

PRELIMINARY NOTIFICATION- REGION III

May 14, 2010

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE -- PNO-III-10-006

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region III staff on this date.

Facility

Perry Nuclear Power Station
FirstEnergy Nuclear Operating Company
Perry, Ohio
Docket: 50-440
License: NPF-58

Licensee Emergency Classification

Notification of Unusual Event
 Alert
 Site Area Emergency
 General Emergency
 Not Applicable

SUBJECT: MANUAL REACTOR SCRAM DUE TO LOSS OF CONTROL ROD DRIVE
 CHARGING WATER HEADER PUMPS

DESCRIPTION:

On May 11, 2010, at 11:18 p.m. (EDT), operators at the Perry Plant initiated a manual reactor shutdown. The shutdown came as a result of both control rod drive (CRD) pumps being unavailable to maintain the minimum pressure required by technical specifications (TS) in the water header to the CRD accumulators.

The event began when the licensee experienced a blown fuse in an instrumentation rack, which resulted in an invalid division 2 emergency core cooling system (ECCS) initiation signal. When this invalid alarm signal occurred, per the design, the division 2 electrical bus stopped powering the systems that were not important to safety, but continued to power the safety significant systems.

Because the CRD pumps are not safety-related, power was lost to the division 2 CRD pump, which was in operation at the time. In addition, the division 1 CRD pump de-energized because it was also being powered by the division 2 bus (its alternate power source) at the time of the event. This left both CRD pumps unavailable, and resulted in the charging water header pressure lowering to less than the minimum value required by TS. According to TS, the plant was required to correct the problem within 20 minutes or shut down. The operators determined that they would be unable to restore the necessary equipment within the allotted time. As a result, a manual scram was initiated from 100 percent power.

All safety-related systems responded as designed, including the division 2 ECCS, which started on the invalid signal, but did not actually inject into the reactor coolant system because they were not needed.

Following the reactor scram, the NRC resident inspector arrived at the site to monitor the licensee's actions and observed operators in the control room.

Currently the plant is shutdown and the licensee continues to investigate the cause of the event. As a result of their continuing investigation, the licensee has determined that the event was

initiated when an electrical card failed during early life and caused the power circuit to experience a blown fuse. The electrical card was installed in the Reactor Core Isolation Cooling system circuitry during recent maintenance as part of ongoing work on the system. The blown fuse caused a voltage spike which resulted in the invalid division 2 ECCS initiation signal.

The NRC resident inspectors continue to monitor the licensee's investigation into the root cause, any necessary repairs to address the cause of the blown fuse, and the proposed corrective actions.

The State of Ohio has been informed.

The information in this preliminary notification has been reviewed with licensee management and is current as of 2:00 p.m (EDT) May 14, 2010.

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