

July 2, 2007

**PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE PNO-II-07-006**

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 Region II staff (Atlanta, Georgia) on this date.

**Facility**

**Licensee Emergency Classification**

North Anna Power Station  
Unit 2  
Mineral, Virginia  
Docket/License: 50-339/NPF-7

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

SUBJECT: UNIT 2 SPURIOUS SAFETY INJECTION PARTIAL ACTUATION AND REACTOR TRIP

DESCRIPTION:

At 5:52 p.m. (EDT) on June 29, the 'B' safety injection system spuriously partially actuated and injected water into the Unit 2 reactor vessel and tripped the main feedwater pumps. The turbine generator and reactor then tripped. In accordance with emergency operating procedures, the 'A' train of safety injection was manually initiated. The 'A' train was successfully reset and secured. However, due to the partial failure of the 'B' train logic, which caused the spurious partial actuation, the 'B' train of safety injection could not be reset. As a result, the reactor coolant system inventory increased resulting in multiple actuations of the pressurizer power operated relief valves to limit reactor pressure. Consequently, the pressurizer relief tank rupture disc ruptured and released water to the containment sump. Upon successfully defeating the malfunctioning 'B' safety injection logic, injection from the 'B' train of safety injection was terminated. Level control was then maintained by the normal charging and letdown system. Other safety systems responded as expected. These included auxiliary feedwater pump starts, containment phase 'A' isolation, emergency diesel generator starts and all reactor control rods fully inserting. The reactor was placed in Cold Shutdown (Mode 5) using normal plant systems and operating procedures.

The licensee has preliminarily determined the spurious partial actuation was due to a card failure in the solid state protection system. The licensee is evaluating the implications of the card failure for appropriate corrective actions and is currently removing and inspecting the pressurizer power operated relief valves for damage. This event was reported as required (EN 43462).

The resident inspectors responded to the site and monitored the licensee's actions.

Region II received initial notification of this occurrence from the licensee via pager to the Senior Resident Inspector at approximately 7:04 p.m. The information presented herein has been discussed with the licensee and is current as of 8:35 a. m. on July 2, 2007.

The Commonwealth of Virginia has been notified.

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