

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)

Duane Arnold Energy Center

DOCKET NUMBER (2)

050003311 OF 03

PAGE (3)

TITLE (4)

Inoperable Snubbers in Installed Configuration

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)	
05	22	85	85	0216	00	08	01	85	None		050000	
THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)												
OPERATING MODE (12) N			20.402(b)			20.405(a)			90.73(a)(2)(iv)			73.71(b)
POWER LEVEL (13) 0.010			20.405(a)(1)(i)			90.38(a)(1)			90.73(a)(2)(v)			73.71(a)
			20.405(a)(1)(ii)			90.38(a)(2)			90.73(a)(2)(vi)			OTHER (Specify in Abstract below and in Test, NRC Form 305A)
			20.405(a)(1)(iii)			Y 90.73(a)(2)(ii)			90.73(a)(2)(vii)(A)			
			20.405(a)(1)(iv)			90.73(a)(2)(iii)			90.73(a)(2)(viii)(B)			
			20.405(a)(1)(v)			90.73(a)(2)(iv)			90.73(a)(2)(ix)			

LICENSEE CONTACT FOR THIS LER (12)

NAME

Kenneth S. Putnam, Technical Support Engineer

TELEPHONE NUMBER

AREA CODE

319 8511-7456

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

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If you complete EXPECTED SUBMISSION DATE)	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
	X				

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

During the Cycle 7/8 refuel outage, Duane Arnold Energy Center personnel identified two shock suppressors (snubbers) whose installed configuration would result in overstressing of the snubber or its structural components during a design basis earthquake. The supported systems were analyzed to determine stress levels in the supported piping during a seismic event with failed supports removed. It was determined that no piping would have exceeded acceptable stresses and consequently no negative impact on supported system operability would have occurred.

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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 5 - 0 2 6 - 0 0 0 2 OF 0 3	LER NUMBER (5)			PAGE (3)		
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			

TEXT (If more space is required, use additional NRC Form 386A's) (17)

During the Cycle 7/8 refuel outage, Duane Arnold Energy Center personnel identified two shock suppressors (snubbers) whose installed configuration would result in overstressing of the snubber or its structural components during a design basis earthquake.

One of the deficient snubbers located on the recirculation system (EIS System AD) piping was discovered during an engineering review of the effect of temporary lead shielding on the structural integrity of the piping. It was noted that the design drawings did not match the original design analysis. Apparently a drafting error during the original design process had resulted in the installation of a 50 KIP snubber and a 120 KIP snubber in reverse orientation. Analysis of the effect of this error revealed that the smaller snubber (SSB-4) would have been stressed beyond its design rating under a design basis seismic event. However, the ultimate strength of the snubber would not have been exceeded and as such there would have been no impact on the supported system. The supported system remained fully capable of performing its design function as a primary system boundary during a seismic event. Prior to plant startup from the Cycle 7/8 refuel outage the reverse oriented snubbers were reinstalled in the correct configuration. To ensure that this type of error had not been made at other locations in safety systems, an engineering review compared as-built condition and design drawings against the original analysis, and checked the original analysis for accuracy. No additional problems were noted.

The second problem affecting a snubber was identified during a refueling outage walkdown of system supports when it was noted that support steel for snubber DLA-5-SS11 on the Residual Heat Removal (RHR) system (EIS System BD) did not match the design drawings. An engineering review concluded that the support steel would have exceeded allowable stress limits. An evaluation of the effect on the supported system of removing this snubber concluded that the piping would not have exceeded acceptable stress levels and as such the RHR system would have remained fully capable of performing all required safety functions during a design basis seismic event. The support steel was upgraded to meet original design margins prior to restarting the plant from the Cycle 7/8 refuel outage.

The inoperability of the two snubbers (SSB-4 and DLA-5-SS11) existed since original installation, and is being reported under 10 CFR 50.73.a.2.i as operation in a condition prohibited by plant Technical Specifications which require snubber operability during all modes of plant operation except cold shutdown and refuel. Initial discovery of as-built discrepancies occurred during the Cycle 7/8 refuel outage more than 30 days prior to the submittal date of this report. The submittal of this report was delayed pending the completion of inspections and associated engineering calculations and final comparison of the results with NRC reporting requirements. The site Resident Inspector was informed of the discrepancies prior to startup from the Cycle 7/8 refuel outage.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31/95

FACILITY NAME (1)

DOCKET NUMBER (2)

LER NUMBER (6)

PAGE (3)

Duane Arnold Energy Center

0 5 0 0 0 3 3 1 8 5 - 0 2 5 - 0 0 0 3 OF 0 3

EXT (If more space is required, use additional NRC Form 386A (1) (17))

The Duane Arnold Energy Center has completed an inspection of all safety-related supports and snubbers to compare the as-built configuration with design drawings. All discrepancies have received an engineering analysis and/or been corrected to match design drawings. The original analysis has been reviewed and verified. Discrepancies that have been noted have been collectively analyzed and all supported systems were verified to have been capable of performing their designed safety functions at all times.

Iowa Electric Light and Power Company

July 31, 1985
DAEC-85-698

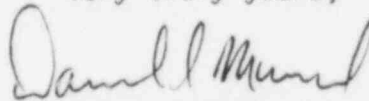
U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Subject: Duane Arnold Energy Center
Docket No. 50-331
Op. License DPR-49
Licensee Event Report No. 85-026

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/KSP/kp

attachment - LER 85-026

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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