



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

June 25, 1992
BW/92-0334

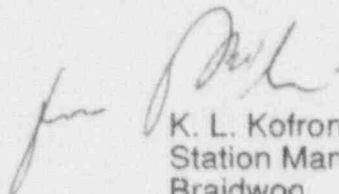
U. S. Nuclear Regulatory Commission
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Dear Sir:

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

This report is number 92-003-00, Docket No. 50-457.

Very truly yours,



K. L. Kotron
Station Manager
Braidwood Nuclear Station

KLK/AS/mko
550/ZD85G

Encl.: Licensee Event Report
No. 92-003-00

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

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1)

Docket Number (2)

Page (3)

Braidwood 2

0 | 5 | 0 | 0 | 0 | 4 | 5 | 7 | 1 | of | 0 | 2

Title (4)

2A Essential Service Water Pump Automatic Start Due to Procedural 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	Docket Number
0 5	2 7	9 2	9 2	0 0 3	0 0	0 5	2 0	9 2	None	0 5 0 0 0 1 1

OPERAT
MODL (9)

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR

(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)
		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

A. Stogsdill, Technical Staff Engineer

Ext. 2843

AREA CODE

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	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

Expected Month | Day | Year

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)

Prior to the event, ESFAS Instrumentation Slave Relay Surveillance 2Bw05 3.2.1-803 (Train A Automatic Safety Injection-K608) was in progress. The decision was made to exit the procedure due to the presence of wire markers on the lugs of the wires being different from the numbers printed on the terminal strip. At 0358, on May 27, 1992, while performing the first step of the restoration section of the surveillance, the 2A SX pump (Essential Service Water Pump) auto started. The pump was secured and the surveillance was completed. The cause of the event was a procedural deficiency. An abnormal electrical configuration was created upon emergency exiting the surveillance. The surveillance procedure will be revised to prevent this type of actuation. The location of the relays within the cabinet, and a description of the terminal strips for the relays will be added as an attachment to the surveillance. The wire markers were removed from the lugs of the associated relay.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						Page (3)			
		Year	///	Sequential Number	///	Revision Number					
Braidwood 2	0 5 0 0 0 4 5 7	9 2	-	0 0 3	-	0 0	0 2	0 1	0 1	3	
TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]											

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 2; Event Date: May 27, 1992; Event Time: 0358
 Mode: 5 - Cold Shutdown; Rx Power: 000%;
 RCS (AB) Temperature / Pressure: 130 Degrees F / 0 psig;

B. DESCRIPTION OF EVENT:

Prior to the event, ESFAS Instrumentation Slave Relay Surveillance 2BwOS 3.2.1-803 (Train A Automatic Safety Injection-K608) was in progress. The Nuclear Station Operators (NSO's) (licensed reactor operators) performing the surveillance were unclear as to the method for completing step F.1.15. The procedure was completed satisfactorily through step F.1.14. Step F.1.15 requires the operator to perform a continuity measurement across a set of contacts on a relay within 2PA13J (ESF Sequencing & Actuation Cabinet Train A). The reason for concern on the NSO's part was determining the correct point to connect the volt-ohmmeter (VOM) for the measurement. The proper location was unclear due to the presence of wire markers on the lugs of the wires attached to the terminal strip of the relay to be measured. The lug markings were different from the numbers printed on the terminal strip identifying each wire of that relay. After discussion with the NSO's, the Control Room Supervisor made the decision to emergency exit the procedure per step E.5 of the procedure, and restore the system beginning with subsection F.3.0.

At 0358, on May 27, 1992, while performing the first step of the restoration section of the surveillance, the 2A SX pump (Essential Service Water Pump) auto started when step F.3.1 was performed. The pump was secured and the surveillance was completed.

The appropriate NRC notification via the ENS phone system was made at 0559 pursuant to 10CFR50.72(b)(2)(ii).

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

C. CAUSE OF EVENT:

Technical Staff investigation as to the cause for the auto start of the 2A SX Pump generated from the 2PA13J cabinet revealed no apparent equipment failures, personnel errors, or apparent procedural deficiencies after initial review of the sequence of events and the electrical schematic diagrams associated with the cabinet. Upon further review of the electrical schematics it was deduced that the possibility of a so called "relay race" had occurred within the cabinet circuitry when performing restoration that could have caused the pump start.

At approximately 1644, the surveillance was partially reperformed to verify that this was the cause for the actuation. When step F.3.1 was performed, a momentary relay actuation was observed from all of the equipment actuation relays within 2PA13J.

An investigation into why the incorrect wire markers were on the lugs of the wires attached to the relay was performed. It was found that the relay located next to the subject relay had recently been removed under NWR #A51186. The markers were probably utilized for removal of the relay next to the subject relay and never removed at completion of the job.

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						Year	///	Sequential Number	///	Revision Number													
Braidwood 2		0	5	0	0	0	4	5	7	9	2	-	0	0	3	-	0	0	0	3	Of	0	3
TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]																							

In summary, the root cause for the event was a result of an abnormal electrical configuration created when emergency exiting the surveillance. The cause was a procedural deficiency.

D. SAFETY ANALYSIS:

This event had no effect on the safety of the plant or the public. The Safety Injection logic functioned as designed. Both trains of Essential Service Water System were operable throughout the event.

E. CORRECTIVE ACTIONS:

Operations prudently exited the surveillance upon noticing the identification discrepancy.

The corrective actions taken to insure adequate resolution of this problem were as follows:

- 1) A revision was completed the same day to the surveillances for both Units, incorporating an additional step prior to step F.3.1 to prevent the chance of any relay race from occurring when emergency exiting.
- 2) The addition of another attachment will be made to the surveillance that illustrates the location of the relays within the cabinet and a description of the relay's terminal strip. This will be tracked to completion by action item 457-180-92-00301.
- 3) The temporary wire markers on the lugs of the wires attached to the terminal strip of the relay were removed.
- 4) The details of this event will be provided to the Electrical Maintenance Department for inclusion in their periodic training. Emphasis will be placed on the need to remove temporary wire markers when work is complete. This will be tracked to completion by action item 457-180-92-00302.
- 5) A review was performed of the corresponding Byron station surveillance for similar consequences.

F. PREVIOUS OCCURRENCES:

There have been previous occurrences of actuations as a result of procedural deficiencies, however, the causes and corrective actions are not applicable to this event.

G. COMPONENT FAILURE DATA:

None