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ACCESSION NBR:8712090141 DOC.DATE: 87/12/04 NOTARIZED: NO DOCKET #
 FACIL:50-331 Duane Arnold Energy Center, Iowa Electric Light & Pow 05000331
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 HANNEN,R.L. Iowa Electric Light & Power Co.
 RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-029-00:on 871111,half Group III isolation & standby
 gas initiation during preventive maint.

W/8 ltr.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Duane Arnold Energy Center (DAEC)	DOCKET NUMBER (2) 0 5 0 0 0 3 3 1	PAGE (3) 1 OF 0 3
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TITLE (4)

Half Group III Isolation and Standby Gas Initiation During Preventive Maintenance

EVENT DATE (5)			LER NUMBER (8)			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	1	8	7	8	7	0	2	9	0	0	1	2	0	4	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)									
	20.402(b)		20.405(e)		<input checked="" type="checkbox"/> 50.73(a)(2)(iv)		73.71(b)			
POWER LEVEL (10) 0 1 6 4	20.405(a)(1)(i)		50.36(e)(1)		50.73(a)(2)(v)		73.71(e)			
	20.405(a)(1)(ii)		50.36(e)(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 Jeff S. Axline, Technical Support Engineer	TELEPHONE NUMBER AREA CODE 3 1 9 8 5 1 - 7 6 0 0
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPDOS	CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NPDOS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH DAY YEAR

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

On November 11, 1987, with the plant at power operation a Primary Containment Isolation System (PCIS) half group III ('B' side) isolation signal was received along with the initiation of the 'B' Standby Gas Treatment System. The isolation occurred while performing preventive maintenance. During connection of a voltmeter to a power supply which feeds two radiation monitors a noise spike was produced causing the monitors' trip points to be exceeded. While verifying the status of automatic functions it was found that one of the Reactor Building Heating and Ventilation (H&V) Isolation dampers had not fully closed. At this point the operators closed the redundant damper which is operated by the 'A' side (untripped) logic. The isolation was reset following automatic function verification and the Standby Gas Treatment System was returned to standby. This event had no affect on the safe operation of the plant.

The cause of this event was an electrical noise spike. The root cause for this spike, which was produced when the meter was connected, could not be determined. As a corrective action, similar preventive maintenance activities will be scheduled during refuel outages. In addition, a note will be added to the applicable procedures stating the possibility of an Engineered Safety Feature (ESF) actuation.

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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 2 9	— 0 0	0 2	OF	0 3

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

I. DESCRIPTION OF EVENT:

On November 11, 1987 at 1015 hours, the plant was operating at approximately 64% of rated thermal power when a Primary Containment Isolation System (PCIS) (EIIS System Code JM) half group III ('B' side) isolation was received along with the initiation of the 'B' Standby Gas Treatment System (EIIS System Code BH). The isolation occurred while performing preventive maintenance, when an Instrument and Control Technician connected a voltmeter to the power supply which feeds the Carbon Vault Radiation Indicating Switch (IL-RIS, DAEC RIS4138) and the 'B' Refuel Floor Exhaust Radiation Indicating Switch (IL-RIS, DAEC RIS4131B). During connection of the voltmeter, RIS4131B received an invalid signal which exceeded its upscale trip point. While verifying the status of automatic functions it was found that one of the Reactor Building Heating and Ventilation (H&V) Isolation Dampers (BH-BDMP-D07633B) had not fully closed. At this point the operators closed the redundant damper which is operated by the 'A' side (untripped) logic. At 1026 hours, following completion of the power supply voltage measurements, the isolation was reset and the Standby Gas Treatment System was returned to standby.

II. CAUSE OF EVENT:

The cause of this event was an electrical noise spike which was produced when a voltmeter was attached to the output of the power supply which feeds RIS4131B. The spike caused the high level trip point of RIS4131B to be exceeded which in turn initiated the isolation and Standby Gas. The root cause for the spike, which was produced when the meter was connected, could not be determined.

The cause of the isolation damper to not fully close was determined to be a sticking operator which stopped the damper approximately one half inch from the full closed position. The root causes for the sticking operator were a lack of preventive maintenance and a lack of in-line oilers and filters.

III. ANALYSIS OF EVENT:

This event had no affect on the safe operation of the plant. The half Group III Isolation Logic and Standby Gas Treatment Systems functioned as designed in response to the invalid signal which RIS4131B received. The isolation damper which did not fully close would not have adversely affected plant operation if this had been an actual event since its redundant damper was satisfactorily isolated in a timely manner.

IV. CORRECTIVE ACTION:

Immediate corrective actions were to determine the validity of the isolation signal and verify automatic function. Following verification, the affected systems were returned to normal status and a Corrective Maintenance Action Request (CMAR) was issued to repair the damper operator which had stuck.

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

As a long term corrective action, preventive maintenance on radiation monitors which have the potential for causing an Engineered Safety Feature (ESF) actuation will be scheduled during refuel outages. In addition, a note will be added to the applicable procedures stating the possibility of an ESF actuation. To increase isolation damper reliability a Preventive Maintenance Action Request (PMAR) will be initiated to provide periodic lubrication and a functional check of isolation dampers and their operators in addition to the operability check which is performed once per operating cycle. Engineering will evaluate the feasibility of installing local moisture traps and in-line oilers.

V. ADDITIONAL INFORMATION

After searching plant records, it was determined that an event which involved a half group III isolation while taking voltage measurements on a radiation monitor has occurred at least once at the DAEC prior to this event.

This event is being reported pursuant to 10 CFR 50.73(a)(2)(iv).

Iowa Electric Light and Power Company

December 4, 1987

DAEC-87- 1172

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 #87-029

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 for RLH

Rick L. Hannen
Plant Superintendent - Nuclear

RLH/JSA/go

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

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