



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

Report No.: 50-424/88-25

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

Locket No.: 50-424

License No.: NPF-68

Facility Name: Vogtle 1

Inspection Conducted: June 7 - July 1, 1988

Inspectors: *J. F. Rogge for*
J. F. Rogge, Senior Resident Inspector

7-19-88
Date Signed

C. W. Burger for
C. W. Burger, Resident Inspector

7-19-88
Date Signed

Accompanied by: R. F. Aiello, Resident Inspector

Approved By: *M. V. Sinkule for*
M. V. Sinkule, Section Chief
Division of Reactor Projects

7/19/88
Date Signed

SUMMARY

Scope: This routine, unannounced inspection entailed resident inspection in the following areas: plant operations, radiological controls, maintenance, surveillance, fire protection, security, and quality programs and administrative controls affecting quality.

Results: Two licensee identified violations were identified in which no notice was issued: failure to perform stroke time testing on four containment isolation valves, and failure to perform surveillance on containment radiation monitors.

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REPORT DETAILS

1. Persons Contacted

Licensee Employees

- *G. Bockhold, Jr., General Manager Nuclear Operations
- *R. M. Bellamy, Plant Manager
- *T. V. Greene, Plant Support Manager
- *W. N. Marsh, Deputy Operations Manager
- W. F. Kitchens, Manager Operations
- *J. E. Swartzwelder, Nuclear Safety & Compliance Manager
- M. A. Griffis, Maintenance Superintendent
- C. C. Echert, Manager Chemistry and Health Physics
- *A. L. Mosbaugh, Assistant Plant Support Manager
- *R. E. Lide, Engineering Support Supervisor
- *G. A. McCarley, ISEG Supervisor
- *E. M. Dannemiller, Technical Assistant to General Manager
- *G. R. Frederick, Quality Assurance Site Manager - Operations
- R. M. Odom, Plant Engineering Supervisor
- *K. Pointer, Regulatory Specialist

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

*Attended Exit Interview

2. Operational Safety Verification - (71707)

The plant began this inspection period in Power Operation (Mode 1) at approximately 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 to assess operator knowledge
- Review of the operator logs, unit log and shift turnover sheets

During the inspection, the operations manager discussed guidance that was being provided to control room personnel regarding professionalism. The inspector noted that the guidance was concise and covered the areas most often cited as representative of professionalism. One additional area was suggested by the inspector regarding actions to be taken when approached by a management, NRC inspectors or INPO personnel. These actions would be to simply be proactive in demonstrating command and control by encouraging the operators to voluntarily and spontaneously provide status and information regarding plant and watchstation activities.

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

- (1) Safety System Status - 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.
- (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.

On June 22, 1988, at 10:25 a.m. the inspector was exiting Unit 1 through the mini personnel entry and security building (PESB) to Unit 2, when he determined that the radiation detector (PM-6-751) was inoperable. All personnel are required to pass through this detector when exiting Unit 1 at the mini PESB. The inspector immediately stopped any personnel from exiting Unit 1 at the mini PESB location and notified HP of the problem. The inspector requested that Health Physics (HP) Technician be sent to the location with a hand held frisker or other supplement for the inoperable radiation detector. The inspector then checked the source check sign off card attached to the detector and noted that there had been no source check by HP since June 18, 1988.

Further inspection indicated that Procedure VEGP 43500-C, "Daily/Weekly Instrument Operations Check" data sheet was being incorrectly implemented. Region II Management was informed, by the inspector, of the detailed circumstance surrounding this event and management subsequently assigned Region II HP inspectors to perform a followup inspection at the site. Therefore, this event has been turned over to Region II for further inspection.

- (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 was controlled in accordance with the facility security plan. Personnel 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 or 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>Surveillance No.</u>	<u>Title</u>
13145-1, Rev 10	Diesel Generator
14220-1, Rev 2	Main turbine valve stroke test (weekly)
14225-1, Rev 5	Operations surveillance logs (weekly)
14445-1, Rev 1	Remote shutdown monitor instrument channel check (monthly)
14460-1, Rev 8	ECCS Flow Path Verification
14495-1, Rev 2	AFW system flow path verification
14515-1, Rev 5	Piping Penetration Area Filtration And Exhaust System Operability Test
14545-1, Rev 1	MDAFW pump operability test
14601-1, Rev 6	ESFAS slave relay and final device test (Train "B")
14701-1, Rev 6	Reactor trip breakers UV and Shunt trip test.
14807-1, Rev 4	MDAFW pump in-service test
14825-1, Rev 7	Main steam system valve in-service test (quarterly)
14980-1, Rev 11	Diesel Generator Operability Test
14980-1, Rev 12T	EDG Train "B" fuel oil day tank water test (monthly)
55003-C, Rev 3	Incore/Excore Detector Calibration
55006-C, Rev 3	Normal Flux Mapping Sequence

Discussions were held with licensee representatives regarding local leak rate testing of twenty penetrations. As required by Appendix J and technical specification surveillance 4.6.1.2.d, these twenty penetrations would need testing with the plant at power. The preferred test method would be to perform the testing during the refueling outage (cold shutdown). However, the next refueling, as scheduled, is not within the two year surveillance periodicity. Technically, there is no requirement to preclude testing at power. However, should a valve leak excessively, the technical specifications do not clearly allow an avenue for repair. In order to perform repair of a valve, technical specification 3.6.3 would require closing another valve in the penetration. When repairs are complete, the licensee would need to open the closed valve in order to perform the local leak rate test to demonstrate operability. Currently

written technical specifications do not allow for reopening of the valve that was purposefully closed to place the plant in a safe configuration. The licensee presented the following as a bases for reopening.

- Inoperability for up to 4 hours allowed under TS 3.6.3
- Unlikely initiating events
- Unlikely to occur during maximum 2 hour re-test time duration
- Unlikely that operable valves on penetration under test would fail coincidentally
- Most penetrations require a missile/line break to expose to containment atmosphere
- Unlikely a missile would impact specific penetration under test
- Combining improbabilities results in no significant contribution to overall plant risk for re-open/re-test
- Overall plant safety likely to be improved by returning valves to service after maintenance.

No specific NRC approval or endorsement for reopening the closed valve was received. In addition, the NRC noted that this type testing should be performed while shutdown. As of June 27, the licensee has completed three penetrations with measured leakage essentially the same as that measured two years earlier. These favorable results may indicate that the plant will not have to make repairs while at power. No further NRC action is planned until a need for repair is identified where plant impact can be specifically evaluated.

- (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 Work Order (MWO) backlog was reviewed. Maintenance was observed and MWO packages were reviewed for the following maintenance activities:

<u>MWO No.</u>	<u>Work Description</u>
1-88-1660	Containment Sump Level Loop 7777
1-88-1652	A Train 125 VDC
1-88-3550	Install new NRA card and calibrate
1-88-3885	Remove Blockout Wall for Rooms RC 66/67, Waste Evaporator

(con't)
2-87-1585

Fire System Signal
Process Cabinet Cable
Termination

Standing Order 88-26

Plant Vent Monitor
Charcoal Cartridge and
filter change out

While observing MWO 1-88-3550 the inspector noted that the new cards being installed were Revision 17 while the old cards were Rev 13. The I&C technicians could not get the new cards to align properly. Bench alignment on the new cards was performed satisfactorily. I&C determined, through troubleshooting, that the dip sticks in the NSCW cabinet did not conform to Revision 17 cards. The dip sticks were subsequently changed out and the NRA cards aligned satisfactorily.

- (8) Outage (60705) - On June 28, the inspector attended the outage planning meeting. This meeting is one of an ongoing series. The progress toward achieving milestones such as contract letting, refuel activities, storage racks, part problems, and design packages was discussed. The inspector determined from the statistics presented that the licensee was achieving suitable progress in preparing for the outage. A sample of these statistics are as follows:

<u>Item</u>	<u>Identified</u>	<u>Issued</u>	<u>Packaged</u>	<u>Scheduled</u>
PM MWO's	335	288	160	266
Surveillance Tests	449	449	428	447
CM MWO's	475	350	268	413
DCP's Ready For Work	27	24	17	25
Clearance Drafts Written	142	23	N/A	119
Contract P.O.'s In Place	22	14	N/A	N/A

Further inspection will be performed in this area.

No violations or deviations were identified.

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

a. In-Office Review of Periodic and Special Reports

This inspection consisted of reviewing the below listed reports to determine whether the information reported by the licensee was technically adequate and consistent with the inspector knowledge of the material contained within the report. Selected material within the report was questioned randomly to verify accuracy and to provide a reasonable assurance that other NRC personnel have an appropriate document for their activities.

Monthly Operating Report - The report dated June 15, 1988 reviewed. The inspector had no comments.

b. Licensee Event Reports and Deficiency Cards

Licensee Event Reports (LER) and Deficiency Cards (DC) 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 listed below. The LERs and DCs 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 1-88-1489 "Loss Of Primary And Secondary Met Tower Indication." On June 15, 1988, the licensee identified that the inverter supplying both meteorological towers was not functioning properly. A Notice of Unusual event was declared. Power was restored quickly and indication returned. This item will receive further followup when the LER is submitted

DC 1-88-1449 "Containment Ventilation Isolation." On June 10, 1988, an ESFAS actuation occurred when radiation monitor 1RE-2565C spiked high due to a faulty power supply. All dampers and valves closed as expected. This deficiency regarded power supply problems is one of continuing concern for the stand

licensee task force. This item will receive further review when submitted as a LER per 10 CFR 50.73(a)(2)(iv).

DC 1-88-1594 "Containment Overcurrent Protection." On June 29, 1988, the licensee identified that ten breakers utilizing magnetic overload protection did not perform within NEMA specifications. These specifications require the breaker to trip within 40% of setpoint, however measured performance was within 100% of setpoint. These breakers provide redundant thermal protection to breakers which have thermal magnetic protection. In order to establish redundancy, the licensee replaced all ten breakers within TS action statement.

- (2) The following LERs were reviewed and are ready for closure pending verification that the licensee's stated corrective actions have been completed.
- (a) *50-424/88-13, Rev 0 "Manual Reactor Trip Due To Failure Of Main Feedwater Isolation Valve II, Rev. 0." On April 24, 1988, at 0922 CDT, a manually initiated reactor trip occurred with the reactor plant at approximately 100% of rated thermal power. The Loop 4 Main Feed Isolation Valve (MFIV) had failed closed and would not respond to an open signal. The manual trip was initiated in anticipation of receiving a SG low level setpoint automatic reactor trip. The direct cause of the event was No. 4 MFIV failed closed. The root cause was that an intermittent failure of an air solenoid valve coil led to the closure of No. 4 MFIV. Corrective actions included replacing each component, which reasonably could have caused the valve to fail closed. The components consisted of two electrically operated air solenoids, four electrical relays and two timer relays (agastats). The components were replaced prior to the restart of the unit. The removed parts were energized in the maintenance shop in a configuration which simulated the installation in the plant. All parts initially functioned as designed. After one intermittent failure, one of the air solenoids failed permanently.
- (b) *50-424/88-14, Rev 0 "Missed Surveillance Due To Personnel Error And Inadequate Communications." On April 25, the licensee discovered that a Technical Specification surveillance test had not been performed within the required time interval. In accordance with TS 4.0.5, the surveillance for the containment air radioactivity monitor inlet valves, HV-12975 and HV-12976, and outlet valves, HV-12977 and HV-12978 was required to be performed no later than April 25, 1988, at 0902 CDT. As soon as the Unit Shift Supervisor (USS) was informed it had been missed, the surveillance was performed immediately and satisfactory.

On May 13, at approximately 1400 CDT, it was identified that the plant should have entered TS 3.0.3 on April 25, since both isolation valves for the two penetrations were inoperable and a 1 hour report was made to the NRC. This event occurred because the USS failed to utilize the scheduling document. Also, the On Shift Operations Supervisor (OSOS) was aware of the surveillance and when it was due, but failed to inform the USS. The TS 3.0.3 entry was not performed because the USS and the OSOS failed to perform an adequate technical review of the system condition. Corrective actions includes instructing appropriate personnel on the use of the surveillance scheduling documents. These documents will be used during shift relief to improve communication and awareness.

This item represents a violation of NRC requirements which meets the criteria for non citation. In order to track this item, the following is identified.

LIV 50-424/88-25-1 "Failure To Perform Surveillance 4.6.3.3 Stroke Time Testing Within TS 4.0.2 Surveillance intervals.

- (c) 50-424/88-15, Rev 0 "Missed Surveillance Due To Personnel Error." On May 24, the licensee discovered that the monthly Analog Channel Operational Test surveillance for the Containment Radiation Level monitors, 1RE-0005 and 1RE-0006, had not been performed since August 1987. An investigation revealed this Technical Specification surveillance (4.3.3.1) was linked to another TS surveillance (4.3.2.1) with the same requirement. Due to a TS change in August 1987, the 4.3.2.1 surveillance was deleted without realizing that 4.3.3.1 surveillance was no longer be addressed. This event was caused by personnel error when an inadequate review of the TS changes was performed to determine the necessary changes to the surveillance data base. The procedure did not provide for data base revisions. Corrective actions include review of previous TS revisions to determine if other surveillance data base changes were needed. The procedure will be revised to require a two-party review for data base changes and will not allow "linking" between the TS surveillance items. The surveillance for monitor 1RE-0005 was performed satisfactorily on May 24, but on May 25, monitor 1RE-0006 failed the surveillance. Since only one operable monitor is required, the action statement was no longer applicable.

This item represents a violation of NRC requirements which meets the criteria for non citation. In order to track this item, the following is identified.

LIV 50-424/88-25-2 "Failure To Perform TS Surveillance
4.3.3.1 Due To Surveillance Scheduling Program."

4. Exit Interviews - (30703)

The inspection scope and findings were summarized on July 1, 1988 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. The items identified during this inspection were:

LIV 50-424/88-25-1 "Failure To Perform Surveillance 4.6.3.3 Stroke Time Testing Within TS 4.0.2 Surveillance Intervals." - paragraph 3.b.(2)(b)

LIV 50-424/88-25-2 "Failure To Perform TS Surveillance 4.3.3.1 Due To Surveillance Scheduling Programs." - paragraph 3.b.(2)(c)

The inspector informed licensee management at the exit that the Systematic Assessment of Licensee Performance would be evaluating the plant in different categories than the previous report. Each new category and how it related to the old category was discussed.

The licensee informed the inspector of the preliminary results of the testing in progress for NRC Bulletin 88-05.