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SUBJECT: Special rept: on 891223, reactor coolant subcooling monitor declared inoperable due to erratic indications.

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R. B. RICHEY  
Manager  
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JAN 15 1990

Letter Number: HO-900010 (0)

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HARRIS NUCLEAR PROJECT UNIT 1  
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NRC 14-DAY SPECIAL REPORT

In accordance with Technical Specifications 3.3.3.6 and 6.9.2 for the Shearon Harris Nuclear Power Plant, Unit No. 1, Carolina Power & Light hereby submits this Special Report. This Special Report concerns the operability of the Reactor Coolant Subcooling Monitor.

Very truly yours,

*CS Hinman for*

R. B. Richey, Manager  
Harris Nuclear Project

RBR:dgr

Enclosure

cc: Mr. R. A. Becker (NRR)  
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## REACTOR COOLANT SUBCOOLING MONITOR SPECIAL REPORT

### Description of Event:

On December 23, 1989 at 0002, the Reactor Coolant Subcooling Monitor was declared inoperable due to erratic indications. This monitor is identified in the Shearon Harris Technical Specifications, Table 3.3-10, Item 11. The compensatory actions allow implementation of the alternative monitoring method, which is a manual calculation of RCS subcooling margin, to permit continued operation of the plant. This compensatory action was in place while the monitor was inoperable.

The monitor was out of service beyond the seven day limit, requiring a special report per Specification 6.9.2.

### Cause/Corrective Actions:

The RCS Subcooling Monitor is a subroutine program of the main plant computer in the Safety Parameter Display System. The plant computer receives inputs from the "A" and "B" safety trains of incore thermocouples via an isolation device, a data isolator board. The computer program then calculates a subcooling margin value base on train "A" and "B" data, providing a single output to the SPDS display.

The data isolator board for the "B" safety train had failed due to normal end of life cause. The failure resulted in erratic high values of several incore thermocouples for the "B" train, causing the plant computer to improperly calculate the subcooling margin value. The failed board was replaced on January 3, 1990, restoring the monitor to operable status.

The repair was delayed due to the plant being in a refueling outage recovery and startup, and due to the holiday season's impact on personnel availability. Normally, equipment inoperabilities which are reportable after a specified time are identified and tracked at daily coordination meetings. This inoperability was not identified, however, until the seven day period had elapsed. The involved departments have been made aware of this situation, which is the first to have occurred in over three years of operation.