



Commonwealth Edison
Braidwood Nuclear Power Station
Route #1, Box 84
Braceville, Illinois 60407
Telephone 815/458-2801

June 28, 1990
BW/90-0664

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

Dear Sir:

The enclosed Licensee Event Report from Braidwood Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.73(a)(2)(iv) which requires a 30-day written report.

This report is number 90-007-00; Docket No. 50-456.

Very truly yours,

R. E. Querio
Station Manager
Braidwood Nuclear Station

REQ/JDW/sjs
(7126z)

Enclosure: Licensee Event Report No. 90-007-00

cc: NRC Region III Administrator
NRC Resident Inspector
INPO Record Center
CECo Distribution List

9007060250 900628
PDR ADDCK 05000456
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EX-22
11

LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) _____ Docket Number (2) _____ Page (3) _____
 0 | 5 | 0 | 0 | 0 | 4 | 5 | 6 | 1 | of | 0 | 3

Title (4) Inadvertent Start of the 1A Auxiliary Feedwater Pump due to
 Testing Methodology Deficiency

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
0	6	0	1	9	0	9	0	0	6
0	6	0	1	9	0	9	0	0	6
OPERATING MODE (9)			1		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)				
POWER LEVEL (10)			0		9		8		
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
20.405(a)(1)(iii)			50.73(a)(2)(i)				50.73(a)(2)(viii)(A)		in Abstract
20.405(a)(1)(iv)			50.73(a)(2)(ii)				50.73(a)(2)(viii)(B)		below and in
20.405(a)(1)(v)			50.73(a)(2)(iii)				50.73(a)(2)(x)		Text)

LICENSEE CONTACT FOR THIS LER (12)

Name _____ TELEPHONE NUMBER _____
 AREA CODE _____
 Phil Lau, HPES Coordinator Ext. 2957 8 | 1 | 5 | 4 | 5 | 8 | - | 2 | 8 | 0 | 1

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

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

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Submission Date (15) _____
 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, 1990 a Reactor Operator (RO) was performing a Slave Relay Surveillance that tested the 1A Auxiliary Feedwater Pump (AF) Steam Generator Low Low Level Auto Start Actuation Relay, K633. This relay was part of the Solid State Protection System. As part of the restoration portion of the procedure the resistance across the relay contacts was measured to verify an open circuit prior to enabling the system. At 0927 the NSO measured the resistance across terminals 1 and 2 of relay K633 in accordance with the procedure. While maintaining one of the ohmmeter probes on terminal 2 the NSO removed the probe from terminal 1. During the removal of the probe the NSO inadvertently touched the probe to the exposed terminal point 13 on relay K633. This created a current path from a parallel circuit through the ohmmeter to the starting relay for the 1A AF pump. This resulted in the auto start of the pump. The 1A AF pump control switch was immediately placed in the "pullout" position and the pump was secured. The cause of this event was a methodology deficiency which is considered a programmatic deficiency. Ohmmeter probes have been modified to reduce the exposed metal surfaces to a small portion of the tip. Alternate locations for obtaining the readings will be used. Training will be provided. Previous corrective actions are not applicable.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						Page (3)		
		Year	///	Sequential	///	Revision				
				Number		Number				
Braidwood 1	0 5 0 0 0 4 5 6	9 0	-	0 0 7	-	0 0	0 2	OF	0 3	

TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 1; Event Date: June 1, 1990; Event Time: 0927;
 Mode: 1 - Power Operation; Rx Power: 98%;
 RCS [AB] Temperature/Pressure: NDT/NOP

B. DESCRIPTION OF EVENT:

There were no systems or components inoperable at the beginning of the event which contributed to the severity of the event. A Nuclear Station Operator (NSO) (Licensed Reactor Operator) was performing Braidwood Operating Surveillance (BwOS 3.2.1-941, Unit One Quarterly Slave Relay Surveillance (Train A - K633)). The procedure tested the 1A Auxiliary Feedwater Pump (AF) [BA] Steam Generator Low Low Level Auto Start Actuation Relay, K633, which was an output function of the Solid State Protection System (SSPS) [JE]. As part of the restoration portion of the procedure the resistance across the relay contacts was measured to verify an open circuit prior to enabling the system.

At 0927 on June 1, 1990 the NSO measured the resistance across terminals 1 and 2 of relay K633 in the Train A SSPS panel in accordance with the procedure. The value of the measurement indicated an open circuit. While maintaining one of the ohmmeter probes on terminal 2 the NSO removed the probe from terminal 1. During the removal of the probe the NSO inadvertently touched the probe to the exposed terminal point 13 on relay K633. This created a current path from a parallel circuit through the ohmmeter to the starting relay for the 1A AF pump. This resulted in the auto start of the pump. After verifying the auto start was not required, the 1A AF pump control switch was immediately placed in the "pullout" position and the pump was secured.

The appropriate MRC notification via the ENS phone system was made at 1007 pursuant to 10CFR50.72(b)(2)(ii).

This event is being reported pursuant to 10CFR50.73(a)(2)(iv) - any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature, including the Reactor Protection System.

C. CAUSE OF EVENT:

The root cause of this event was a methodology deficiency. This is considered a programmatic deficiency. The procedure specified taking resistance readings on the relay terminal points 1 and 2. These terminal points are located on the back side of a "dual deck" relay. The spacing between the front row terminal points and the back row terminal points is 2 inches. The spacing between the terminal points on a row either back or front, is 3/4 of an inch. The NSO was provided with an ohmmeter with probes that have 9/16 of an inch metal tips. Additionally the NSO was required to read a value from the ohmmeter while holding the probes on the terminal points. Due to the physical layout of the panel the meter cannot be placed near the relay. As a result the NSO was required to hold both a probe and the ohmmeter in one hand the second probe in the other hand.

A review of the task performance requirements was conducted by personnel trained in Human Performance Enhancement System (HPES) event evaluation techniques. Based on the results of this review it has been concluded that the methodology for task performance places that NSO at a higher than acceptable risk level for creating an inadvertent actuation such as the one that occurred in this event. The deficiency in the methodology for performing the task created the event.

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Braidwood 1	0 5 0 0 0 4 5 6	9 0	-	0 0 7	-	0 0	0 3 OF 0 3
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D. SAFETY ANALYSIS:

This event had no effect on the safety of the plant or the public. All systems operated as designed. The safety function provided by the Auxiliary Feedwater System was not required and was inappropriate for existing plant conditions. Discussions on redundant equipment are not applicable. The AF initiation was neither desired or required. There are no reasonable and credible alternative conditions that would have been more severe.

E. CORRECTIVE ACTIONS:

The 1A AF pump was immediately secured by placing the Control Switch in the pull out position.

Ohmmeter probes that are used to obtain readings on back row terminal points of dual deck relays have been modified to reduce the exposed metal surfaces to a small portion of the probe tip.

A review will be conducted to identify the procedures that require readings obtained by placing probes on back row contacts of dual deck relays. Alternate locations for obtaining the readings on the relays identified by the review will be used if available. This action will be tracked to completion by action item 456-200-90-02201.

This event will be covered in a training tailgate session for appropriate Operating Dept. personnel. This action item will be tracked to completion by action item 456-200-90-02202.

F. PREVIOUS OCCURRENCES:

There was a previous occurrence of an AF pump auto start during the performance of this procedure.

LER No.	DVR Number	Title
50-457/88-006	20-2-88-018	Inadvertent Start of Unit 2 Auxiliary Feedwater Pump Due to Personnel Error

The corrective actions were implemented addressing both root and contributing causes. Previous corrective actions are not applicable to this event.

G. COMPONENT FAILURE DATA:

This event was not the result of component failure, nor did any components fail as a result of this event.