Iowa Electric Light and Power Company

July 29, 1992
NG-92-3458

Mr. A. Bert Davis
Regional Administrator
Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

Subject: Duane Arnold Energy Center
Docket No: 50-331
Op. License DPR-49
Licensee Event Report #92-011

Gentlemen:

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

Very truly yours,

David L. Wilson

David L. Wilson
Plant Superintendent - Nuclear

DLW/JI/eah

cc: Director of Nuclear Reactor Regulation
Document Control Desk
U.S. Nuclear Regulatory Commission
Mail Station P1-137
Washington, D. C. 20555

NRC Resident Inspector - DAEC

IE22

NRC Form 366A
(4-95)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

APPROVED OMB NO. 3150-0104

EXPIRES: 4/30/92

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

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

TITLE (4): Automatic Emergency Diesel Generator Start Due to Momentary Emergency Bus Undervoltage During Electrical Storm

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	0 7	9 2	9 2	— 0 1 1	— 0 0	0 7	2 9	9 2	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)	1 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
Joseph P. Ickes, Technical Support Specialist	3 1 9 8 5 1 - 7 6 4 8

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 July 7, 1992, at 0342, with the plant operating at 100% power, the 'A' and 'B' Emergency Diesel Generators (EDG) automatically started but were not required to load.

The cause of automatic starting of the EDGs was a sensed momentary under-voltage condition on both emergency buses. The cause of the sensed under-voltage condition was a momentary grid disturbance caused by an electrical storm.

Following verification that emergency bus voltages were at satisfactory levels, the EDGs were secured and returned to the standby mode.

This event had no effect on the safe operation of the plant.

I. DESCRIPTION OF EVENT:

On July 7, 1992, at 0342, with the plant operating at 100% power, a startup transformer trouble alarm was received. Immediately following, the 'A' and 'B' Emergency Diesel Generators (EDG) automatically started. This occurred due to a momentary grid disturbance caused by an ongoing electrical storm. Although the EDGs started, they were not wired to load. In addition to the EDG starts, one of two main generator output breakers opened, the 'A' Reactor Water Cleanup (RWCU) pump tripped and the primary instrument and service air compressors were momentarily deenergized.

II. CAUSE OF THE EVENT:

The cause for the automatic starting of the EDGs was a sensed momentary under-voltage condition on both emergency buses. The cause for the sensed under-voltage condition was a momentary grid disturbance due to an electrical storm. The affected main generator output breaker also opened due to the momentary grid disturbance caused by the storm.

Tripping of the 'A' RWCU pump occurred as designed when its solid state adjustable speed motor controller sensed a voltage dip on the associated emergency bus. The primary instrument and service air compressors were deenergized when momentary faults were sensed on both the normal and backup feedlines supplying their transformers. The circuit breakers on these lines opened as designed.

III. ANALYSIS OF EVENT:

This event had no effect on the safe operation of the plant. The EDGs started as designed in response to a sensed momentary voltage dip on the emergency busses. The main generator output breaker also opened as designed. The RWCU system is not a safety related system and tripping of the pump had no adverse consequences. The primary instrument and service air compressors were deenergized for approximately one minute. During this time the secondary instrument and service air compressors supplied all plant air loads.

IV. CORRECTIVE ACTIONS:

At 0344 the primary instrument and service air compressors were reenergized. At 0347 the main generator output breaker which had opened, was reclosed by the system control center. Following verification that emergency bus voltages were at satisfactory levels, the EDGs were inspected locally and found to be operating satisfactorily. Both were then secured and returned to the standby mode, the 'B' at 0350, and the 'A' at 0353. The RWCU system was placed back in service at 0354.

In addition, Iowa Electric Light & Power Company will evaluate the need for additional lightning protection on the feed lines that supply the primary instrument and service air compressor transformers. This evaluation will identify possible improvements which could be made to the system and provide a plan for implementation of any recommendations generated. The evaluation will be completed by October 1, 1992.

V. ADDITIONAL INFORMATION:

A) PREVIOUS SIMILAR EVENTS

DAEC LER 91-08 describes a similar event that occurred on August 7, 1991

B) EIIS SYSTEM AND COMPONENT CODES

Systems:
- FK - Switchyard System
- EK - Emergency Onsite Power Supply System
- CE - Reactor Water Cleanup System
- LD - Instrument Air Supply System
- LF - Service Air System

Components:
- EK - DG - Diesel Generator
- CE - SC - Speed Controller
- LD - CMP - Compressor
- LF - CMP - Compressor

This report is being submitted pursuant to 10 CFR 50.73 (a)(2)(iv).