

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Duane Arnold Energy Center										DOCKET NUMBER (2) 0 5 0 0 0 3 3 1 1										PAGE (3) 1 OF 0 4											
TITLE (4) Low Pressure Setpoints Found in Bench Tests of Main Steam Safety/Relief Valves																															
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)							
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0 4		1 1		8 5		8 5		0 1 7		0 0		0 7		1 2		8 5								0 5 0 0 0							
OPERATING MODE (9) N				THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5. (Check one or more of the following) (11)																											
POWER LEVEL (10) 0 0 0				20.402(b)								20.405(c)								50.73(a)(2)(iv)								73.71(b)			
				20.405(a)(1)(i)								50.36(c)(1)								50.73(a)(2)(v)								73.71(c)			
				20.405(a)(1)(ii)								50.36(c)(2)								50.73(a)(2)(vii)								<input checked="" type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 305A)			
				20.405(a)(1)(iii)								50.73(a)(2)(i)								50.73(a)(2)(viii)(A)								For Information			
				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)																															
NAME James C. Smith, Acting Technical Support Supervisor																TELEPHONE NUMBER 3 1 9 8 5 1 - 7 2 3 8															
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		SIB		RIV		TIO		2 0		No		X		SIB		RIV		TIO		2 0		No									
X		SIB		RIV		TIO		2 0		No		X		SIB		RIV		TIO		2 0		No									
SUPPLEMENTAL REPORT EXPECTED (14)																															
YES (If yes, complete EXPECTED SUBMISSION DATE)																X		NO		EXPECTED SUBMISSION DATE (15)		MONTH		DAY		YEAR					

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

While the reactor was shutdown in refuel mode for a refuel outage, the 6 Main Steam Safety/Relief Valves and 2 Safety Valves were removed from the plant and tested by Wyle Laboratories prior to maintenance on the valves. While testing the setpoint pressure for valve lifting, four of the valves were found to lift at a lower pressure than the minimum allowable pressure. One other valve did not reseal after initial actuation.

All valves concerned were resurfaced and rebuilt by manufacturers' representatives at the Wyle facilities. All setpoint drifts were in the conservative direction so the valves would have fulfilled their safety function of preventing the overpressurization of the reactor vessel. The lower setpoints found were also above normal operating pressure so spurious actuation was unlikely. This report is being submitted for information purposes.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						PAGE (3)		
		YEAR	SEQUENTIAL NUMBER			REVISION NUMBER				
Duane Arnold Energy Center	05000331	85	—	017	—	000	02	OF	04	

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X	S B R V	D 2 4 3 N		

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
Duane Arnold Energy Center	0500033185	017	00	03	OF 04	

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

While the reactor was shutdown in refuel mode for a refuel outage, the 6 Main Steam Safety/Relief Valves and 2 Safety Valves (part of EIS System SB) were removed from the plant and tested by Wyle Laboratories prior to maintenance on the valves. During testing, four of the valves lifted at a lower pressure than the minimum allowable nameplate pressure. One other valve failed to reseal following the initial actuation of the valve. The details of the test discrepancies are given below.

VALVE	SPECIFIED SETPOINT	AS FOUND SETPOINT (multiple tests)	SPECIFIED TOLERANCE	COMMENTS*
SRV-4400	1100 psig	1075 psig 1078 psig 1093 psig	+/-11 psig	Zero pretest leakage, post-test leakage found
SRV-4406		lift pressure satisfactory		Would not reseal after initial test
SRV-4402	1100 psig	1057 psig 1063 psig 1069 psig	+/-11 psig	Pretest & post-test leakage found
SRV-4401	1090 psig	1060 psig 1062 psig 1071 psig	+/-11 psig	Zero pretest leakage, post-test leakage found
SRV-4403	1240 psig	1194 psig 1193 psig	+/-12.4 psig	Pretest & post-test leakage found

*Leakage tests occurred at 90% of nameplate setpoint pressure

The first four valves listed above are manufactured by Target Rock Corporation (model 7467F) and the last valve is manufactured by Dresser Industries (model 6-3777 QA). The leakage noted was caused by minor steam cutting of the valve seating surfaces. No obvious causes for the setpoint drifts were noted in the Wyle reports or in discussions with a Wyle representative. Two other Main Steam Safety/Relief Valves manufactured by Target Rock and one Safety Valve manufactured by Dresser were tested satisfactorily with no discrepancies noted.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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FACILITY NAME (1) Duane Arnold Energy Center	DOCKET NUMBER (2) 0 5 0 0 0 3 3 1 8 5	LER NUMBER (5)			PAGE (3)		
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TEXT (If more space is required, use additional NRC Form 366A's) (17)

All of the valves listed above had experienced setpoint drift in the conservative direction and would have prevented overpressurization of the reactor vessel as designed. Furthermore, the setpoints found were above normal operational pressure so the valves were unlikely to spuriously actuate. Indication of slightly elevated tailpipe temperature with SRV-4406 has been noted during the past operating cycle. According to a Target Rock representative the elevated temperatures did not necessarily indicate significant leakage or an unseated condition. Furthermore, the Target Rock representative stated that the test conditions were conservative because of the much smaller than service test flow and that valve failure to reseal in the test is not necessarily indicative of the same valve failure in service conditions.

See LER's 77-026, 77-027, and 78-018 for other instances of Safety/Relief and Safety Valve setpoint drift and leakage problems.

All valves listed above were rebuilt and resurfaced by manufacturers' representatives at the Wyle facilities. All post-maintenance tests conducted by Wyle Laboratories were satisfactory. Note that this report is being voluntarily submitted for information purposes.

Iowa Electric Light and Power Company

July 12, 1985
DAEC-85-0593

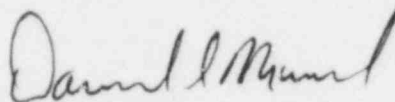
U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Subject: Duane Arnold Energy Center
Docket No. 50-331
Op. License DPR-49
Licensee Event Report No. 85-017

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/JCS/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