REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8707210795 DOC. DATE: 87/07/17 NOTARIZED: NO DOCKET #
FACIL: 50-331 Duane Arnold Energy Center, Iowa Electric Light & Pow 05000331
AUTH. NAME AUTHOR AFFILIATION
AXLINE, J. S. Iowa Electric Light & Power Co.
HANNEN, R. L. Iowa Electric Light & Power Co.
RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-018-00: on 870601, partial Group IV isolation occurred when power lost to Primary Containment Isolation Sys B. Caused by lack of procedural guidance for planning of maint. Maint procedures will be updated. W/870717 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 3
TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR	COPIES ENCL
	PD3-1 LA	1	1	PD3-1 PD	1	1
	CAPPUCCI, A	1	1			
INTERNAL:	ACRS MICHELSON	1	1	ACRS MOELLER	2	2
	AEOD/DOA	1	1	AEOD/DSP/NAS	1	1
	AEOD/DSP/ROAB	2	2	AEOD/DSP/TPAB	1	1
	DEDRO	1	1	NRR/DEST/ADE	1	0
	NRR/DEST/ADS	1	0	NRR/DEST/CEB	1	1
	NRR/DEST/ELB	1	1	NRR/DEST/ICSB	1	1
	NRR/DEST/MEB	1	1	NRR/DEST/MTB	1	1
	NRR/DEST/PSB	1	1	NRR/DEST/RSB	1	1
	NRR/DEST/SGB	1	1	NRR/DLPQ/HFB	1	1
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	NRR/DREP/RAB	1	1	NRR/DREP/RPB	2	2
	NRR/PMAS/ILRB	1	1	NRR/PMAS/PTSB	1	1
	REG FILE 02	1	1	RES DEPY GI	1	1
	RES TELFORD, J	1	1	RES/DE/EIB	1	1
	RGN3 FILE 01	1	1			
EXTERNAL:	EG&G GROH, M	5	5	H ST LOBBY WARD	1	1
	LPDR	1	1	NRC PDR	1	1
	NSIC HARRIS, J	1	1	NSIC MAYS, G	1	1

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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

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

TITLE (4)
Partial Group IV Isolation Due to De-energization of RPS Bus 'B' During Maintenance

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 6	0 1	8 7	8 7	0 1 8	0 0	0 7	1 7	8 7	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 0 0	20.402(b)	20.405(c)	X 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)	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
Jeff S. Axline, Technical Support Engineer	3 1 9 8 5 1 - 7 6 0 0

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	

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 June 1, 1987, with the plant in cold shutdown, a partial Group IV isolation occurred, per design, when power was lost to the 'B' Primary Containment Isolation System logic. This occurred during reinstallation of a relay in the RPS power supply logic. The 'B' loop RHR Shutdown Cooling inject valve was the only Group IV valve that was open and not tagged out, therefore it was the only valve to actuate. The intermediate cause of the isolation (MO1905 closing) was failure to tagout this valve. The root cause was a lack of procedural guidance for the planning of maintenance. At the present time there is no procedure specifically aimed at planning maintenance to avoid adverse affects on systems other than those being worked on directly.

This event did not affect the safe operation of the plant because it was only a momentary isolation condition, which was immediately reset.

As a corrective action, the CMAR, PMAR, Jumper and Lifted Lead, and Tagout procedures will be updated to provide more specific guidance for minimizing the possibility of inadvertent ESF actuations.

This event, which occurred on June 1, 1987, is being reported pursuant to 10 CFR 50.73(a)(2)(iv). A 30 day extension on this LER was granted by the resident inspector.

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Duane Arnold Energy Center (DAEC)	0 5 0 0 0 3 3 1	8 7	— 0 1 8	— 0 0	0 2 OF 0 2

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

On June 1, 1987, the plant was in cold shutdown for the cycle 8/9 refuel outage. The vessel was completely refueled with all control rods inserted. At approximately 1047 hours a partial Group IV isolation occurred, per design, when power was lost to the 'B' Primary Containment Isolation System (EIIS System Code JM) logic. The 'B' loop RHR Shutdown Cooling inject valve (EIIS Component Code JM-INV-1905) was the only valve in this group that was open and not tagged out, therefore it was the only valve to actuate. This isolation occurred when installation of a relay (EIIS Component Code JC-RLY-C71A-K001B) in the RPS power supply logic caused it's auxiliary contacts to open momentarily, which in turn caused the alternate RPS power supply to be momentarily disconnected from the 'B' RPS bus. M01905 was immediately reopened.

It was originally determined on May 29, 1987, that relay K1B needed to have it's plunger replaced. When maintenance on the relay was planned, it was known that there was the possibility that the auxiliary contact might be inadvertantly opened during the maintenance. The appropriate valves were tagged out to avoid this inadvertant actuation and at 1757 hours the 'B' RPS bus was de-energized. The defective relay plunger was removed to determine if a like replacement was available. When it was determined that a like replacement would have to be ordered, the maintenance was stopped and the 'B' RPS bus was re-energized. At the time the appropriate valves were tagged out the 'A' RHR Shutdown Cooling loop was in service. The 'B' loop Shutdown Cooling inject valve (M01905) was closed and did not need to be tagged out. On June 1, 1987, when the parts were ready to be installed, RHR Shutdown Cooling was operating on the 'B' loop. A new tagout was not performed even though the 'B' inject valve (M01905) was in the open position. The intermediate cause of the isolation (M01905 closing) was failure to tagout this valve. The root cause was a lack of procedural guidance for the planning of maintenance. At the present time there is no procedure specifically aimed at planning maintenance to avoid adverse affects on systems other than those being worked on directly.

A Group IV isolation is used to minimize the loss of coolant during use of RHR Shutdown Cooling in the event that there is a leak in the system piping. At the time of the event a Group IV isolation was not required by Technical Specifications. This event did not affect the safe operation of the plant because it was only a momentary isolation condition, which was immediately reset.

During plant operation the Group IV valves would be closed. Maintenance on systems affecting these valves, when open, would only be done during shutdown.

As a corrective action, the CMAR, PMAR, Jumper and Lifted Lead, and Tagout procedures will be updated to provide more specific guidance for minimizing the possibility of inadvertent ESF actuations.

A search of the LER database did not reveal previous events of this nature. This event, which occurred on June 1, 1987, is being reported pursuant to 10CFR50.73(a)(2)(iv). A 30 day extension on this LER was granted by the resident inspector.

Iowa Electric Light and Power Company

July 17, 1987
DAEC-87-0778

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

Subject: Duane Arnold Energy Center
Docket No. 50-331
Op. License DPR-49
Licensee Event Report No. 87-018

Gentlemen:

In accordance with 10 CFR 50.73 please find attached a copy of the subject Licensee Event Report.

Very truly yours,

Rick L. Hannen 7/16/87
Rick L. Hannen
Plant Superintendent - Nuclear

RLH/JSA/go

Attachment - LER 87-018

cc: Mr. A. Bert Davis
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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