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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 89-003
SMOKE DETECTORS LEFT INOPERABLE WITHOUT COMPENSATORY MEASURES BEING TAKEN AS REQUIRED BY FIRE HAZARDS ANALYSIS APPENDIX B

Gentlemen:

In accordance with the requirements of the Plant Hatch Unit 2 Technical Specifications Section 6.9.2, and the Fire Hazards Analysis (FHA) Appendix B, Georgia Power Company is submitting the enclosed Special Report (SR) concerning three events where fire detection devices were rendered inoperable and appropriate compensatory measures were not taken within one hour. These events occurred at Plant Hatch - Unit 2.

Sincerely,

W. G. Hairston, III

SR/ct

Enclosure: SR 50-366/1989-003

c: (See next page.)

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c: Georgia Power Company
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ENCLOSURE

PLANT HATCH - UNIT 2
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A. REQUIREMENT FOR REPORT

This report is required by the Unit 2 Technical Specifications section 6.9.2. These sections of the Technical Specifications state that Special Reports for fire protection equipment operating and surveillance requirements shall be submitted, as required, by the Fire Hazards Analysis (FHA) and its Appendix B requirements.

Appendix B, section 1.2.1 of the FHA states that fire detection instrumentation must be operable whenever the equipment in the respective area is required to be operable. Action Statement "a" states that in the event a fire detection device is inoperable, compensatory measures must be taken within one hour. The FHA states that a special report is required when the FHA required actions are not met. In the event described in this report, smoke detectors were inoperable for greater than one hour with no hourly roving fire watch established as required by the FHA.

B. UNIT(S) STATUS AT TIME OF EVENTS

On 05/09/89, Units 1 and 2 were in the run mode at approximate power level of 2435 MWt and 2350 MWt, respectively.

C. DESCRIPTION OF EVENT

This report describes an event in which fire detection devices were inoperable due to their being in an alarmed condition and not being reset at a slave panel. The hourly roving fire watch as required by FHA Appendix B was not established.

The event took place on 05/09/89 at 2115 CDT when photocell smoke detectors 2X43-N409AL and 2X43-N409AF activated during surveillance testing of the 1A D/G, signaling alarm conditions in the 2A and 2C diesel generator battery rooms. Plant operators silenced the audible alarm in the control room, and then acknowledged the alarms at the slave panel at 2137 CDT. Acknowledging an alarm condition silences the audible alarm at the slave panel, but does not reset the detection device. As long as the detection device remains in the "acknowledged" status it is incapable of further alarm function, and is therefore inoperable. The two smoke detectors were reset at 0747 CDT on 05/10/89, an elapsed time of 10 hours, 32 minutes.

At the time the alarms were received,the 1A diesel generator was being run for surveillance testing. The shift supervisor dispatched Operations personnel to the 2A and 2C battery rooms and confirmed no fire was present. It is believed that exhaust fumes from the 1A D/G entered the adjacent 2A and 2C battery rooms, causing the smoke detectors to activate.

The photocell smoke detectors were not declared inoperable during the event. With the detectors inoperable, the number of operable detectors in the area fell below the minimum number of required detectors. Under these conditions, the FHA Appendix B required an hourly roving fire watch to be established. However, no fire watch was established. The fact that the detectors had been inoperable was discovered later by a management review of fire detection system computer alarm printouts. The date of discovery was 05/12/89, and the deficiency was documented at that time.

D. CAUSE OF EVENT

The root cause of the event is personnel error in that failing to reset the alarm at the slave panel makes the affected detectors inoperable. Specifically, licensed Operations personnel failed to follow, in a timely manner, the appropriate steps of procedure 34SO-Z43-001-0S, Operation of the Multiplex Fire Detection System. This procedure directs the operator to 1) determine which detection device is alarming, 2) check for evidence of fire at the detector location, 3) determine if the required number of detectors is still operable in the affected zone, 4) establish a firewatch if the number of operable detectors is below the minimum, 5) consult the FHA Appendix B, and 6) initiate a tracking Limiting Condition for Operation (LCO) for inoperable devices.

E. ANALYSIS OF EVENT

During this event, fire detection devices were inoperable without an hourly roving firewatch being established as required by the FHA Appendix B. These fire detection devices are located in the diesel generator battery rooms of Unit 2. Any credible event postulated for fire hazard analysis purposes assumes a fire in only one fire zone at a time. Addressing this kind of credible event, the Safe Shutdown Analysis Report states that a design basis fire in any one of the diesel generator battery rooms would not prevent the plant from being shut down and maintained in a safe condition. Even if a loss of off-site power is assumed as part of the event analysis, plant Operations personnel are specifically trained in the emergency procedures that are required in order to shut down the plant under such conditions.

Even though the required firewatch was not established, other measures existed that would have mitigated the consequences of a fire in any one of the battery rooms. The shift supervisor dispatched Operations personnel to the 2A and 2C battery rooms and confirmed no fire was present. With the exception of ventilation openings each of the battery rooms is completely enclosed by fire-rated concrete floor, walls, and ceiling, and is accessed by a single three-hour rated fire door. The door provides the fire barrier between the battery room and the adjacent switchgear room. Each of the adjacent switchgear rooms is equipped with four smoke detection devices. These smoke detectors were operable throughout the events. They annunciate in the main control room, and were therefore capable of giving Operations personnel warning that other detection devices in the affected area were indicating alarm conditions. The local area near the detectors is equipped with portable carbon dioxide fire extinguishers as well as carbon dioxide hose reels for fire suppression.

Because diesel generator monthly surveillances were being executed at the time of the alarms, plant equipment operators were working in the diesel generator building. The plant equipment operators were close enough to the 2A and 2C battery rooms to have noticed unusual conditions or indications of fire. All are trained on the use of fire fighting equipment available in the area.

Based on the foregoing analysis, it is concluded that the event had no adverse impact on nuclear safety. The analysis is applicable to all power levels.

F. CORRECTIVE ACTIONS

The corrective actions for this event will include the following:

1. Counseling the involved licensed personnel.

2. Replacing the smoke detectors in the battery rooms with heat detectors. This will reduce the false alarm rate in this area, and lead to improved operator responsiveness to alarms in the diesel generator buildings. This action has already been completed.

3. Installing a "slave" fire detection system computer terminal in the main control room. This will permit alarms to be reset by operators in the main control room. This action will be completed by the end of the next Unit 2 refueling outage, in approximately December, 1989.