Dave Morey Vice President Farley Project Southern Nuclear **Operating Company** P.O. Box 1295 Birmingham, Alabama 35201 Tel 205.992.5131

July 6, 1998



Docket No.: 50-364

10 CFR 50.73

1022

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

> Joseph M. Farley Nuclear Plant - Unit 2 Licensee Event Report No. 98-006-00 **Containment Penetration Overcurrent** Protective Device Energized Due to Inadequate Procedure

Ladies and Gentlemen:

Joseph M. Farley Nuclear Plant - Unit 2 Licensee Event Report No. 98-006-00 is being submitted in accordance with 10 CFR 50.73(a)(2)(i). There are no NRC commitments in the Licensee Event Report.

If you have any questions, please advise.

Respectfully submitted,

By marry Dave Morey

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Enclosure

cc: Mr. L. A. Reyes, Region II Administrator Mr. J. I. Zimmerman, NRR Project Manager Mr. T. M. Ross, Plant Sr. Resident Inspector

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At 0825 on 6/06/98 with Unit 2 in Mode 1, it was determined that Farley Nuclear Plant had operated in a condition prohibited by Technical Specifications (TS). TS 3.8.3.1 requires that certain containment penetration overcurrent protective devices be deenergized in Modes 1, 2, 3 and 4 unless energized under administrative control. During performance of routine monthly surveillance on containment penetration overcurrent protective devices, the 2C reactor coolant pump (RCP) motor space heater breaker FCN4 was found closed, without being administratively controlled, and was promptly opened.

An investigation determined that on 5/15/98, while in Mode 3 (Hot Standby), the 2C RCP motor space heater breaker FCN4 had been closed while clearing a tagging order following maintenance on the 2C RCP. The plant completed startup activities and achieved 100% power on 5/23/98. The cause of the event has been determined to be a procedural error in the Reactor Coolant System operating procedure which specified the normal position of this breaker as "closed." Closed is the correct position only for modes 5 and 6 with the RCP shut down. The computerized tagging order database used to develop the tagging order was derived from the Reactor Coolant System operating procedure. The Reactor Coolant System operating procedure and the computerized tagging database have been changed to specify the correct position of the RCP motor space heater breakers for Modes 1, 2, 3 and 4.

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Plant and System Identification														

Westinghouse -- Pressurized Water Reactor Energy Industry Identification System codes are identified in the text as [XX].

## Description of Event

At 0825 on 6/06/98 with Unit 2 in Mode 1, it was determined that Farley Nuclear Plant had operated in a condition prohibited by Technical Specifications (TS). TS 3.8.3.1 requires that certain containment penetration overcurrent protective devices be deenergized in Modes 1, 2, 3, and 4 unless energized under administrative control. During performance of routine monthly surveillance on containment penetration overcurrent protective devices, 2C Reactor Coolant Pump (RCP) motor space heater breaker [EC] was found closed without being administratively controlled and was promptly opened.

An investigation determined that the Reactor Coolant System [AB] operating procedure specifies the position of the 2C RCP motor space heater breaker FCN4 as closed. This procedure is required to be completed prior to startup of RCPs while in Mode 5.

On 5/7/98 at 1414, in accordance with the Containment Penetration Protective Devices Test surveillance test procedure, the breaker that supplies the 2C RCP motor space heater breaker was verified to be open prior to mode 4 entry. Subsequent to entry into mode 4, the 2C RCP was removed from service and tagged out for minor maintenance on 5/14/98 at 1906. The 2C RCP motor space heater breaker was tagged open in accordance with the tagging order.

Tagging orders are normally prepared using a computerized database, which references position information from the System Operating Procedures (SOPs). For breaker FCN4, the referenced procedure is the Reactor Coolant System SOP. The foreman preparing the return to service portion of the tagging order specified that the breaker be closed, as required by procedure. The breaker was closed at approximately 0114 on 5/15/98, when the tagging order was cleared, and the RCP was returned to service on 0152 on 5/15/98.

Unit 2 startup activities continued and the plant was returned to 100% power on 5/23/98. During the time the breaker was closed, the allowable times in the applicable TS 3.8.3.1 action statement had been exceeded and several mode changes had taken place.

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## Cause of Event

This error is attributed to a procedure inadequacy. The cause of the event has been determined to be a procedural error in the Reactor Coolant System SOP which specified the normal position of the 2C RCP motor space heater breaker as "closed." The correct position for the breaker is mode dependent. Closed is the correct position only for modes 5 and 6, with the 2C RCP shut down. The computerized tagging order database, used to develop the tagging order, was derived in part from the Reactor Coolant System SOP. This procedural inadequacy was common to the motor space heater breakers for only the Unit 2 RCPs. It is not applicable to other containment penetration overcurrent protective devices subject to TS 3.8.3.1.

## Safety Assessment

Each RCP motor space heater breaker has internal overloads which are capable of interrupting voltage to the associated motor space heaters and the associated electrical penetration in the event an overload condition should occur. Following the event the 2C RCP motor space heater breaker overloads were tested and from this testing it was confirmed that the breaker overloads would have been capable of protecting the associated electrical penetration conductor in the event of an electrical fault. In addition, by design, there is no voltage applied to the motor space heaters during RCP operation. The RCP motor space heaters are automatically deenergized when the respective RCP motor is started. The 2C RCP motor space heaters were energized for approximately 38 minutes during the time breaker FCN4 was closed prior to starting the 2C RCP. While the 2C RCP motor space heater breaker was closed, no events occurred that could have resulted in an overcurrent condition in the associated electrical penetration, and thus, the containment penetration overcurrent protection function was not challenged.

Based on the above the health and safety of the public were not affected.

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Corrective Action												

Upon discovery that the 2C RCP motor space heater breaker was in the closed position, it was promptly opened to restore compliance with TS. Other breakers that are containment penetration overcurrent protective devices were verified open, as required, and the Containment Penetration Overcurrent Protective Devices surveillance test procedure was completed satisfactorily.

All breakers in the Containment Penetration Overcurrent Protective Devices surveillance test procedure have been checked to verify that their positions as specified in SOPs and in the computerized tagging data base are in agreement with the surveillance test procedure.

Since the Reactor Coolant System SOP has been wrong for a number of years, a review was made of plant occurrence reports and completed monthly surveillance test procedures for the last two years to determine if a similar event had occurred in the past. Based on that review, no similar events associated with Containment Penetration Overcurrent Protective Devices were noted to have occurred.

The Reactor Coolant System SOP and computer tagging order database have been revised to add a step to open the applicable motor heater breaker after starting a RCP and to provide guidance on when these breakers are required to be open.

## Additional Information

The following LERs have been submitted in the last two years on the subject of failure to operate in accordance with TS due to inadequate procedures:

LER 96-004-01 (Shared) Surveillance Requirements Not Met for Manual Safety Injection Input Into the Reactor Trip System;

LER 96-002-00 (Unit 1) TS Surveillance Requirement Not Met and Common Cause Failure Identified;

LER 96-002-00 (Unit 2) Misapplication of Technical Specification 4.4.6 Requirements Regarding F\*;

LER 97-014-00 (Unit 1) RCS Leak Detection System Inoperable Due to Defective Procedure Results in Operating in Condition Prohibited by TS;

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LER 97-005-01 (Shared) Failure to Perform Nuclear Instrumentation Surveillance Requirements Prior to Mode 2 and 3 Entry;

LER 97-003-00 (Unit 2) Failure to Perform Diesel Generator Surveillance Requirements Due to Procedural Inadequacy; and

LER 98-001-00 (Unit 1) Inadequately Performed Surveillance Due to Improper Calculation of E-Bar.