

April 1, 2013

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE - PNO-II-13-003A

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. Some of the information may not yet be fully verified or evaluated by the Region II staff.

Facility

St. Lucie Nuclear Plant, Unit 1
Florida Power and Light Co.
Jensen Beach, FL
Docket: 50-335

Licensee Emergency Classification

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

SUBJECT: UPDATE - UNPLANNED SHUTDOWN GREATER THAN 72 HOURS DUE TO CLOSURE OF B TRAIN STEAM GENERATOR MAIN STEAM ISOLATION VALVE.

This preliminary notification supplements the information in PNO-II-13-003. The licensee has completed inspections and repairs for both the A and B main steam isolation valves (MSIVs). Those inspections identified contact between the valve disc swing arm and the valve body (on both valves) which resulted in additional stress on the actuator-to-valve disc linkage assemblies. The valve internals had been recently replaced for both MSIVs during the Unit 1 extended power uprate outage. The actuator-to-valve disc linkage assembly failed on the B MSIV and resulted in the unexpected closure of the valve on March 12, 2013. The A MSIV also showed similar indications of stress on the linkage assembly; however, the A MSIV linkage had not reached the point of component failure. The licensee replaced affected components in both MSIVs and modified valve internals to prevent contact between the valve disc swing arms and valve bodies. The licensee also performed non-destructive examination of the B MSIV to support a component stress analysis of the closure event on March 12th. The stress analysis concluded that continued use of the undamaged B MSIV components was acceptable. NRC inspectors in Region II and NRR reviewed the analysis and concluded the analytical techniques utilized and conclusions reached were reasonable. Unit 1 startup occurred on Sunday, March 31, 2013. Unit 2 MSIVs are of a different design and not susceptible to the same issue.

On March 12, 2013, at 2:51 p.m. EDT, during normal full power operations, Unit 1 automatically tripped when the thermal margin/low pressure (TMLP) trip setpoint was exceeded. The TMLP setpoint is based, in part, on inputs associated with the differential steam pressure between the A and B steam generators. The trip setpoint was exceeded due to an interruption of steam flow from B steam generator as a result of an unexpected closure of the B MSIV. The trip response was uncomplicated and all control element assemblies (CEAs) fully inserted into the core. No automatic safety system actuations were required and none occurred.

The NRC resident inspectors observed repairs to the MSIVs and continue to monitor the licensee's actions. The State of Florida has been notified via telephone. This preliminary notification is issued for information only. The information presented herein has been discussed with the licensee, and is current as of 11:00 a.m. on April 1, 2013.

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