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Docket Nos. 50-321  
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U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

EDWIN I. HATCH NUCLEAR PLANT  
SPECIAL REPORT 1-93-001  
MISSED SURVEILLANCE ON FIRE PUMP DIESEL ENGINES

Gentlemen:

In accordance with the requirements of the Unit 1 and Unit 2 Technical Specifications and Fire Hazards Analysis, Georgia Power Company is submitting the enclosed Special Report (SR) concerning a Missed Surveillance on the Fire Pump Diesel Engines.

Sincerely,

J. T. Beckham, Jr.

JKB/sc  
5076

Enclosure: Special Report 1-93-001

cc: Georgia Power Company  
Mr. H. L. Sumner, General Manager - Nuclear Plant  
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. Ebner, Regional Administrator  
Mr. L. D. Wert, Senior Resident Inspector - Hatch

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ENCLOSURE  
PLANT HATCH - UNIT 1  
NRC DOCKET 50-321  
OPERATING LICENSE NPF-5  
SPECIAL REPORT 1-93-001  
MISSED SURVEILLANCE ON FIRE PUMP DIESEL ENGINES

A. REQUIREMENT FOR REPORT

This report is required by the Unit 1 and Unit 2 Technical Specifications Section 6.9.2 which states, "Special Reports for fire protection equipment operating and surveillance requirements shall be submitted, as required, by the Fire Hazards Analysis and its Appendix B requirements."

The Fire Hazards Analysis (FHA) Appendix B, Section 2.3.2.c. states, "Each fire pump diesel engine shall be demonstrated OPERABLE at least once per 18 months, during shutdown, by verifying the diesel starts from ambient conditions, via the auto-start signal, and operates for greater than or equal to 60 minutes while loaded with the fire pump." The ACTION statement associated with this requirement states, "With one pump and/or one water supply inoperable or with the required surveillance interval (including grace period) exceeded, restore the inoperable equipment to OPERABLE status within 14 days or prepare and submit a Special Report to the Commission within the next 30 days per Technical Specification 6.9.2." In this event, it was found that the surveillance had not been performed as required and that the surveillance interval plus grace period had been exceeded. Therefore, this Special Report is required.

B. UNIT STATUS AT TIME OF EVENT

At the time of discovery of this event on 2/24/93, both units were in the Run mode at power levels of 2436 CMWT each (100 percent rated thermal power). At the time the surveillance interval plus grace period lapsed on 1/13/93, both units were in the Run mode at rated thermal power.

## ENCLOSURE (CONTINUED)

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#### C. DESCRIPTION OF EVENT

On 2/24/93 at 0735 CST, personnel from the fire protection engineering section notified the Unit 1 licensed Shift Supervisor that a surveillance had been missed on both diesel engine driven fire pumps. The surveillance is required by the FHA Appendix B, Section 2.3.2.c and is required to be performed at least once per 18 months. The missed surveillance was discovered by Nuclear Safety and Compliance department personnel as part of a quality check on the completeness and accuracy of the Commitment Tracking Database. During this activity, it was discovered that the procedure listed as the implementing document for the 18-month fire pump run test had been canceled and was no longer in effect. A subsequent search of the Commitment Tracking Database and various fire protection procedures by fire protection engineering personnel confirmed that no procedure currently implemented the run test requirement. However, the procedure implementing the weekly run test, which is identical to the 18 month run test except for the duration of the run, was confirmed to be effective. A further check of data packages and surveillance records indicated that at least two years had elapsed since the last run 18 month test surveillance had been performed on both diesel engine driven fire pumps. Therefore, a Deficiency Card was initiated in accordance with plant administrative control procedures, and both diesel engine driven fire pumps were declared inoperable at 0735 CST on 2/24/93.

The affected pumps were successfully tested by performing a run test per the requirements of the FHA, Appendix B, Section 2.3.2.c. This requirement was satisfied by using procedure 42SV-FPX-004-0S, "FIRE PUMP TEST," and running the pumps for a full hour. This procedure is normally used to satisfy the requirement for the weekly test of the fire pumps per FHA Appendix B Section 2.3.1.b. The only difference between the weekly requirement and the 18-month requirement is the minimum amount of time the pumps are required to operate. In the weekly test the pumps must operate for at least 30 minutes, whereas in the 18-month test the pumps must operate for at least one hour. No problems were observed during this testing and the fire pumps were declared operable at 2010 CST on 2/25/93. The electric fire pump was not affected by this event.

#### D. CAUSE OF EVENT

The cause of this event was personnel error that occurred during the origination and subsequent revision of surveillance procedures 52SV-X43-001-1S, "DIESEL-DRIVEN FIRE PUMP INSPECTION AND LUBRICATION," and 52SV-X43-002-1S, "DIESEL-DRIVEN FIRE PUMP INSPECTION." Both procedures were originated by the same person on the same day in 1986, and both of the procedures included the requirement to subject the

ENCLOSURE (CONTINUED)

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MISSED SURVEILLANCE ON FIRE PUMP DIESEL ENGINES

diesel engine driven fire pumps to a periodic, 60 minute run test which met the requirements of the FHA Appendix B Section 2.3.2.c.

Normally, procedures satisfying a surveillance requirement contain an objective statement which lists the requirements the procedure is intended to address. In this case, both procedures listed in their respective objective statements the surveillance requirement found in FHA Appendix B Section 2.3.2.d, which involves an inspection of the Diesel Fire Pumps. However, neither procedure listed the run test requirement found in FHA Appendix B Section 2.3.2.c, even though both procedures contained instructions for performing the run test.

In January 1990, the manufacturer of the fire pumps' diesel engines issued updated recommendations which resulted in the two subject procedures being revised. During the revision process, maintenance personnel noted the overlap in the two procedures and suggested that they be combined into a single, unified procedure. This was done by canceling one procedure and incorporating all applicable requirements into the second. In preparing the new procedure, the writer used the objective statements of both procedures to identify the requirements which were to be satisfied by the new, unified procedure. However, as the run test requirement was not specified in the objective section of either procedure, the writer did not realize that it should have been included in the new, unified procedure. Consequently, the run test requirement was not included.

A personnel error occurred on the part of the originator of the two overlapping procedures. The objective statement should have noted all the FHA requirements that were to be satisfied by each procedure. The individual who made this error is no longer employed at Plant Hatch.

A personnel error occurred on the part of the writer of the new, unified procedure in that an adequate review of the Commitment Tracking Database was not performed to ensure that all requirements addressed by the canceled procedure were incorporated into the new, unified procedure.

E. ANALYSIS OF EVENT

Fire protection equipment at Plant Hatch consists of fire-rated sealing assemblies, emergency lights, various smoke, heat and flame detectors, and fire suppression systems. The fire suppression systems include portable fire extinguishers, halon systems, carbon dioxide systems, and water-based systems which include manually operated hose stations, automatic sprinklers and deluge systems. The prime movers for the water-based fire suppression systems are an electric fire pump and two diesel engine driven fire pumps. The FHA requires that at least two of

## ENCLOSURE (CONTINUED)

### SPECIAL REPORT 1-93-001 MISSED SURVEILLANCE ON FIRE PUMP DIESEL ENGINES

these three fire pumps remain operable at all times. Operability of the diesel engine driven fire pumps is verified, in part, by two run tests: an 18-month run test which lasts 60 minutes, and a weekly run test which lasts 30 minutes. In this event, the 60-minute run test was permitted to lapse on both diesel engine driven fire pumps. The weekly, 30-minute run test was not affected by this event, and the tests have been performed as required. This 30 minute test is identical in every respect to the 18 month, 60 minute test except for the duration of the run. Therefore, if a problem had existed which would have prevented the diesel engine driven fire pumps from fulfilling their design function, it would have been identified during a weekly test. Additionally, both diesel engine driven fire pumps successfully completed the run test when it was performed on 2/25/93. Thus it is reasonable to conclude that, should the diesel engine driven fire pumps have received a valid demand signal, they would have started and performed as required.

Based on this analysis, it is concluded that this event had no adverse impact on nuclear safety.

#### F. CORRECTIVE ACTIONS

Corrective actions for this event include:

1. Performing a 60 minute run test and restoring both diesel engine driven fire pumps to operable status. This action was performed per surveillance procedure 42SV-FPX-004-OS, "FIRE PUMP TEST," and has been satisfactorily completed.
2. Revising the weekly, run test procedure mentioned in Corrective Action 1 to require a run time of 60 minutes or more. This will result in an enhancement to the weekly surveillance and will result in the weekly surveillance satisfying the 18 month surveillance requirement. This action will be completed by 7/31/93.
3. Counseling the writer of the revised, unified procedure on the need to ensure all licensing commitments are satisfied when procedures are changed or canceled. This action has been completed.