

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Duane Arnold Energy Center	DOCKET NUMBER (2) 0 5 0 0 0 3 3 1	PAGE (3) 1 OF 0 2
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TITLE (4)
Both Standby Filter Units Inoperable

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	7	12	84	026	00	0	8	1	None		0 5 0 0 0
0	7	12	84	026	00	0	8	1			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) 9.9	20.402(b)	20.406(c)	50.73(a)(2)(iv)	73.71(b)						
	20.406(a)(1)(i)	50.38(c)(1)	X 50.73(a)(2)(v)	73.71(c)						
	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)						
	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)(x)							

LICENSEE CONTACT FOR THIS LER (12)									
NAME Wendell R. Keith, Technical Support Engineer								TELEPHONE NUMBER	
								AREA CODE	
								3 1 9 8 5 1 - 7 3 3 9	

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	
X	I ₁ L		M 340	No						
B	I ₁ L R I ₁ S		N 305	No						

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)

With the standby filter unit "B" train inoperable due to an inoperable radiation monitor, the "A" SFU outlet damper failed to function during testing. The "A" SFU system was declared inoperable and the plant entered a 24-hour LCO due to both redundant trains of a safety system being declared inoperable.

The "B" SFU was confirmed to function satisfactorily when initiated. However, the "B" initiation logic was still unavailable due to the inoperable radiation monitor. The "B" SFU was started and left running. This restored the required safety function. The 24-hour LCO was ended within the first 2 hours.

The "A" SFU damper was repaired on 7/12/84. The "B" radiation monitor was repaired on 7/14/84.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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			
		84	026	00	02	OF	02

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

During normal operation at approximately 99% power on 7/10/84, post-maintenance surveillance was being conducted on the Control Room standby air filtration system. The Control Building air intake "B" radiation monitor (EIIS IL; RIS) would not calibrate. For this reason, the "B" standby filter unit (SFU; EIIS VI) system was declared inoperable and the plant entered a 7 day LCO. Although not required by Technical Specification, surveillance was performed on the redundant ("A") SFU to demonstrate its operability. This system initiated as designed. On 7/11/84, unrelated maintenance work was started on the outlet damper (EIIS CDM) of the inoperable "B" SFU. At 2323 hours, surveillance was again performed on the "A" SFU. During this test the "A" SFU outlet damper would not open. At 0015 hours on 7/12/84, the "A" SFU was declared inoperable and the plant entered a 24 hour LCO as required by Technical Specification 3.10.A.4 due to both SFUs being inoperable. This event is being reported pursuant to the requirements of 10CFR50.73(a)(2)(v).

Post-maintenance testing demonstrated the operability of the "B" SFU at 0105 hours. However, the "B" initiation logic was still unavailable due to the out of calibration radiation monitor. The "B" SFU was started and left running. With it operating continuously, the SFU was performing its safety function of supplying filtered makeup air to the Control Room at design flow rates. Therefore, the "B" SFU was declared operable and the 24 hour LCO was ended at 0130 hours on 7/12/84. A 7 day LCO was in effect until the "A" SFU damper was repaired later that day.

The safety function of the system was restored within the 24 hour limit as required by the Technical Specification. There was no radiation above background levels which would have required the system during this period.

The "A" outlet damper was repaired as described below and the "A" SFU was demonstrated operable during the day shift of 7/12/84. It is noted that the specific equipment which malfunctioned on the outlet damper of both SFUs was the air pilot positioner (Moore Products - Model 74G). In each case the positioner was replaced. These are also used on the feedwater regulator valves and feedwater minimum flow valves. A search of plant maintenance history over the past 10 years operation found four previous replacements of these positioners. The failures have been due to very fine alumina dessicant getting past the instrument air dryer after filters and blocking the air inlet port to the positioner. The cause of the dessicant downstream of the air dryer has not yet been determined. Engineering work is in progress to install a larger capacity air dryer. This problem is being addressed within the scope of this work.

The "B" radiation monitor (NMC Corp. - Model GA2T0) failed calibration due to non-linearity. Analysis of the instrument circuitry by DAEC personnel and discussions with NMC discovered the problem. The instrument had previously been upgraded from a model GA2TMO to a GA2T0 with a detector tube changeout. Vendor did not include information on gain circuitry modification. An existing resistor in the gain circuitry was replaced with one of less resistance. This increased the gain voltage and allowed the monitor to calibrate linearly. The instrument was returned to service on 7/14/84. At this time both SFUs were operable. The 7-day LCO was ended. It is noted that this radiation element was previously installed in the "A" monitor which has had several spurious initiations. (See LER 84-020.) Engineering work is in progress to have both monitors replaced.

Iowa Electric Light and Power Company

August 10, 1984

DAEC-84-510

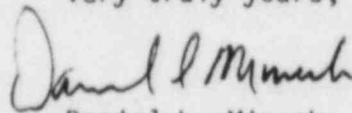
U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Subject: Duane Arnold Energy Center
Docket No. 50-331
Op. License DPR-49
Licensee Event Report No. 84-026

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

cc: Mr. James G. Keppler
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
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NRC Resident Inspector - DAEC

File A-118a

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