of the licensee's review this item will remain unresolved and be identified as Unresolved Item 50-424/87-49-01, "Review Licensee Evaluation and Corrective Action Regarding the Closure of either the RHR Cold Leg Isolation (1HV-8809A & B) or Crossover Isolation (1HV-8716A & B) Valves which Renders the System Inoperable".

(2) The following LERs were reviewed and are ready for closure pending verification that the licensee's stated corrective actions have been completed.

50-424/87-46, Rev 0 "Waste Gas Decay Tank Not Sampled Within Technical Specification Time Limit" This LER documents a violation of TS 4.11.2.6 which requires in part that the gas decay tank be sampled each 24 hours to demonstrate compliance with TS 3.11.2.6. TS 3.11.2.6 requires that the radioactivity in a tank be less than or equal to 2.0 x 10+5 curies of noble gas. Actual measured was 6.9 curies and thus for this event the LCO was not violated. In order to prevent recurrence of another violation regarding the surveillance the licensee has issued a memo to chemistry technicians stressing the requirements, establishment of a fixed time for sampling, and improving the surveillance tracking system. This item is identified as a licensee identified violation (LIV) which meets the criteria for not issuing a Notice Of Violation (NOV) and will be identified as:

50-424/LIV87-04 "LER 87-46 - Failure to perform TS Surveillance 4.11.2.6 within prescribed time limits".

(3) The following LER's were reviewed and are considered closed.

*50-424/87-47, Rev 0 "Vibration Induced Switch Actuation Trips Turbine Initiating a Reactor Trip" This LER describes two similar trips on July 8 and on July 22 from the same cause. Due to the licensee's inability to identify the cause on the first trip additional instrumentation was installed to monitor parameters on the stator cooling system. The second trip resulted in the identification that a temperature switch was actuating at a lower than normal setpoint. The licensee has installed a two-out-of-three logic but has delayed testing the circuit as a measure to preclude a third trip. Interim measures include a continuous watch on the stator cooling temperature with direction to inform the control room when high temperatures occur and the operators will promptly trip the generator. The circuit will be tested during the October outage. The inspector has no further questions regarding this LER.

7. Followup on Previous Inspection Items (92701)

a. (Closed) Inspector Followup Item 50-424/87-12-03 "Review Revised Surveillance Procedure 14928-1". The inspector reviewed Revision 2 of the Containment Ventilation Isolation - Refueling Surveillance Procedure dated July 22, 1987 to verify that comments were incorporated orated appropriately. The inspector has no further questions at this time; therefore, this item is considered to be closed.

b. (Open) Inspector Followup Item 50-424/87-31-04 "Review Methodology for Control of Throttle Valves". The inspector conducted a review of the ESF room cooler and safety-related chiller flow path verification surveillance procedure 14553-1. This procedure requires the cooling coil outlet throttle valves to be secured in position by an intact tie wrap and torque seal. The inspector has noted that during the performance of this surveillance operations personnel have found tie wraps to be missing thus requiring a system flow balance check to verify that the throttle valve is still correctly positioned. The inspector expressed a concern with the use of tie wraps due to there ease of removing. Also, the inspector requested to review the licensee's methodology used in determining which throttle valves should be locked. Pending the inspectors review of the above matter this item will remain open.

8. Plant Review Board (PRB) (40700)

This inspection consisted of a review of the licensee's Onsite Review Committee to determine if any significant safety - related responsibilities of the PRB are not adequately being met. The following requirements, guidance and licensee commitments were utilized as appropriate:

- 10 CFR 50.73
- ANSI N18.7-1976
- Regulatory Guide 1.33 Revision 2, 1978
- FSAR section 13.4.1
- Technical Specification (TS)

This review included attendance at two PRB meetings and review of selected meeting minutes. The licensee's administrative procedure 00002-C "Plant Review Board - Duties and Responsibilities" was reviewed against appropriate commitments. The review was performed to determine if the PRB is properly fulfilling its function in the following areas:

- Compliance with the composition, duties and responsibilities as described in the TS,
- Review of all reportable events,
- Investigation of all violations of TS including recommendations to prevent future recurrences,
- Review of plant operations to detect potential nuclear safety hazards, and

- Review of proposals which could affect nuclear safety,

The inspector determined during the above inspection that the PRB had not been performing a timely review of recent reportable events. The untimely review was a change from the licensee's normal practice and was primarily due to the large number of reportable events which had recently occurred. This item was discussed with the licensee who committed to resolve the problem.

No violations or deviations were identified.