



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

Report Nos.: 50-321/87-02 and 50-366/87-02

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

Docket Nos.: 50-321 and 50-366

License Nos.: DPR-57 and NPF-5

Facility Name: Hatch 1 and 2

Inspection Conducted: January 24 - February 20, 1987

Inspectors: <u><i>P. Holmes-Ray FOR</i></u> Peter Holmes-Ray, Senior Resident Inspector	<u>3/4/87</u> Date Signed
<u><i>W. Ruland FOR</i></u> William Ruland, Senior Resident Inspector (Brunswick)	<u>3/4/87</u> Date Signed
<u><i>G. Nejfelt FOR</i></u> George M. Nejfelt, Resident Inspector	<u>3/4/87</u> Date Signed
Approved by: <u><i>F. S. Cantrell</i></u> Floyd S. Cantrell, Section Chief Division of Reactor Projects	<u>3/4/87</u> Date Signed

SUMMARY

Scope: This routine inspection was conducted at the site in the areas of Operational Safety Verification, Maintenance Observation, Plant Modification, Surveillance Testing Observation, Engineering Safety Feature (ESF) System Walkdown, Reportable Occurrences, On Site Followup of Events, Emergency Planning, Three Mile Island (TMI) Item Update, and Limitorque Motor Operators.

Results: One violation, 50-321/87-02-01, was identified as a failure to adequately test the mode changing operation of air systems used for containment isolation systems (paragraph 7).

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## REPORT DETAILS

### 1. Persons Contacted

#### Licensee Employees

J.T. Beckham, Jr., Vice President, Plant Hatch  
\*H.C. Nix, Plant Manager  
D. Read, Plant Support Manager  
\*H.L. Sumner, Operations Manager  
\*P.E. Fornel, Maintenance Manager  
\*T.R. Powers, Engineering Manager  
R.W. Zavadoski, Health Physics and Chemistry Manager  
C. Coggin, General Support Manager  
\*M.H. Gooze, Outages and Planning Manager  
\*O.M. Fraser, Site Quality Assurance (QA) Manager (Acting)  
\*C.T. Moore, Training and Emergency Preparedness Manager  
\*S.B. Tipps, Nuclear Safety and Licensing Manager  
\*A. Vest, Procedure Upgrade Program (PUP) Manager  
\*R. Dedrickson, Assistant to Vice President, Plant Hatch

Other licensee employees contacted included technicians, operators, mechanics, security force members and office personnel.

NRC management on site during inspection period:

L.A. Reyes, Director, DRP, on February 13, 1987  
F.S. Cantrell, Chief, Project Section 2B, DRP, on January 26-27, 1987;  
and on February 13, 1987

\*Attended exit interview

### 2. Exit Interview (30703)

The inspection scope and findings were summarized on February 20, 1987, with those persons indicated in paragraph 1 above. The licensee did not identify as proprietary any of the material provided to or reviewed by the inspectors during this inspection. The licensee acknowledged the findings and took no exception.

(Open) Violation 50-321/87-02-01. Failure to provide surveillance procedures. (Paragraph 7).

(Open) Unresolved Item 50-366/87-02-02. Design control modification problems. (Paragraph 4.a.).

(Open) Unresolved Item 50-321, 366/87-02-03. Method to ensure qualified personnel are available to fill emergency organization positions. (Paragraph 4b).

(Open) Inspector Followup Item 50-321/87-02-04. Nondestructive testing of piping and determination of chemical contaminants. (Paragraph 5).

3. Licensee Action on Previous Enforcement Matters (92702)

No action on previous enforcement matters was taken.

4. Unresolved Items\*

Two unresolved items (URIs) were identified during this report period. These URIs were:

- a. Design Control Modification Items - Two concerns were identified. The first concern involved the development of Unit-2 design control request (DCR) 84-201 for upgrading the automatic depressurization system (ADS) to satisfy the commitment for Three Mile Island (TMI) item II.K.3.18. It appeared to the inspector that this DCR package on site was closed, when in fact, an interim modification was in place. This interim modification involved a push button which was installed in lieu of the required key lock switch to provide for inhibition of the ADS without a high drywell pressure. The second item concerned the inconsistency between a Unit-2 elementary wiring drawing (H-27979) for the remote shutdown panel and its "as built notice" (ABN 2-77-55) for items not affected by the drawing change. Specific examples were:
- (1) indicated motor control center (MCC) for valve 2E11-F009 was 2R24-S011 on drawing H-27979, Revision 7; and was 2R27-S096 in ABN 2-77-55, Revision 0;
  - (2) the nomenclature for E11-F009 was called the inboard suction isolation valve on drawing H-27979, Revision 7, and was called the outboard suction isolation valve in ABN 2-77-55, Revision 0.
  - (3) the practice of referencing "not applicable" ABNs on the microfiche cards maintained in the document control center (DCC). Neither ABN 81-92 for drawing H-27979, Revision 7, nor ABN 83-134 for drawing H-16276, Revision 17, changed the drawings for which they were listed.

These design control modification questions are considered as URI 50-366/87-02-02.

- b. Emergency Position Matrix - The inspector questioned whether the licensee had made adequate plans to provide qualified personnel for the emergency organization. It was noted that only two individuals were qualified as Technical Support Center (TSC) Manager as indicated by a Moore to Reddick memo dated January 27, 1987. No emergency position matrix which reflected the recent reorganization could be provided to the inspector. When asked, the licensee responded that no method existed to ensure that at least one qualified person was always available to fill each position in the emergency organization.

\*An Unresolved Item is a matter about which more information is required to determine whether it is acceptable or may involve a violation or deviation.

The licensee had already identified the problem with insufficient numbers of qualified personnel in their 1987 Emergency Procedure (EP) Training Quality Improvement Program. The licensee stated that the emergency matrix was under revision. This item is unresolved pending further inspector review. This is URI 50-321,366/87-02-03: Method To Ensure Qualified Personnel Available To Fill Emergency Organization Positions.

5. Operational Safety Verification (71707)

The inspectors kept themselves informed on a daily basis of the overall plant status and any significant safety matters related to plant operations. Daily discussions were held with plant management and various members of the plant operating staff. The inspectors made frequent visits to the control room. Observations included instrument readings, setpoints and recordings, status of operating systems, tags and clearances on equipment, controls and switches, annunciator alarms, adherence to limiting conditions for operation, temporary alterations in effect, daily journals and data sheet entries, control room manning, and access controls. This inspection activity included numerous informal discussions with operators and their supervisors. Weekly, when on site, selected Engineering Safety Feature (ESF) systems were confirmed operable. The confirmation was made by verifying the following: accessible valve flow path alignment, power supply breaker and fuse status, instrumentation, major component leakage, lubrication, cooling, and general condition.

General plant tours were conducted on at least a biweekly basis. Portions of the control building, turbine building, reactor building, and outside areas were visited. Observations included safety related tagout verifications, shift turnover, sampling program, housekeeping and general plant conditions, fire protection equipment, control of activities in progress, radiation protection controls, physical security, problem identification systems, and containment isolation.

During a plant tour on February 6, 1987 on the 130' elevation of reactor building Unit-1, the inspector noticed a white foreign material on control rod drive system stainless steel piping and copper tubing. The licensee was contacted and asked to determine the chemical composition of the material and to determine its source. The material source was the reactor water clean up (RWCU) system heat exchanger room. The material flowed around a floor drain hub, which was not grouted in, then dripped off the floor drain elbow just below the 158 elevation onto the control rod drive (CRD) piping below. Analysis showed that the material contained high concentrations of chlorides and sulfides. The licensee cleaned the fouled piping and stopped the leak around the drain hub. Additional action such as nondestructive testing of the piping and determination of the source of the chemical contaminates is on going and will be inspector followup item (IFI) 50-321/87-02-04.

In the area of housekeeping a number of discrepancies were observed by the inspectors - particular in the Unit-2 Northwest Diagonal (e.g., emergency lighting on stairwell inoperable, equipment drain clogged, Gai-tronic loud speaker plugged with paper, temporary funnel under leaking valve clogged,

potentially contaminated clothing was left behind a panel, radiation warning signs were not stored properly; and tools, trash, and a small dead bird were left in area). These housekeeping items were reported to the licensee as they were found for corrective action.

In the course of the monthly activities, the Resident Inspectors included a review of the licensee's physical security program. The performance of various shifts of the security force was observed in the conduct of daily activities to include: protected and vital access controls, searching of personnel, packages and vehicles, badge issuance and retrieval, escorting of visitors, patrols and compensatory posts.

No violations or deviations were identified.

6. Maintenance Observation (62703)

During the report period, the inspectors observed selected maintenance activities. The observations included a review of the work documents for adequacy, adherence to procedure, proper tagouts, adherence to technical specifications, radiological controls, observation of all or part of the actual work and/or retesting in progress, specified retest requirements, and adherence to the appropriate quality controls.

On January 28, 1987, the inspector noted that the hydraulic hoses from each diesel generator control panel to gauges on another panel were hard and inflexible. These hoses may be the hoses originally installed for the diesel generators, since no record of replacing these hose was able to be found by the licensee. At the exit interview the licensee stated that preventive maintenance for these hydraulic hoses will be performed on a 5 year interval to ensure the hydraulic hose integrity. The hydraulic hoses questioned by the inspector have been scheduled for replacement.

During this reporting period, several instances of poor maintenance cleanup practices were observed. The particular items were discussed with and have been corrected by the licensee.

No violations or deviations were identified.

7. Surveillance Testing Observations (61726)

The inspectors observed the performance of selected surveillances. The observation included a review of the procedure for technical adequacy, conformance to Technical Specifications, verification of test instrument calibration, observation of all or part of the actual surveillances, removal from service and return to service of the system or components affected, and review of the data for acceptability based upon the acceptance criteria.

During the inspection period, it was found by the inspector that no procedures were established to verify the activated devices for the following cases:

- a. Non-interruptable Service Air: The automatic actuation of valves (e.g., 1P52-F875, -F876, -F877, and -F878) needed for the transfer of non-interruptable service air from the plant instrument air system to the nitrogen inerting system, upon loss of instrument air, was not verified. The non-interruptable service air supplied a number of primary containment isolation valves specified in TS Table 3.7-1 (e.g., 1P33-F002, -F003, -F011, and -F014). Also, the pressure switches associated with this transfer (e.g., 1PIS-N018, -N019, -N021, and -N022) were tested on a 5 year surveillance frequency by "non-safety related" surveillance procedure 57CP-P52-001-1, Revision 0. Drawings used in this finding were: H-11667, Revision 1; H-16251, Revision 14; and H-15239, Revision 14.
- b. Drywell Pneumatic System: The integrated operation of the drywell pneumatic system was not tested, although portions of this system (e.g., flow transmitter by procedure 57CP-CAL-011-1S, Revision 2) were tested. There was no verification of the automatic actuation of the drywell pneumatic system isolation valves (e.g., 1P70-F004, -F005, -F066, and -F067) in the event of a continuous high flow for greater than 10 minutes indicating a drywell pneumatic downstream header rupture. Drawings used in this finding were: H-16286, Revision 18; and H-16299, Revision 0.

The safety significance of these items in terms of functions lost to isolate primary system valves was negligible, because of the redundancy of the containment isolation valves affected. However, this finding emphasized that safety-related equipment subsystems are needed to be tested periodically to prove designed equipment operability. These items are considered as a violation, 50-321/87-02-01.

#### 8. ESF System Walkdown (71710)

The inspectors routinely conducted partial walkdowns of ESF systems. Valve and breaker/switch lineups and equipment conditions were randomly verified both locally and in the control room to ensure that lineups were in accordance with operability requirements and that equipment material conditions were satisfactory. The Unit-2 reactor core isolation cooling (RCIC) system was walked down in detail on February 12-13, 1987. The following Unit-2 remote shutdown panel, 2C82-P001, procedural discrepancies were found by the inspector in the validated procedure upgrade program (PUP) procedure 34SO-E51-001-2S, Revision 4:

- a. Breaker No. 2C82-S23 for the test bypass valve, 2E51-F007, was found in the "NORMAL" position. The lineup procedure for the remote shutdown panel, 34SO-E51-001-2S, Revision 4, Attachment 2, list the position of this breaker in the "CLOSE" position.

It was determined that the procedure was incorrect, because this switch is spring returned to the "NORMAL" position from the "CLOSE" position.

- b. The RCIC turbine flow controller, was found in "MANUAL" and set at 0 gpm. Procedure 34SO-E51-001-2S, Revision 4, Step 7.1.5.6, required that this flow controller be confirmed in "AUTO" with the flow rate set at 400 gpm. Also, RCIC system electrical lineup check off sheet in Attachment 2 of this procedure 34SO-E51-001-2S did not specify the positioning of the flow controller, 2C82-R001.

The Shift Supervisor, upon notification by the inspector, had the RCIC remote shutdown flow controller repositioned to "AUTO" and set at 400 gpm.

The problem described does not make RCIC inoperable. The safety significance of this RCIC flow controller set at zero flow rate and in manual was negligible. Also, procedure 34SO-E51-001-2S, Revision 4, was currently being considered to change the wording of Step 7.1.5.6 from "confirm" to "confirm or place" the RCIC flow controller.

These two items are particularly noteworthy, because they represented procedural discrepancies not identified in the PUP validation process.

The housekeeping inside the locked area of the remote shutdown panel was very poor. The area was not cleaned up after work was done in this space. Also, a pair of head phone were plugged in and thrown on the floor.

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

#### 9. Reportable Occurrences (90712 & 92700)

Newly issued Licensee Event Reports (LERs) were reviewed for potential generic impact, to detect trends, and to determine whether corrective actions appeared appropriate. Events, which were reported immediately, were also reviewed as they occurred to determine that Technical Specifications were being met and the public health and safety were of utmost consideration.

#### 10. Onsite Followup of Events (93702)

On January 27/28, 1987 the failure of the Unit 2 "B" Condensate Transfer Pump (CTP) resulted in the loss of about 92,000 gallons of Condensate Storage Tank (CST) water. The spill was to the CTP enclosure then out through conduit to the control and turbine buildings. The conduit was not leak tight so a small amount of CST water leaked from the conduit to the ground in the vicinity of the CST. The exact amount of water that went from the CST to the buildings and through drains to radwaste is indeterminate since other sources of in leakage to radwaste occurred simultaneously. Radiological surveys indicated that no significant contamination of the ground or the buildings occurred as a result of the event.

## Sequence of events (All times are Central Standard Time (CST)):

<u>Date</u>	<u>Time</u>	<u>Event</u>
1/27/87	1430	CST level from Main Control Room (MCR) reading 35.0 ft.
	1735	Outside rounds Plant Equipment Operator (PEO) found no excessive water in CST or CTP enclosures. CST level 35.7 ft by local indication.
	1745	From plots of CST level made after the event, it is probable that the CTP failure occurred at this time.
	2100	Radwaste reports to MCR excessive leakage into Control Building floor drain sumps. Shift Supervisor (SS) out of the MCR to investigate.
	2130	SS back in MCR but did not find cause of leakage. Shift personnel continue to look for leakage.
	2230	CST level 29.5 ft (MCR).
1/28/87	0030	Water found coming out of a drain hub in the condenser bay.
	0100	"B" CTP tripped.
	0105	Shift Supervisors find water near condensate booster pumps and in west cable way. They investigated the CST area and found water on the asphalt near the CST enclosure, approximately eight feet of water in the CTP enclosure and approximately two feet of water in the CST enclosure.
	0115	Commenced effort to close "B" CTP suction valve. Building and Grounds contacted to build a sandbag dike to contain spill. HP/Lab contacted and Maintenance/I&C contacted.
	0120	Site Vice President, Managers and Hatch Duty Officer notified.
	0127	CST enclosure being drained to radwaste through manual valves.
	0200	Maintenance requested to set up pump from CTP to CST enclosure and from Unit-2 Turbine Building to Unit-1 Turbine Building equipment drain sumps.
	0230	CST level 24.3 ft (local). CTP "B" suction valve closed. Temporary pumps transferring water from CTP to CST enclosures.



0250 NRC Senior Resident Inspector (SRI) notified.

0336 CST enclosure drain to radwaste stopped by closing manual valve. Leak path identified as through the gland seal of "B" CTP.

0400 NRC SRI on site in response to the event.

0530 Temporary pumps transferring water from Unit 2 to Unit 1 Turbine Building equipment drain sumps.

0545 Leakage into turbine building west cable way reported stopped.

0600 Unit-1 condensate transfer system cross connected to Unit-2 condensate transfer system. This provided backwash water for demineralizers in Unit-2 radwaste system.

0630 CST level 23.0 ft (MCR). The continued drop in CST level after "B" CTP was isolated was due to normal makeup to Unit-2 without addition to the CST from radwaste.

The licensee took prompt corrective actions to mitigate the effects of this event; and no release to the environment resulted.

No violation or deviation was identified.

#### 11. Visit by Brunswick Senior Resident Inspector

The inspector familiarized himself with the site for emergency purposes, obtained a badge for unescorted access, toured the emergency response facilities and major plant areas. The inspector reviewed the licensee's current emergency plan, the emergency classification procedure, 73EP-EIP-001-0S, and the emergency operating procedure flow charts. The review was limited to a brief familiarization with the documents.

No violations or deviations were identified.

#### 12. Three Mile Island (TMI) Item II.K.3.18

The inspector reviewed TMI item II.K.3.18, concerning the automatic depressurization system (ADS) logic, which was considered closed by the site licensing staff. However, this TMI item was not completed and an interim modification was performed - installation of a push button rather than a key switch to provide manual inhibition of ADS without a high drywell pressure signal present.

Documentation concerning II.K.3.18 prior to 1984 was summarized in IE Inspection Reports 50-321/83-27 and 50-366/83-29, paragraph 11. Subsequent correspondences were:

Date	Originator	
03-15-85	GPC	Partial implementation request - push button rather than a key switch to be installed for the ADS manual inhibit, because of anticipated transient without scram (ATWS) considerations.
02-28-86	GPC	ADS modification completed for both units with the exception of the manual inhibit switch. GPC committed to install the manual inhibit key switch during the Spring 1987 Unit-1 and the Spring 1988 Unit-2 refueling outages.

### 13. Limitorque DC Motor Operators

IE Information Notice No. 87-08 addressed the potential degradation of motor leads in Limitorque DC motor operators that were fitted with Nomex-Kapton insulated leads and manufactured between December 1984 and December 1985. The licensee has identified three Limitorque motor operators with the Nomex-Kapton insulated leads (e.g., 1E41-F001, -F011, and 2E41-F011). However, only one valve, 1E41-F001, used the insulated leads manufactured in the specified 12 month period. As a result, a "Justification for Continued Operation" (JCO) was done for 1E41-F001, the steam supply valve to the high pressure coolant injection (HPCI) turbine. The JCO concluded that no additional action was required by the licensee, because 1E41-F001 is not a primary containment isolation valve and no credit is taken for the operation of this valve in the event of a High Energy Line Break (HELB) in the HPCI room.