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

Report Nos.: 50-321/88-21 and 50-366/88-21

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: June 20-24, 1988

Inspectors: G R Wiseman 7/13/88
G. R. Wiseman Date Signed

David C Ward 7/12/88
D. C. Ward Date Signed

Approved by: ARoff for T. E Conlon 7/22/88
T. E. Conlon, Chief Date Signed
Plant Systems Section
Engineering Branch
Division of Reactor Safety

SUMMARY

Scope: This routine, unannounced inspection was in the areas of fire protection/prevention and followup on previously identified inspection findings.

Results: Within the areas inspected, the following violation was identified:

- Failure to Conduct and Document Required Surveillance of the Remote Shutdown Panel Halon Suppression System.

REPORT DETAILS

1. Persons Contacted

Licensee Employees

*J. Bennett, Superintendent, Plant Training
R. Bunt, Project Manager, Appendix R
*G. Creighton, Senior Regulatory Specialist
*D. Davis, General Support
*R. Davis, Audit Supervisor
*T. Elton, Administrative Support Supervisor
*P. Fornel, Manager, Maintenance
*G. Goode, Superintendent, General Engineering Support
*J. Lewis, Superintendent, Operations
*D. McAfee, Fire Protection, Engineering Supervisor
*H. Nix, Plant Manager
*T. Powers, Engineering Manager
*D. Read, Plant Support Manager

Other licensee employees contacted during this inspection included craftsmen, engineers, operators, mechanics, technicians, and administrative personnel.

NRC Resident Inspector

*R. Musser

*Attended exit interview

2. Fire Protection/Prevention Program (64704)

a. Fire Prevention/Administrative Control Procedures

The inspectors reviewed the following Fire Prevention/Administrative Procedures:

Procedure No.	Title
20AC-ADM-002-0S (Rev. 3)	Plant Records Management
40AC-ENG-008-0S (Rev. 0)	Fire Protection Program
42FP-FPX-005-0S (Rev 0)	Drill Planning, Critiques, and Drill Documentation

Based on this review, it appears that the above procedures meet the NRC guidelines of the document entitled "Nuclear Plant Fire Protection Functional Responsibilities, Administrative Controls, and Quality Assurance" dated June 1977.

The inspectors verified that procedure 40AC-ENG-008-0S included specific criteria for the establishment of fire watches during repair and maintenance activities whenever combustible materials are stored or moved through the non-sprinklered area of the Intake Structure. This was a special conditional commitment identified in the Hatch Supplemental Safety Evaluation Report dated January 2, 1987, in support of an exemption request approval by the NRC.

b. Fire Protection Surveillance Procedures

The inspectors reviewed the following Fire Protection System Surveillance procedures:

Procedure No.	Title
42SV-FPX-006-0S (Rev. 0)	Fire Damper Surveillance
42SV-FPX-009-2S (Rev. 1)	Inspection and Testing of the Halon 1301 Fire Extinguishing System, Remote Shutdown Panel
42SV-FPX-013-0S (Rev. 1)	Automatic Fire Door Surveillance
42SV-FPX-023-0S (Rev. 1)	Fire Hose, Hydrostatic Test

Based on this review, it appears that various test outlines and inspection instructions adequately implement the surveillance requirements of Appendix B of the plant's Fire Hazards Analysis. In addition, it appears that the inspection and test instructions in the procedures follow general industry fire protection practices, NRC fire protection program guidelines and the guidelines of the National Fire Protection Association (NFPA) Fire Codes.

c. Fire Protection System Surveillance Inspections and Tests

The inspectors reviewed the following surveillance inspection and test records for the dates indicated:

Procedure No.	Dates
42-FPX-009-2S	03/28/87 - 02/10/88
42-SV-L43-001-1S (Fire Doors)	07/19/85, 08/16/85, 08/26/85, 09/14/85, 09/23/85, 12/16/85, 02/26/86

The surveillance test record data associated with the above fire protection system surveillance test/inspections were found to be satisfactory with regard to meeting the requirements of Appendix B of

the plant's Fire Hazards Analysis. In addition, the inspectors reviewed the surveillance results associated with procedure F2SV-FPX-009-2S to ensure the 62 day surveillance of the Unit 2 remote shutdown panel halon suppression system was conducted within the required interval. This onsite review identified that the required documentation was not available in Document Control, to indicate the performance of the required surveillance between 03/28/77 and 07/17/87 tests and between 08/19/87 and 11/20/87 tests. This interval exceeds the maximum interval of 62 days plus 25% of the interval or 77.5 days.

During a subsequent telephone conversation on June 28, 1988, the licensee stated that the documentation package for the surveillance performed on May 13, 1987, had not been transmitted to Document Control but was found in the possession of the Engineering Fire Protection Group. The licensee also stated that their review indicated no evidence that the required surveillance was performed between 08/19/87 and 11/20/87. Failure to perform this surveillance and failure to transmit the May 13, 1987 surveillance package to Document Control is identified as Violation Item 50-366/88-21-01, Failure to Conduct and Document Required Surveillance of the Remote Shutdown Panel Halon System.

d. Fire Brigade

(1) The total station fire brigade is composed of approximately 73 members from the operations staff. The on duty shift fire brigade leader is normally one of the shift supervisors and the remaining four fire brigade members are composed of plant equipment operators. The inspectors reviewed the on duty shifts for the following dates and verified that sufficient qualified fire brigade personnel were on duty to meet the provisions of the plant's Technical Specifications:

06/18/88
06/19/88
06/20/88
06/21/88
06/22/88

In addition, the inspectors verified that sufficient personnel were assigned to each shift to meet the minimum operating and fire brigade staff requirements of the Technical Specifications.

The licensee has recently initiated an informal shift roster which is used to designate the personnel assigned to the fire brigade and to the minimum shutdown crew. In reviewing these rosters for the day shifts on 06/18/88, 06/19/88, and 06/20/88, the inspectors found that two individuals who were not fire brigade qualified had signed in on the roster as fire brigade members. These two individuals are Auxiliary Plant

Operators (APOs). APOs are not presently trained for fire brigade duty. Further review of the rosters for the dates above, identified that additional fire brigade qualified personnel had also signed in on the roster and that a five man brigade was available exclusive of the unqualified APOs. In addition, the inspectors found that there is no method of verifying that only trained individuals sign in as fire brigade members. At the beginning of each shift, the fire brigade and minimum shutdown crew members sign in on the roster maintained by the shift supervisor; however, the shift supervisor does not have a list of qualified brigade members to compare with the roster to ensure only qualified personnel are assigned to the brigade.

For the dates reviewed by the inspectors, the assignment of unqualified personnel to the brigade is not considered a violation of plant Technical Specifications since additional qualified personnel were assigned brigade duty to meet the five man minimum. However, the lack of a method of positive verification that only qualified personnel are assigned brigade duty is considered a weakness in the implementation of the Fire Protection Program. This weakness had been previously identified as part of Unresolved Item 50-321,366/88-15-02 in Inspection Report No. 88-15. Based on the inspectors' review of this unresolved item, it was determined that the licensee was taking adequate corrective action to eliminate all weaknesses identified in the item except in the area of controlling fire brigade assignments. Since none of the weaknesses identified in the Unresolved Item constitute a violation of the licensee's Technical Specifications or Fire Protection License Condition, the Unresolved Item 88-15-02 will be closed in this report and a new Inspector Followup Item, 50-321,366/88-21-02, Failure to Provide Control of Assignment of Fire Brigade Members, is identified here to track the weakness in assigning personnel to the fire brigade.

Based on the review of the duty rosters associated with the above dates, there was sufficient manpower on duty to meet both the operational and the fire brigade requirements of the plant's Technical Specifications.

(2) Training

The inspectors attended a one hour session of the initial 40 hour fire brigade training dealing with the use of firefighting foams on flammable/combustible liquids fires and a two hour session for fire brigade leaders in which fire ground command and management were discussed.

The session on the uses of fire fighting foams included a video tape and a classroom discussion of plant specific foam use. The

session was well organized and provided adequate information on the use of fire fighting foams at Plant Hatch.

The training session for fire brigade leaders is the licensee's initial implementation of a new fire brigade leadership training program. The program was developed in response to an internal QA audit finding which identified a weakness in the area of fire brigade training program. The training program is set up to be conducted quarterly and will include the following material covered over a two year period:

- Critical Factor Analysis
- Fire Fighting Systems Model
- Time Constraints
- Fire Incident Command
- Tactics for Fire Control
- General Tactical Principles
- Special Hazards Tactics

The training in the two hour session, in which fire ground command and management were discussed, provided a good background in the subject areas; however, the training lacked plant specific information necessary for an effective leadership training program for Plant Hatch. The fire brigade leader performance during the fire drill witnessed during this inspection and during a previous inspection indicated that adequate training was not being conducted for brigade leaders. Therefore, an Inspector Followup Item, 50-321,366/88-21-03, Followup on the Implementation of Fire Brigade Leadership Training, is identified to ensure the implementation of this training is reviewed in future inspections.

(3) Fire Brigade Firefighting Strategies

The inspectors reviewed the following plant firefighting strategies:

Pre-Plan No.	Description
SR-2407	Diesel Generator Room 2C
SR-2404	Diesel Generator Switchgear Room 2E
SR-2402	Diesel Generator Battery Room 2A
SR-2401	Diesel Generator Oil Storage Room 2A
SR-2203F	Unit 2 Reactor Building North CRD Area
SR-2205F	Unit 2 Reactor Building South CRD Area
SR-0501-IS	River Intake Structure

Based on this review, the inspectors determined that the above firefighting strategies adequately addressed the fire hazards in the area, the type of fire extinguishants to be utilized, the

direction of attack, systems in the room/area to be managed in order to reduce fire damage, heat sensitive equipment in the room/area, and specific fire brigade duties with regard to smoke control and salvage.

(4) Fire Brigade Drill

During this inspection, the inspectors witnessed an unannounced fire brigade drill. The drill fire scenario was a fire in a temporary tent setup on the 130' elevation of the Unit 2 Reactor Building.

Ten fire brigade members responded to the pending fire emergency in full protective clothing and self contained breathing apparatus. The fire brigade advanced two 1-1/2 inch fire attack hose lines into the area. The hose lines were placed in service on the fire and the tent fire was placed under control in approximately 40 minutes.

Fire brigade performance was identified as steadily deteriorating in Inspection Report No. 87-30, Inspector Followup Item 50-321,366/87-30-04. This trend appeared to have improved only minimally in the drill witnessed. The following weaknesses identified in Inspection Report No. 87-30 still exist:

- The brigade leader failed to establish a command post with adequate communication.
- The brigade leader did not perform a proper sizeup of the fire situation prior to initiating firefighting activities.
- Health Physics personnel did not promptly respond to assist the fire brigade.

The primary problem identified was the lack of leadership provided by the fire brigade leader in the drill. The licensee has recently initiated a leadership training program for all fire brigade leaders. The inspectors feel the successful implementation of such a training program will eliminate the deficiencies identified during the two drills previously witnessed. The Inspector Followup Item 50-321,366/87-30-04 will remain open pending the NRC witnessing a satisfactory fire brigade drill.

e. Review of Appendix R Nonconformances

Through discussions with plant personnel, the inspectors found that the licensee had recently identified a number of nonconformances from the requirements of 10 CFR 50 Appendix R for the protection of

circuits required for plant shutdown. These nonconformances were identified through the licensee's review of a number of backlogged Unit 1 As-Built Notices (ABNs) associated with the Analog Transmitter Trip System (ATTS) design change which was completed in the Spring of 1986. The nonconformances are identified in a letter dated June 10, 1988 (Log No. REA-8-6-809) from William F. Garner of Southern Company Services to D. R. Madison of Georgia Power Company. Included in this letter are recommended actions for eliminating the nonconformances which include the revision of plant Emergency Operating Procedures (EOPs) to include additional operator actions or the installation of fire rated barriers to protect electrical cable.

The inspectors reviewed each of the nonconformances with the site Fire Protection Engineering Supervisor and the Appendix R Project Manager from Southern Company Services. This review established that the licensee had evaluated each of the nonconformances for its effect on the ability to reach and maintain Unit 1 plant shutdown. The licensee's representatives stated that in all cases the consequences of a fire damaging the unprotected circuits could have been mitigated by:

- Corrective actions which would have been implemented through the plant symptom based EOPs; or

- Availability of redundant systems. For example, a loss of High Pressure Core Injection (HPCI) could have been supplemented by the use of safety relief valves, which are protected, to depressurize to the point where Low Pressure Core Injection (LPCI) could initiate.

Therefore, the existence of these nonconformances would not have prevented Unit 1 from achieving plant shutdown.

The licensee is required by Appendix B of their Fire Hazards Analysis to submit a special report within 30 days to document the failure to provide protection for these circuits. This special report will include the licensee's evaluation of why failing to protect these circuits would not have prevented them for achieving safe plant shutdown. Upon discovery of the nonconformances the licensee implemented roving fire watches in the affected fire areas which will remain in effect until corrective actions have been implemented.

f. Plant Tour and Inspection of Fire Protection Equipment

(1) Permanent Plant Fire Protection Features

The inspectors conducted a tour of the Diesel Generator Building and Cable Spreading Room. The fire/smoke detection systems, manual fire fighting equipment (i.e., portable extinguishers, hose stations, etc.) and the fire area boundary walls, floors

and ceiling were inspected and found to be in service or functional.

The CO2 system installed in each of the Diesel Generator Rooms and the Pre-Action sprinkler system protection in the Cable Spreading Room were inspected and found to be in service.

The tours of these areas also verified the licensee's implementation of the fire prevention administrative procedures. The control of combustibles and flammable materials, liquids and gases, and the general housekeeping were found to be satisfactory.

(2) Appendix R Fire Protection Features

The inspectors visually inspected the fire rated raceway barrier on conduit 2E21601 in Fire Area 0014. This fire barrier was found intact and it appeared that the one hour fire barrier integrity has been maintained. In addition, the inspectors visually inspected the three-hour rated raceway fire barriers applied to the conduit/raceway bank located in Fire Area 1412 (Diesel Generator Switchgear Room 1E) which contained the following safe shutdown circuits:

ESA-4	ESA-26
ESA-6	ESA-28
ESA-8	ESA-84
ESA-10	ESA-86
ESA-12	ESA-90
ESA-14	ESA-91

This fire barrier was found intact and it appeared that the three hour barrier integrity was maintained.

The following eight-hour emergency lighting units were inspected:

1R42-E041	1A Diesel Generator Room
1R42-E066	1A Diesel Generator Room
1R42-E068	1A Diesel Generator Room
1R42-E109	1A Diesel Generator Room
2R42-E038	2A Diesel Generator Room
2R42-E045	2A Diesel Generator Room

These units were in service, lamps properly aligned and appeared to be properly maintained.

g. Response to NRC Information Notice 88-04

On Feburary 5, 1988, the NRC issued Information Notice 88-04, Inadequate Qualification and Documentation of Fire Barrier Penetration Seals. The purpose of the notice was to make licensees aware that some installed fire barrier penetration seal designs may not be adequately qualified for the design rating of the penetrated fire barriers. The licensee's proposed response to the Notice was reviewed during this inspection.

The licensee has completed a preliminary evaluation of the concerns outlined in the Information Notice and has proposed the following action to evaluate these concerns as they apply to Plant Hatch.

- Evaluate Plant Hatch's test qualification documentation with respect to adequacy and completeness. This evaluation will also consider the method of installation or repair used for the fire barrier penetration seals.

- Cross reference the test qualification documentation to each specific fire barrier penetration seal (or repairs to that specific seal).

- Offer resolutions to any problems encountered.

The licensee has a preliminary completion date of March 1989 for the cross referencing process. If the licensee implements the proposed plan of action described above, the concerns outlined in Information Notice 88-04 should be adequately evaluated.

In addition, the inspectors attempted to verify that the following four penetration seals located in the cable spreading room could be tracked to specific test data which demonstrated the seal was a qualified three hour fire barrier:

H033F
H034F
H068F
H072F

However, the lack of a cross reference between the seal and test data made the task very cumbersome and the inspectors were unable to verify the seals were installed in a tested configuration. The inspectors noted during this review that at least one of the seals, H033F, had been modified from the original design detail.

The licensee's implementation of their action plan in response to the Information Notice will be followed up in a future inspection.

3. Action on Previous Inspection Findings

a. (Closed) IFI 321,366/86-27-02, Proposed Firefighting Strategies/ Preplans Lack Fire Brigade Guidance. The inspectors reviewed the plant Preplans (Revision 1) dated April 23, 1987, for the Diesel Generator Building and Reactor Buildings. This review determined that Revision 1 preplans adequately gives the locations of portable extinguishers for brigade use, addresses management of plant systems with references to appropriate EOPs and Abnormal Operating Procedures (AOPs) located in the control room, gives locations of telephones and communications systems, and provides guidelines for fire attack access and command post locations. These revised preplans appear adequate to meet NRC guidelines; therefore, this item is closed.

b. (Closed) Violation 321,366/87-30-02, Failure to Implement Fire Protection Program Procedures for Documentation of Fire Protection Activities. This violation involved two examples of the licensee's failure to document fire protection activities in accordance with plant procedures.

- Example 1 resulted from the failure of the licensee's staff assigned to critique plant fire drills to complete the required records to document the drill as satisfactory or unsatisfactory.

  The licensee's corrective action included the revision of the plant procedure, 42FP-FPX-005-0S (Rev. 0), for performing plant fire drills to include the requirement that drill evaluation be completed and transmitted to Document Control within 30 days. The inspectors verified that all drill critiques sent to Document Control for the fourth quarter of 1987 were complete.

- Example 2 resulted from the licensee's failure to implement the requirements of Administrative Control Procedure 20AC-ADM-002-0S to perform a quarterly records check.

  The licensee's corrective action in response to this example was to revise the administrative procedure to eliminate the requirement for a quarterly records check since this requirement was impractical. The licensee is relying on the responsible organization to insure the required records are transmitted to Document Control. The inspectors verified that Revision 3 of 20AC-ADM-002-0S no longer requires Document Control to perform a quarterly records check.

c. (Closed) Violation 321,366/87-30-03, Failure to Repeat Unsatisfactory Fire Brigade Drills Within Required Time Period. Drill critiques for two drills in 1986 and two in 1987 indicated that drill performance was unsatisfactory; however, a redrill was not conducted within 30 days in accordance with plant procedures.

The licensee's corrective action in response to this violation was to conduct six drills in November and December. Five of these drills were conducted to meet the requirement for each shift to participate in an unannounced drill at least once per year. One of the drills was a redrill of an unsatisfactory drill. All drills were considered satisfactory by personnel assigned to critique the brigade performance. The inspectors verified that all six drill critiques had been transmitted to Document Control and the redrill had been conducted within the 30 day time limit.

d. (Open) IFI 321,366/87-30-04, Additional Fire Brigade Training and Drills Required. During the 87-30 inspection, a fire brigade drill was witnessed which was unsatisfactory. During this inspection, another brigade drill was witnessed which showed only minimal improvement in brigade performance. The major deficiency noted during this inspection resulted from the lack of leadership by the fire brigade leaders. The licensee has recently initiated a training program for brigade leaders which should eliminate these deficiencies.

This item will remain open pending the NRC witnessing a fire brigade drill which eliminates the concerns outlined in report 87-30 and this report.

e. (Closed) IFI 321,366/87-30-05, Justification for CO2 Extinguisher Mountings in the Control Room. The CO2 extinguishers provided in the control room were mounted on shelves and not secured to prevent falling. The inspectors were concerned that if the CO2 extinguisher was knocked or fell from the shelf it may become a missile in the control room since they are high pressure cylinders.

The licensee corrected this problem by removing the CO2 fire extinguishers from the control room and replacing them with halon type. The halon fire extinguishers were permanently mounted with fire extinguisher brackets designed for mounting extinguishers on vehicles. These brackets will ensure the extinguishers cannot be knocked or fall from the shelves.

f. (Closed) Unresolved Item 321,366/88-15-02, Apparent Failure to Complete Required Periodic Fire Brigade Leadership Training. During the Hatch Operational Team Assessment, this item was identified to denote weaknesses in the licensee's methods used to control the roster of qualified fire brigade leaders and members and imprecise administrative instructions controlling fire brigade training.

During this inspection, it was determined that the licensee was taking adequate corrective action to eliminate all weaknesses identified in the item except in the area of controlling fire brigade assignments. Since none of the weaknesses identified in the unresolved item constitute a violation of the licensee's Technical Specifications or Fire Protection License Condition, this Unresolved Item is closed. A

new inspector followup item is identified in paragraph 2.d of this report.

4. Exit Interview

The inspection scope and results were summarized on June 24, 1988, with those persons indicated in paragraph 1. The inspectors described the areas inspected and discussed in detail the inspection results listed below. Proprietary information is not contained in this report. Dissenting comments were not received from the licensee.

Item Number	Description and Reference
366/88-21-01	Violation - Failure to Conduct and Document Required Surveillance of the Remote Shutdown Panel Halon Suppression System
321,366/88-21-02	Inspector Followup Item (IFI) - Failure to Provide Control of Assignment of Fire Brigade Members
321,366/88-21-03	Inspector Followup Item (IFI) - Followup on the Implementation of Fire Brigade Leadership Training