

## LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)  
Duane Arnold Energy CenterDOCKET NUMBER (2)  
0 5 0 0 0 3 3 1 1 OF 0 2TITLE (4)  
RHR/Core Spray Fill Energy Center

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	DOCKET NUMBER(S)	
0	1	0	2	8	4	8	4	-	0	0	5
0	1	0	2	8	4	0	0	0	2	0	1
0	1	0	2	8	4	0	0	0	2	0	1

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)									
N	20.402(b)		20.406(e)		50.73(a)(2)(iv)		73.71(b)			
POWER LEVEL (10)	20.406(a)(1)(i)		50.38(c)(1)		50.73(a)(2)(v)		73.71(e)			
1	20.406(a)(1)(ii)		50.38(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 366A)			
0	20.406(a)(1)(iii)		50.73(a)(2)(i)		50.73(a)(2)(viii)(A)					
	20.406(a)(1)(iv)		50.73(a)(2)(ii)		50.73(a)(2)(viii)(B)					
	20.406(a)(1)(v)		50.73(a)(2)(iii)		50.73(a)(2)(ix)					

LICENSEE CONTACT FOR THIS LER (12)  
NAME  
Wendell Keith, Technical Support Engineer

TELEPHONE NUMBER

AREA CODE  
3 1 9 8 5 1 - 7 3 0 6

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
X	B	M	P	G	2	0	0	Y	

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) ☐ NO ☒

EXPECTED SUBMISSION DATE (15)

MONTH DAY YEAR

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

On 010284, with the plant in run mode and the reactor at 100% power, the RHR/Core Spray Fill Pump motor was tripped by the circuit breaker thermal overload relay. The system pressure decreased to 25 psig before being re-pressurized and vented. The fill pump's function is to maintain the RHR/Core Spray pump discharge piping in a filled condition. The vertical head of the piping is approx. 90 feet which corresponds to the low pressure alarm set point at 40 psig. Par. 3.5.H of the plant Technical Specification states that "...the discharge piping from the pump discharge of these systems...shall be filled" as an LCO with no action statement. Although the system pressure was promptly restored and venting showed no indication of air in the piping, pressure below 40 psig had the potential for air ingress. Because of the Tech. Spec. LCO requirement without a corresponding action statement, this placed the plant in violation of the Tech. Spec. For this reason, this event is being reported pursuant to 10CFR50.73 (a)(2)(i)(B). The fill pump was rebuilt and is now maintaining design pressure. An amendment to Tech. Spec. par. 3.5.B will be requested to include specific actions upon receiving discharge piping low pressure alarm. Engineering efforts to upgrade the adequacy of the fill system are continuing.

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PDR ADOCK 05000331  
S PDR

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

APPROVED OMB NO. 3150-0104  
EXPIRES: 8/31/85

FACILITY NAME (1) Duane Arnold Energy Center	DOCKET NUMBER (2)  0 5 0 0 0 3 3 1 8 4	LER NUMBER (6)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
			0 0 5	-	0 0 0 2	OF	0 2

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

On 010284 at 2144, the RHR/Core Spray Fill Pump motor was tripped by a thermal overload on the circuit breaker relay. The RHR/Core Spray pump discharge piping pressure decreased to 25 psig from the normal operating pressure of 70 psig. This initiated the RHR low pressure alarm set at 40 psig. The fill pump, 1P-70 was restarted at 2150 but was unable to maintain the system pressure. The system piping was pressurized and vented at 2155. One RHR pump was started at 2224 to maintain system pressure at greater than or equal to 40 psig. The fill pump was rebuilt 010484 and is now running at design pressure. At the time of the event, the plant was in the run mode and the reactor was at 100% power.

Technical Specification par. 3.5.B states "Whenever Core Spray subsystems, LPCI subsystem, HPCI, or RCIC are required to be operable, the discharge piping from the pump discharge of these systems to the last block valve shall be filled" as an LCO with no action statement. The RHR/Core Spray discharge is maintained full by 1P-70. The vertical head of the specified piping is approximately 90 feet which corresponds to 40 psig. The operators who performed the venting reported a steady stream of water with no accumulation of air apparent upon opening the vent valves throughout the system. Apparently, no air entered the piping during the short duration of system pressure being under 40 psig. However, in spite of the operator observations and the prompt repressurization of the system piping, pressure below 40 psig had the potential for air intrusion. Because of the Tech. Spec. LCO requirement without a corresponding action statement, this placed the plant in violation of the Tech. Spec. For this reason, this event is being reported pursuant to 10CFR50.73(a)(2)(i)(B).

As discussed in Tech. Spec. basis, Section 3.5, the maintenance of filled discharge piping is to prevent water hammer. However, the systems would still perform their design function even with a water hammer. For this reason, the temporary problem with the discharge piping pressure would not affect the operability of the above identified ECCS systems.

As corrective action, an amendment to Tech. Spec. par. 3.5.B will be requested to include specific actions upon receiving discharge piping low pressure alarm. Engineering efforts to upgrade the adequacy of the fill system are continuing.

Iowa Electric Light and Power Company

February 1, 1984

DAEC-84-53

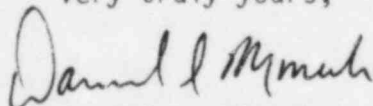
U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D. C. 20555

Subject: Duane Arnold Energy Center  
Docket No. 50-331  
Op. License DPR-49  
Licensee Event Report No. 84-005

Gentlemen:

In accordance with 10 CFR 50.73 please find attached a copy of the subject Licensee Event Report.

Very truly yours,



Daniel L. Mineck  
Plant Superintendent - Nuclear  
Duane Arnold Energy Center

DLM/WRK/pv

attachment

cc: Mr. James G. Keppler  
Regional Administrator  
Region III  
U. S. Nuclear Regulatory Commission  
799 Roosevelt Road  
Glen Ellyn, IL 60137

NRC Resident Inspector - DAEC

File A-118a

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