

November 29, 1999

**PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE** PNO-IV-99-056

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 IV staff in Arlington, Texas on this date.

**Facility**

Entergy Operations, Inc.  
Waterford 3  
Killona, Louisiana  
Dockets: 50-382

**Licensee Emergency Classification**

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

Subject: DECLARATION OF AN ALERT FOLLOWING A LOSS OF REACTOR COOLANT SYSTEM INVENTORY

On November 27, 1999, at 5:33 a.m. (CST), operators at Waterford 3 Steam Electric Station declared an Alert following a loss of reactor coolant system inventory. At the time of the event, the plant was shut down and in Mode 4 with reactor coolant system temperature at 295 degrees F and pressure at 350 psia. The plant had been shut down on November 26 to repair a small steam leak on a main steam line drain line. Operators were cooling down the reactor coolant system to Mode 5 (reactor coolant system temperature less than or equal to 200 degrees F) to establish the required plant conditions to repair the steam leak.

At 4:47 a.m. (CST), operators opened the motor-operated suction valve for Low Pressure Safety Injection Pump B in preparation for placing shutdown cooling in service. As the valve was opened, pressurizer level dropped rapidly from 35 percent. The indicated pressurizer level went off-scale low. Operators closed the pump suction valve and stopped the loss of reactor coolant system inventory. As a result of a drop in reactor coolant system pressure from 350 psia to approximately 100 psia, operators stopped the two operating reactor coolant pumps and established natural circulation. Heat was removed from the reactor coolant system through Steam Generator 2 to the main condenser. Operators started High Pressure Safety Injection Pump A and restored level in the pressurizer. There was no indication of voiding in the reactor vessel head.

Operators determined that when the low pressure safety injection pump suction valve was opened, approximately 5500 gallons of water flowed from the reactor coolant system to the refueling water storage pool. During subsequent system walkdowns, the licensee determined that a reachrod-operated valve which should have been closed was in the open position. The licensee found that the reachrod had become disconnected from the valve operator. It appeared that the last time the valve was positioned to the closed position (during a recirculation of the refueling water storage pool), the position indication at the reachrod hand wheel indicated that the valve was closed, but because the reachrod was not connected to the valve, the valve was actually in the open position. As a result, when the low pressure safety injection pump suction valve was opened, a flow path was established from the reactor coolant system to the refueling water storage pool.

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The operators declared an Alert based on the existence of plant conditions that warranted precautionary activation of the Technical Support Center and placing other response facilities and personnel on standby. There was no release of radiation to the environment during the event. Operators placed Low Pressure Safety Injection System Train A in service at 11:05 a.m. (CST), continued the plant cooldown, and entered Mode 5 at 12:37 p.m. (CST). The licensee terminated the Alert classification and exited their Emergency Plan at 12:26 p.m. (CST). Subsequent system walkdowns have revealed no equipment damage resulting from the event. The licensee has initiated a review of the event to determine the root cause and identify corrective actions to prevent recurrence.

Region IV received notification of this occurrence by telephone from the Senior Resident Inspector on November 27, 1999, at 5:45 a.m. (CST). The Senior Resident Inspector responded to the plant and monitored the licensee's actions. He was subsequently supported on site by the Senior Resident Inspector from the River Bend Station. The NRC entered the Monitoring Mode of Normal Operations at 6:40 a.m. and manned the Region IV Incident Response Center. NRC Region IV exited the Monitoring Mode at 12:45 p.m. (CST). Region IV conducted a briefing for the Commissioner's Assistants at 10 a.m. (CST).

The Region initiated a special inspection on November 29, 1999, to evaluate the cause of the event and assess the licensee's response to the event.

The NRC and the licensee issued press releases, and there has been local media interest.

The State of Louisiana was informed of the event.

This information has been discussed with the licensee and is current as of November 29, 1999, at 7:30 a.m. (CST).

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