NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Duane Arnold Energy Center	0 5 0 0 0 3 3 1	1 OF 0 2

TITLE (4)
RCIC Barometric Condenser Vacuum Pump Inoperability

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 9	0 3	8 4	8 4	0 3 1	0 0	1 0	0 3	8 4	None	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	0 7 2	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)
		20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	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)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
James R. Probst, Technical Support Engineer	AREA CODE 3 1 9 — 8 5 1 - 7 3 0 7

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	BIN	MLOI	G10 8 0	Yes							

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On September 3, 1984 during normal operation and routine RCIC surveillance a Barometric Condenser High Pressure Alarm in the Reactor Core Isolation Cooling System occurred. Investigation showed the barometric condenser vacuum pump to be inoperable. RCIC was declared inoperable and a 7 day LCO initiated. Pump function was successfully restored following pump motor commutator cleaning. RCIC was declared operable September 5, 1984 and the 7 day LCO terminated.

All necessary safety systems remained operable during the period RCIC was not operable, and the safe operation of the plant was not compromised.

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

On September 3, 1984, while in the final stages of Reactor Core Isolation Cooling (BN) routine scheduled monthly surveillance testing, a RCIC Barometric Condenser High Pressure Alarm was received. The reactor was in run mode at approximately 72% power. Upon investigation, the barometric condenser vacuum pump (BN-1P-22) was found inoperable, although Control Room indication showed it to be energized. RCIC was declared inoperable at 1551 hours and a 7 day LCO was entered per Technical Specification 3.5.E.2. HPCI (BJ) operability was then demonstrated as required by Technical Specification 4.5.E.1.f. Maintenance personnel examined the pump (Nash Engineering, CSM Series 40) on 9/4/84 and determined the source of the problem to be the commutator of the pump motor (GE Type CD, Frame L186AY), which had an accumulation of dust and grime on its surface. Following cleaning of the commutator, the pump was successfully restarted several times. After RCIC operability tests were successfully completed, RCIC was declared operable 9/5/84 at 2032 hours and the 7 day LCO ended. New brushes are being procured, and will be installed upon receipt. A similar problem involving an unclean commutator resulted in the HPCI barometric condenser vacuum pump being removed from service in 1983. (See LER 83-031.) The frequency of commutator and brush inspection is being increased.

Throughout the period RCIC was inoperable (approximately 52.5 hours), the reactor remained in run mode and all necessary safety systems were fully operable. The safe operation of the plant was not compromised. There have been two previous occurrences of RCIC inoperability in 1984. (See LER 84-018 and LER 84-025.) Neither involved the pump in question, or a commutator problem in general.

Iowa Electric Light and Power Company

October 3, 1984
DAEC-84-619

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. 84-031

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/JRP/kp

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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