

**Licensee/Facility:**

ENTERGY OPERATIONS, INC.  
River Bend  
St Francisville, Louisiana  
Dockets: 050-00458  
[1] GE-6

**Notification:**

MR Number: 4-2004-0004  
Date: 08/15/2004

**Subject:** REACTOR SCRAM FOLLOWING OFFSITE POWER LINE FAULT

**Discussion:**

This Morning Report supplements information provided in Event Notification (EN) 40957. Specifically, it provides additional information regarding the cause of the scram, the licensee's response, and NRC followup actions.

As previously reported in EN 40957, River Bend Station experienced a reactor scram following a loss of a 230 Kv offsite power line on August 15, at 4:05 a.m. (CDT). A guy wire failed on a tower supplying a 230 Kv power line (Port Hudson #353) to River Bend Station causing a ground fault on the line. The breaker in the River Bend Station switchyard which isolated the fault actuated slower than anticipated, which resulted in the backup protective relaying initiating an isolation of the North 230 Kv bus from the South 230 Kv bus and the plant. Two of the subsequently actuated breakers also operated slower than anticipated and allowed the Port Hudson #353 line fault to be sensed by the main generator protection relays, which initiated a main generator and main turbine trip. With the reactor operating at full power, a trip of the main turbine resulted in a reactor scram on a turbine control valve fast closure signal. Concurrent with the fault on the Port Hudson #353 line and slow fault isolation, a failure of a fault detection distance relay on incoming offsite power line ENJAY #352 resulted in isolation of that incoming line which deenergized Transformer RSST 2 which supplies power to the Division 2 4160V safety-related bus as well as various balance of plant loads. As a result, the Division 2 emergency diesel generator started and provided power to the Division 2 safety bus until offsite power to this bus was restored. The Division 1 safety bus continued to be powered from offsite power via a 500 Kv offsite line.

The licensee's investigation of the event revealed that three of eight McGraw-Edison breakers in the switchyard had opened slower than anticipated following the initial fault do to the lack of lubrication on portions of the breaker operating mechanism. The failed fault detection relay on the ENJAY line was subsequently replaced. Inspections, preventive maintenance, and testing were conducted on the three slow-operating breakers in the switchyard, and the breakers were returned to service. A schedule for exercising and time testing of all eight of the subject breakers has been established. The faulted Port Hudson #353 line is still deenergized for repair.

The reactor was restarted and critical at 9:19 a.m. on August 16, 2004, and the generator was synchronized to the grid at 2:16 a.m. on August 17. The resident inspectors are monitoring the licensee's actions. This Morning Report is for information only.

**REGIONAL ACTION:**

A resident inspector was dispatched to the site to monitor the licensee's actions following notification of the event. The resident inspectors will continue to monitor licensee corrective actions.

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