

March 4, 1985

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-II-85-23

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 II staff on this date.

FACILITY: South Carolina Electric & Gas Co.
Summer Unit 1
Docket No. 50-395
Jenkinsville, South Carolina

Licensee Emergency Classification:
 Notification of Unusual Event
 Alert
 Site Area Emergency
 General Emergency
 Not Applicable

SUBJECT: PREMATURE CRITICALITY DURING STARTUP

South Carolina Electric and Gas (SCE&G) is continuing to evaluate a premature criticality which occurred on February 28 during the restart of Summer Unit 1. Region II is following up on the event.

The unit was taken out of service on February 27 as the result of the loss of ability to move rod controls, although reactor shutdown capability was not affected (PNO-II-85-21, issued on February 27). The cause was subsequently attributed to a defective supervisory buffer memory card in the rod control circuitry. With this component replaced, the unit proceeded toward restart.

It was at 1:30 p.m. on February 28--during that restart--that the operator realized the reactor had gone critical sooner than expected when the unit tripped from about six percent power as the result of a high power acceleration rate. The trip occurred when the fourth and final bank of control rods had been withdrawn 76 steps; the expected critical position was 168 steps. All reactor trip systems operated as designed, and there were no challenges to engineered safety features.

SCE&G believes the amount of xenon in the core was incorrectly estimated and that an inappropriate boron concentration curve was used in arriving at the incorrect expected control rod critical position. The operator who performed the startup has been temporarily relieved of his duties. The unit returned to service on March 1 and is operating at full power today. A Region II specialist inspector is on site in a continuing regional follow-up concerning calculations of the expected critical position.

This information is current as of noon today.

The State of South Carolina has been informed.

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PNO-II-85-023 PDR

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