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)
High Pressure Coolant Injection System Taken Out of Service for Isolation Valve Repair

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)
1 1	0 4	8 5	8 5	0 4 3	0 1	0 1	1 2	8 6	None	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
N		20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)		20.405(a)(1)(i)	50.36(c)(1)	X 50.73(a)(2)(v)	73.71(c)
0 4 0		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
	AREA CODE
Wendell Keith, Technical Support Engineer	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 NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	
X	B J	I S V	A 3 9 1	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)

At 0020 hours on 11/04/85, with the reactor in normal run mode and power reduced to 40% to support maintenance, the High Pressure Coolant Injection System (HPCI) was voluntarily taken inoperable in order to work on a packing leak on the outboard steam supply isolation valve. Following valve packing repair and testing and subsequent system testing, HPCI was declared operable at 1822 hours. Further valve repair will be performed in the near future as is detailed in the text of this LER. The remaining Emergency Core Cooling Systems (ECCS) and the Reactor Core Isolation System (RCK) were operable through the period of HPCI inoperability as required by Technical Specification 3.5.D.2. This event is being reported as the inoperability of a single train safety system pursuant to 10 CFR 50.73(a)(2)(v).

At 2201 hours on 12/13/85, following successful RCIC and ECCS operability testing, the HPCI system was again made inoperable for partial valve disassembly. At 0640 hours on 12/14/85, power was reduced to 42% to complete repairs on the outboard steam supply isolation valve. The old packing was removed and an inspection was conducted in an attempt to determine the root cause of the packing leak. The valve stem was found in good condition and no other cause for the packing leak could be determined. The valve was repacked satisfactorily. The valve was successfully stroke tested at 1258 hours on 12/14/85 and the HPCI system was declared operable at 1830 hours.

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

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

On 10/26/85 with the reactor at approximately 63% power, the High Pressure Coolant Injection System (HPCI, EIIS System BJ) steam supply outboard isolation valve (EIIS Component ISV-2239) was found to have a packing leak. Although HPCI was operable with the valve in its normally open position, the valve was lightly backseated in the open position to minimize leakage. The valve was timed while opening and closing from the backseat and demonstrated to be within ASME limits. A Maintenance Action Request was written to repair the leak.

At 0020 hours on 11/04/85 with reactor power at 40%, HPCI was voluntarily made inoperable by closing the inboard steam supply isolation valve to further repair the HPCI outboard valve. This placed the plant in a 7 day LCO in accordance with Technical Specification 3.5.D.1. Personnel entered the steam tunnel and added packing, thus reducing the steam leak to a small amount of weeping. At 0316 hours, the valve met the ASME time limits when opened and closed. The HPCI system was declared operable following successful testing at 1822 hours. The 7 day LCO was cancelled. This event is being reported as the inoperability of a single train safety system pursuant to 10 CFR 50.73(a)(2)(v).

On 11/25/85, the packing was again found to be leaking. A packing adjustment on 11/27/85 with the HPCI system on-line was unable to isolate the steam leak. The valve was lightly backseated to reduce leakage. The valve was again verified to be operable based on valve stroking times from the backseat position. The valve will be fully repacked and further troubleshooting activities will be performed as necessary in a future scheduled power reduction. A review of plant documents found that this valve has had a packing leak one other time in the last three years.

The Automatic Depressurization System (ADS, EIIS SB), RCIC system, Low Pressure Coolant Injection System (LPCI, EIIS BO), and both Core Spray Subsystems (EIIS BM) were operable throughout the period of HPCI inoperability. This event had no effect on public health and safety.

The HPCI valve which was repacked is a 10" Anchor-Darling model number 1463-3.

At 2201 hours on 12/13/85 following successful RCIC and ECCS operability testing, the HPCI system was again made inoperable for partial valve disassembly and inspection. At 0640 hours on 12/14/85, power was reduced to 42% to complete repairs on the HPCI outboard steam supply isolation valve.

The old packing was removed. Some of the inner packing rings showed evidence of steam cutting which may have occurred after the packing started leaking. The valve stem was found in good condition with no evidence of scoring during visual inspection. No obvious evidence of improper packing installation was found either. Consequently, the root cause of the packing leak could not be determined. However, specific measurements of the stem will be taken and compared to design specifications at the next scheduled outage of sufficient duration (no later than first quarter, 1987). At that time a thorough inspection will be performed without ambient temperature and ALARA concerns which exist during operation.

The valve was repacked and the packing was successfully adjusted under pressure. The valve was successfully stroke-tested at 1258 hours on 12/14/85 and the HPCI system was tested and declared operable at 1830 hours.

Iowa Electric Light and Power Company

January 10, 1986
DAEC-86-0023

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. 85-043, Rev. 1

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/kp

Attachment - LER 85-43, Rev. 1

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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