

November 30, 2011

**PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE - PNO-IV-11-009**

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 IV, Arlington, Texas staff on this date.

**Facility**

South Texas Project Nuclear Operating  
Company  
South Texas Project Unit 2  
P.O. Box 289  
Wadsworth, TX 77483  
Docket: 50-499  
License No. NPF-80

**Licensee Emergency Classification**

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

SUBJECT: South Texas Project Unit 2 Reactor Trip

DESCRIPTION: On November 29, 2011, at 3:29 a.m. (CST), South Texas Project Unit 2 experienced an automatic reactor trip from 100 percent power because of a main generator lockout signal. All control rods were fully inserted following the reactor trip and all safety systems responded as designed. Plant conditions are stable in Mode 4 (Hot Shutdown), but the licensee plans to cool down the plant to Mode 5 (Cold Shutdown) for inspections of the main generator. Although all safety systems responded as designed, there were a few equipment anomalies associated with the trip.

At 3:10 a.m., on November 29, 2011, Unit 2 operators received a stator cooling water system trouble alarm. The stator, which is the stationary piece of the generator, has its own cooling system. Automatic protective features for the main generator caused the main generator to go offline, causing a turbine trip and a reactor trip per design at 3:29 a.m. Following the reactor trip, a main condenser steam dump valve stuck open resulting in a cool down of the reactor coolant system. Operators manually isolated the affected steam dump valve to stop the cooldown.

In addition, a water seal associated with the stator cooling water system voided, releasing hydrogen gas from the main generator into the turbine building. The licensee vented the turbine building to provide additional air flow and purged the main generator with carbon dioxide to dissipate the hydrogen gas. No equipment damage and no personnel injuries occurred as a result of the hydrogen leak.

The resident inspectors responded to the control room to monitor the licensee's response to the event. The NRC will monitor and assess the licensee's actions to determine the cause of the trip and the corrective actions prior to plant restart.

Unit 1 was unaffected by the event and continued to operate at 100 percent power.

The licensee issued a press release.

The information presented herein has been discussed with the licensee and is current as of 9:00 a.m. (CST), on November 30, 2011.

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