

Georgia Power Company  
333 Piedmont Avenue  
Atlanta, Georgia 30308  
Telephone 404 526 5195

Mailing Address:  
40 Inverness Center Parkway  
Post Office Box 1286  
Birmingham, Alabama 35201  
Telephone 205 866-5561

W. G. Hairston, III  
Senior Vice President  
Nuclear Operations

*The subject plant is system*

HL-1649  
001660

May 21, 1991

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

PLANT HATCH - UNIT 2  
NRC DOCKET 50-366  
OPERATING LICENSE NPF-5  
SPECIAL REPORT 2-91-002  
FIRE BARRIER ASSEMBLIES INOPERABLE  
FOR A PERIOD LONGER THAN 14 DAYS

Gentlemen:

In accordance with Plant Hatch Unit 2 Technical Specifications section 6.9.2 and Appendix B of the Fire Hazards Analysis, Georgia Power Company is submitting the enclosed Special Report concerning fire barrier assemblies which were inoperable for a period greater than 14 days.

Sincerely,

*W. G. Hairston, III*  
W. G. Hairston, III

OCV/cr

Enclosure: Special Report 2-91-002

cc: Georgia Power Company  
Mr. H. L. Sumner, General Manager - Nuclear Plant  
Mr. J. D. Heidt, Manager Engineering and Licensing - Hatch  
NORMS

U.S. Nuclear Regulatory Commission, Washington, D.C.  
Mr. K. Jabbour, Licensing Project Manager - Hatch

U.S. Nuclear Regulatory Commission, Region II  
Mr. S. D. Ebnetter, Regional Administrator  
Mr. L. D. Wert, Senior Resident Inspector - Hatch

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ENCLOSURE

PLANT HATCH - UNIT 2  
NRC DOCKET 50-366  
OPERATING LICENSE NPF-5  
SPECIAL REPORT 2-91-002  
FIRE BARRIER ASSEMBLIES INOPERABLE FOR LONGER  
THAN 14 DAYS RESULTS IN SPECIAL REPORT  
AS REQUIRED BY THE FIRE HAZARDS ANALYSIS

A. REQUIREMENT FOR REPORT

This report is required by Unit 2 Technical Specifications Section 6.9.2 which states that special reports shall be submitted as required by the Fire Hazards Analysis (FHA) and its Appendix B requirements.

The FHA, Appendix B, section 1.1.1, states that fire rated assemblies and sealing devices in fire rated assemblies separating fire areas shall be operable. Action statement b. of FHA Appendix B, Section 1.1.1, allows for the fire rated assembly(ies) or sealing device(s) to be inoperable for up to 14 days. If this time is exceeded, a special report is required. The subject deficiencies were corrected within 14 days of identification. However, two of the deficiencies remained unidentified for approximately a 15-month period and a third deficient condition existed for an indeterminate amount of time; hence, a report is required.

B. UNIT STATUS AT TIME OF EVENT

On 4/20/91, at approximately 1605 CDT, Unit 2 was in a refueling outage with the fuel unloaded from the vessel.

C. DESCRIPTION OF EVENT

On 4/20/91, non-licensed personnel were performing an inspection of fire rated assemblies in accordance with procedure 42SV-FPX-018-2S, "Fire Barrier 18 Month Surveillance." The procedure implements surveillance requirement 2.1.1.a of Appendix B of the FHA which requires an inspection of the exposed surfaces of fire rated assemblies on an 18-month frequency. At approximately 1605 CDT, on 4/20/91, while performing the surveillance, non-licensed personnel discovered a hole approximately 2 inches in depth and 3 inches in diameter in a three-hour, fire-rated boundary wall for fire area C2009. Also, at approximately 1615 CDT, non-licensed personnel discovered that the sealing device for conduit penetration 2Z43-H027C was not installed. The conduit penetration is located in the

ENCLOSURE (Continued)

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three-hour, fire-rated, west boundary wall of fire area C2006 and, thus, should contain a sealing device with a three-hour fire rating. Deficiency Cards (DCs) 2-91-1661 and 2-91-1662 were written to document these conditions and licensed personnel were notified. Subsequently, an hourly fire watch was established for the affected fire areas in accordance with FHA, Appendix B, Section 1.1.1, Action a.

On 4/24/91, investigation into the cause of the deficiencies showed that penetration 2243-H027C had apparently been in an unsealed condition since February of 1990. Specifically, the penetration had not been sealed following the routing of conduit 2MB1839 through the penetration in February of 1990 in association with the implementation of Design Change Request (DCR) 86-356. This DCR installed new station service air compressors and routed new power supply cables through the affected penetration. Since the penetration had apparently been inoperable for greater than 14 days, it was determined, on 4/24/91, that the event was reportable in accordance with FHA Appendix B, Section 1.1.1. The time period in which the hole was partially drilled in the fire rated boundary wall of fire area C2009 could not be determined from the investigation.

In addition, while investigating for the cause of the two deficiencies already mentioned, at approximately 1330 CDT, on 5/7/91, non-licensed Nuclear Safety and Compliance personnel identified a second unsealed conduit penetration in a three-hour fire-rated wall. This penetration (2243-H660C) is located in the east boundary wall of fire area C2006. This penetration was also apparently left unsealed following the routing of conduit 2MB1839 in February of 1990. A walkdown of conduit 2MB1839 was subsequently performed and no other unsealed penetrations were found in fire rated assemblies along its routing. Upon discovery of this second unsealed penetration, DC 2-91-2070 was written to document the condition and licensed personnel were notified. In accordance with FHA, Appendix B, Section 1.1.1, Action a., an hourly fire watch was established for those affected areas.

ENCLOSURE (Continued)

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D. CAUSE OF EVENT

The cause of penetrations 2Z43-H027C and 2Z43-H660C not being sealed is personnel error. Specifically, the individual responsible for ensuring that penetrations were sealed following the routing of conduit 2MB1839 documented on a conduit installation data sheet that all such penetrations had been sealed in accordance with plant procedures. Penetrations 2Z43-H027C and 2Z43-H660C, which were breached during the routing of conduit 2MB1839, were found to be unsealed on 4/20/91 and 5/7/91, respectively. No other documented maintenance activity has been performed on the two subject penetrations since February of 1990. Thus, it was concluded that the individual responsible for ensuring that the penetrations associated with conduit 2MB1839 were sealed overlooked penetrations 2Z43-H027C and 2Z43-H660C in his review. This is an isolated event. Administrative controls are adequate to preclude further instances in which conduit penetrations in fire barrier assemblies are left unsealed as a result of DCR work activities.

The cause of the partially drilled hole in the boundary wall of fire area C2009 is unknown. A review of maintenance history was performed and no work was identified which could have resulted in the partially drilled hole.

E. ANALYSIS OF EVENT

In this event, three fire barrier assemblies were found to be degraded. The three-hour, fire rated wall separating fire areas C2006 and 0007A had an unsealed penetration (2Z43-H027C); the three-hour, fire rated wall separating fire areas C2005 and C2006 had an unsealed penetration (2Z43-H660C); and, the three-hour, fire rated wall separating fire areas C2009 and C0001 had a hole approximately three inches in diameter drilled approximately two inches into it. Upon discovery of the conditions, an hourly fire watch was established for the affected fire areas in accordance with FHA Appendix B, Section 1.1.1.

Each of the fire areas affected by this event contains a relatively low combustible loading. The three affected fire walls are each 12 inches thick and the largest breach in any of these walls was



ENCLOSURE (Continued)

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approximately .12 square feet. Consequently, it is concluded that the probability of a fire propagating from one fire area to another is minimal.

Each of the fire areas affected by this event, with the exception of fire area C2006, is equipped with fire detector systems which provide annunciation in the Main Control Room upon detection of a fire. Consequently, in the unlikely event of a fire in one of these areas, it would be promptly detected and subsequently extinguished by a trained fire brigade. In the unlikely event of a fire in area C2006, its postulated duration would be only approximately 0.18 hours based on the combustible loading present. Because of this, and because the breaches in the wall are small, such a fire has a low probability of propagating to an adjacent fire area. Additionally, based on the plant's Safe Shutdown Analysis Report, a design basis fire occurring in any one of the zones affected by this event would not affect the ability to safely shutdown the plant.

Based on the above information, it is concluded that this event had no adverse affect on nuclear safety.

F. CORRECTIVE ACTIONS

1. Penetration 2Z43-H660C was sealed under MWO 2-91-2243. The work was completed on 5/10/91.
2. Penetration 2Z43-H027C was sealed under MWO 2-91-1852. The work was completed on 5/2/91.
3. The partially drilled hole found in a fire rated boundary wall of fire area C2009 was repaired under MWO 2-91-1854. The work was completed on 5/3/91.
4. The individual responsible for ensuring that penetrations 2Z43-H027C and 2Z43-H660C were sealed following the installation of conduit 2MB1839 was a contract person and is no longer employed at Plant Hatch. Consequently, the individual cannot be counseled.