NON-PUBLIC?: N
ACCESSION #: 9206290181
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Joseph M. Farley Nuclear Plant - Unit 2 PAGE: 1 OF 4

DOCKET NUMBER: 05000364

TITLE: Reactor Trip Due To De-energization of Stationary Gripper Coils
In Rod Control Power Cabinet
EVENT DATE: 05/26/92 LER #: 92-008-00 REPORT DATE: 06/22/92

OTHER FACILITIES INVOLVED: DOCKET NO: 05000

OPERATING MODE: 1 POWER LEVEL: 45

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION:
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: R. D. Hill, General Manager - TELEPHONE: (205) 899-5156
Nuclear Plant

COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE NPRDS:

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT:

At 1817 on 5-26-92, while operating at 45 percent power, the Unit 2 reactor tripped due to a power range high negative flux rate. This occurred when the stationary gripper coils for the twelve rods powered by the 1 BD rod control power cabinet were mistakenly de-energized. Maintenance personnel intended to replace power supply fuses to the movable grippers to clear a rod control urgent failure condition; however, due to inadequate work planning and inappropriate actions, the stationary grippers were de-energized.

This event was caused by personnel error in that the maintenance work request (MWR) planning was inadequate and the journeyman took inappropriate action when he encountered an unexpected situation.

The individuals involved have been coached. This event will be discussed

in licensed, non-licensed and maintenance annual retraining. Electrical Maintenance personnel will receive specialized training on the rod control system. Daily Planning personnel will also receive training on this event. Labels have been placed on the rod control power cabinet disconnects for both units indicating the coils affected and warning that the reactor will trip if the stationary coil disconnect is opened.

The unit returned to power operation at 0132 on 05-28-92.

END OF ABSTRACT

Plant and System Identification

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

Summary

At 1817 on 5-26-92, while operating at 45 percent power, the Unit 2 reactor tripped due to a power range high negative flux rate. This occurred when the stationary gripper coils for the twelve rods powered by the I BD rod control power cabinet AA! were mistakenly de-energized. Maintenance personnel intended to replace power supply fuses to the movable grippers to clear a rod control urgent failure condition; however, due to inadequate work planning and inappropriate action the stationary grippers were de-energized.

Description

At 1655 on 5-26-92, during a ramp up from 42 percent to 48 percent power, a rod control urgent failure alarm was received on the 1 BD rod control power cabinet. The decision was made to replace the movable gripper fuses for the 1 BD rod control power cabinet because a similar problem had occurred on 2 BD power cabinet on the previous shift.

An MWR to replace the fuses for 1 BD cabinet was written by a maintenance foreman and approved by a maintenance engineer. The maintenance engineer was aware that three sets of fuses existed for each rod control cabinet, however, the maintenance foreman was not. The three sets of fuses include one set for the stationary gripper coils, one set for the lift coils and one set for the movable gripper coils. The MWR planning sequence was inadequate in that it did not specify which of the three sets of fuses supplying 1 BD cabinet was to be replaced.

Prior to working the MWR, the maintenance engineer advised the maintenance foreman of the fact that replacing movable gripper fuses could not trip the plant. Because the maintenance foreman was unaware that three sets of fuses existed, he simply relayed the information that this work could not trip the plant to the journeyman assigned to the MWR.

The MWR was then taken to Operations for release. The Shift Foreman Inspecting (SFI) and the Shift Supervisor (SS) reviewed the MWR and signed for release. The SS read the work sequence aloud to the control room operators and released the MWR for work. Both the SS and the SFI thought the work sequence was very general in nature but considered it sufficient based on their assumption that movable gripper fuses were to be replaced. The SS also assumed that the journeyman had been properly briefed; especially since similar maintenance had been performed on power cabinet 2 BD the shift before.

The journeyman proceeded to rod control cabinet 1 BD and unexpectedly encountered three sets of fuses. The only identification associated with the disconnect panels containing the three sets of fuses designated them as A100, A101 and A102. Expecting to encounter one set of blown fuses, the journeyman began to inspect each set of fuses associated with cabinet 1 BD.

The journeyman opened the panel on the first (movable gripper) disconnect (A102). He took voltage readings on the fuses inside the panel. There was no voltage drop across the fuses, indicating the fuses were not blown. The journeyman then closed the disconnect panel. He then opened the panel on the second (lift coils) disconnect (A101). The fuses inside this panel were not the same size as those obtained from the storeroom for the MWR so the assumption was made that these were not the fuses to be replaced. The journeyman then closed the disconnect panel A101.

Since the first set of fuses encountered were not blown and the second set of fuses were not the same size as the fuses obtained from the storeroom, the journeyman assumed that the fuses associated with the third (stationary gripper) disconnect (A100) were the blown fuses and therefore needed to be replaced. The journeyman then opened the third disconnect. This disconnect supplied power to the stationary gripper coils for rods powered from cabinet 1 BD. The resulting dropped rods caused a high negative flux rate reactor trip.

Following the trip, the operators implemented FNP-2-EEP-0 (Reactor Trip or Safety Injection) and FNP-2-ESP-0.1 (Reactor Trip Response) ensuring

that the unit was safely in Mode 3. The unit was maintained in a stable condition.

Cause of Event

This event was caused by cognitive personnel error.

The event occurred primarily due to inadequate planning of the MWR and the inappropriate actions taken by the journeyman when he encountered an unexpected situation.

Contributing causes include the failure on the part of the SFI and SS to question the vagueness of the MWR planning sequence.

Reportability Analysis and Safety Assessment

This event is reportable because of the actuation of the reactor protection system. After the trip, the following safety systems operated as designed:

- main feedwater was isolated by automatic closure of the flow control valves and bypass valves,

- auxiliary feedwater pumps started automatically and provided flow to the steam generators,

- source range nuclear detectors energized automatically, and

- pressurizer heater and spray valves operated automatically as required to maintain reactor coolant system pressure.

There was no effect on the health and safety of the public.

Corrective Action

The individuals involved have been coached on the importance of adequate written and verbal communications and on the importance of appropriate questioning and necessity for restraint when vague or unclear instructions are encountered.

This event will be discussed in licensed, non-licensed and maintenance annual retraining. Electrical Maintenance personnel will receive specialized training on the rod control system. Daily Planning personnel will also receive training on this event.

Labels have been placed on the rod control power cabinet disconnects for both units indicating the coils affected and warning that the reactor will trip if the stationary coil disconnect is opened.

Additional Information

The unit returned to power operation at 0132 on 05-28-92.

This event would not have been more severe if it had occurred under different operating conditions.

No similar LERs have been submitted by Farley Nuclear Plant.

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J. D. Woodard Southern Nuclear Operating Company
Vice President the southern electric system
Farley Project June 22, 1992

10 CFR 50.73

Docket No. 50-364

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

Joseph M. Farley Nuclear Plant - Unit 2
Licensee Event Report No. LER 92-008-00

Gentlemen:

Joseph M. Farley Nuclear Plant, Unit 2, Licensee Event Report No. LER 92-008-00 is being submitted in accordance with 10 CFR 50.73. If you have any questions, please advise.

Respectfully submitted,

J. D. Woodard

JDW/EFB:map 2660

Enclosure

cc: Mr. S. D. Ebneter
Mr. G. F. Maxwell

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