

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)		DOCKET NUMBER (2)	PAGE (3)
Perry Nuclear Power Plant, Unit 1		0 5 0 0 0 4 4 0	1 OF 3
TITLE (4)			

Procedure Error Causes Opening Of Containment And Drywell Vacuum Breakers

EVENT DATE (5)			LER NUMBER (6)		REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)											
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAMES										
0	9	0	1	8	6	8	6	0	5	0	0	0	0	0	0	0	0	0	0
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5 (Check one or more of the following) (11)																			
OPERATING MODE (9)		2		20.402(b)		20.405(c)		X		50.73(a)(2)(iv)		73.71(b)							
POWER LEVEL (10)		01.01.1		20.405(a)(1)(i)		50.38(e)(1)				50.73(a)(2)(v)		73.71(c)							
				20.405(a)(1)(ii)		50.38(e)(2)				50.73(a)(2)(vi)		OTHER (Specify in Abstract below and in Text NRC Form 366A)							
				20.405(a)(1)(iii)		50.73(a)(2)(i)				50.73(a)(2)(viii)(A)									
				20.405(a)(1)(iv)		50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)									
				20.405(a)(1)(v)		50.73(a)(2)(iii)				50.73(a)(2)(ix)									

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME		AREA CODE	
Paul Russ, Compliance Engineer, ext. 6472		2 1 1 6 2 5 1 9 - 1 3 7 1 3 7	

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)		<input checked="" type="checkbox"/> NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)

On September 1, 1986 at 1100 a Containment vacuum breaker was found to be open. Investigation revealed that a drywell vacuum breaker had also opened. The opening of both vacuum breakers resulted from a vacuum being drawn on the Drywell and Containment via the Reactor Vessel head vent. The vacuum in the Reactor Vessel occurred when the Main Steam Isolation Valves and Main Steam Line drain valves were opened with a vacuum in the condenser. Control Room operators responded by switching the head vent path from the Drywell to the Main Steam Line, and both vacuum breakers closed.

The event was caused by a procedure error. The Integrated Operating Instruction (IOI) for Cold Startup did not require shifting the Reactor Vessel head vent path from the Drywell to the Main Steam Line until after a condenser vacuum had been established. The condition was not promptly corrected because Control Room operators did not properly respond to the annunciators for the open vacuum breakers. The IOI for Cold Startup has been changed to require that the Reactor Vessel head vent be shifted to the Main Steam Line prior to establishing a main condenser vacuum. The Control Room operators involved in the event have been counseled to ensure that all annunciators receive the proper response. All Control Room operators will be made aware of this event and trained on its significance.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO 3130-0104

EXPIRES 8/31/88

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Perry Nuclear Power Plant, Unit 1	05000440	86	053	00	02	OF 03

TEXT (If more space is required, use additional NRC Form 366A's) (17)

At 1100, September 1, 1986, a Containment Vacuum breaker was found to be open. Further investigation revealed that a drywell vacuum breaker had opened at approximately 0615 the same day. At the time of the event the plant was in Operational Condition 2 (Startup). Reactor vessel [RPV] temperature was 172 degrees, reactor vessel pressure was less than atmospheric pressure, and reactor vessel water level was 190 to 200 inches above the top of the active fuel.

Prior to the event, operators were conducting evolutions per the Integrated Operating Instruction (IOI) for cold plant startup. At 1807, August 30, 1986, operators commenced establishing a vacuum in the main condenser [COND] with the mechanical vacuum pumps. By 2145 a condenser pressure of about 3 inches HgA had been established. At 0320 on August 31, the Main Steam Line drain valves were opened to drain the Main Steam piping. This connected the main condenser to the reactor vessel via the inboard Main Steam drain lines and inboard Main Steam piping. Since the Reactor Vessel head vent had previously been opened to the Drywell, a flow path from the Drywell to the condenser was established causing Drywell pressure to decrease. At 0548 on September 1, the inboard and outboard Main Steam Isolation Valves were opened. This increased the size of the flow path by providing two additional sets of Main Steam drain lines. Drywell pressure began to decrease more rapidly and a Drywell vacuum breaker opened at approximately 0615. Control Room operators failed to properly respond to the vacuum breaker annunciator [ANN]. With the Drywell vacuum breaker open, a vacuum was now being drawn on the Containment. At 1100 the Shift Technical Advisor noticed that a Containment vacuum breaker had opened. Control Room operators investigated the condition and at 1140 shifted the reactor vessel head vent path from the Drywell to the Main Steam Line. Within several minutes the Containment and Drywell vacuum breakers closed.

This event was caused by a procedure error. The IOI for Cold Startup did not require shifting the Reactor Vessel head vent path from the Drywell to the Main Steam Line until after a condenser vacuum had been established. The condition was not promptly corrected because Control Room operators failed to properly respond to the annunciators for the open Drywell and Containment vacuum breakers.

The Drywell vacuum breaker system is designed to prevent negative pressure from drawing Suppression Pool water over the wier wall and causing flooding in the Drywell. The Containment vacuum breaker system is designed to prevent exceeding the Containment design external pressure. During this event the systems responded to actual differential pressures as designed. In the event of an accident both vacuum breakers would have shut maintaining Drywell and Containment integrity. The actuation of the vacuum breakers is therefore not safety significant, regardless of power level. No previous similar events have been identified.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/88

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 365A's) (17)

The IOI for Cold Startup has been changed to require that the Reactor Vessel head vent be shifted to the Main Steam Line prior to establishing a main condenser vacuum. The Control Room operators involved in the event have been counseled to ensure that all annunciators receive the proper response. All Control Room operators will be made aware of this event and trained on its significance.

Energy Industry Identification System Codes are identified in the text as [XX].