



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

April 22, 1992
BW/92-0208

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

Dear Sir:

Subject: Licensee Event Report 92-004-00

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

This report is number 92-004-00; Docket No. 50-456.

K. L. Kofron
Station Manager
Braidwood Nuclear Station

KLK/DN/dla
544/ZD85G

Encl.: Licensee Event Report No. 92-004-00

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

23001
9204290304 920422
PDR ADDCK 05000456
S FDR

Handwritten initials/signature

LICENSEE EVENT REPORT (LER)														
Facility Name (1) Braidwood 1										Docket Number (2) 0 5 0 0 0 4 5 6			Page (3) 1 of 0 3	
Title (4) Containment Isolation Valve Closure caused by Jumper Installation on Wrong Terminal Points														
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)			
									None		0 5 0 0 0			
0 3	2 5	9 2	9 2	0 0 4	0 0	0 4	2 2	9 2			0 5 0 0 0			
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)		1 0 0		20.402(b)		20.405(c)		<input checked="" type="checkbox"/> 50.73(a)(2)(iv)		73.71(b)				
				20.405(a)(1)(i)		50.36(c)(1)		<input type="checkbox"/> 50.73(a)(2)(v)		73.71(c)				
				20.405(a)(1)(ii)		50.36(c)(2)		<input type="checkbox"/> 50.73(a)(2)(vii)		Other (Specify in Abstract below and in Text)				
				20.405(a)(1)(iii)		50.73(a)(2)(i)		<input type="checkbox"/> 50.73(a)(2)(viii)(A)						
				20.75(a)(1)(iv)		50.73(a)(2)(.1)		<input type="checkbox"/> 50.73(a)(2)(viii)(B)						
				20.405(a)(1)(v)		50.73(a)(2)(iii)		<input type="checkbox"/> 50.73(a)(2)(x)						
LICENSEE CONTACT FOR THIS LER (12)														
Name P. Lau, Regulatory Assurance										TELEPHONE NUMBER Ext. 2957				
										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	MANUFAC- TURER	REPORTABLE TO NWRDS	//// //// //// //// ////	CAUSE	SYSTEM	COMPONENT	MANUFAC- TURER	REPORTABLE TO NWRDS	//// //// //// //// ////			
SUPPLEMENTAL REPORT EXPECTED (14)														
Yes (If yes, complete EXPECTED SUBMISSION DATE)										<input checked="" type="checkbox"/> NO		Expected Submission Date(15)		
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)														

On March 25, 1992 Special Procedure (SP 92-002) was performed to test Slave Relay K605 for Train A Containment Isolation Phase A. During SP 92-002, an electrical jumper would be installed to prevent closure of the Chemical Volume Control System letdown isolation valve 1CVB152. The cycling of the letdown isolation valve during slave relay testing had been identified as causing thermal stress on the Volume Control Tank spray nozzle. Two Electrical Maintenance Department electricians (EMD) were assigned to install the jumper on Terminal Board (TB610-1 and TB610-2) in the rear of the Train A Solid State Protection System Output Cabinet. The cabinet door was unlocked and TB610-1 and TB610-2 were identified. The EMD electrician then picked up the jumper and moved into the cabinet while kneeling on the floor outside the cabinet. Due to spatial misorientation, the EMD electrician inadvertently followed the incorrect row of terminal strips. At 1037, the EMD electrician installed the jumper on TB611-1 and TB611-2 and caused a closure of Containment Chilled Water Isolation valve 1W0006A. The cause of the jumper being placed on TB611-1 and TB611-2 was the location of the Terminal Board labeling, cramped work area conditions, and the requirement to directly see the connection point on Terminal Board during attachment of the jumper.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						Page (3)		
		Year /// ///	Sequential Number /// ///	Revision Number /// ///						
Braidwood 1	0 5 0 0 0 4 5 6	9 2	- 0 0 4	-	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: March 25, 1992; Event Time: 1037
 Mode: 1 - Power Operation; Rx Power: 100%;
 CS (AB) Temperature / Pressure: NOT/HOP;

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.

Special Procedure (SP 92-002) "Unit 1 Engineered Safeguards Features Actuation System Instrumentation Slave Relay Test" had been written to perform a Slave Relay Test of the Train A Containment Isolation Phase A Relay K605. The intent of SP 92-002 was to determine whether the opening of the relay output contacts could be measured. An electrical jumper would be installed to prevent closure of the Chemical Volume Control System (CV) (CB) letdown isolation valve 1CV8152. The cycling of the letdown isolation valve(s) during slave relay testing had been previously identified by Westinghouse as causing thermal stress on the Isolation Control Tank spray nozzle.

On March 25, 1992 SP 92-002 was performed. The Station Control Room Engineer (SCRE) (licensed-SRO) assigned three Nuclear Station Operators (NSO) (licensed-RO) to perform SP 92-002. One NSO remained in the control room to coordinate the test and the other two would go in the Auxiliary Electric Equipment (AEER) to operate the test panel and communicate with the control room NSO. Two Electrical Maintenance Department electricians (EMD) (non-licensed) and a Technical Staff System Test Engineer (STE) (non-licensed) were also assigned to assist the NSO's.

After obtaining the permission of the SCRE to begin SP 92-002, the NSO's, the EMD electricians and the STE entered the AEER. The group proceeded to the Train A Solid State Protection System (EF) (JE) Output Cabinet (1PA09J). Communication with the control room NSO was established. It was determined that the jumper would be installed by EMD in the rear of 1PA09J. The jumper was to be placed on terminal points 1 and 2 on Terminal Board (TB610-1 and TB610-2). At this time, the cabinet door was unlocked. After opening the rear 1PA09J output cabinet door, one EMD electrician correctly identified TB610-1 and TB610-2 as the location for placing the jumper. One of the NSO's present and the STE confirmed that the EMD electrician had located the correct terminal points.

Since the group was concerned about placing the jumper on the correct location, a second EMD electrician identified TB610-1 and TB610-2 as the location for the jumper. The other NSO and STE again agreed that the location had been properly identified. At this time, the NSO's moved to the front of the cabinet to prepare for the steps which followed the jumper installation. The first EMD electrician then picked up the jumper and moved into the cabinet while kneeling on the floor outside the cabinet. During this entry, the EMD electrician inadvertently followed the incorrect row of terminal strips. At 1037, the EMD electrician installed the jumper on TB611-1 and TB611-2. This caused a closure of valve 1W0006A "Containment Chilled Water Isolation" and was considered to be reportable 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.

The appropriate NRC notification via the ENS phone system was made at 1223 pursuant to 10CFR50.72(b)(2)(ii).

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Braidwood 1	0 5 0 0 0 4 5 6	9 2	-	0 0 4	-	0 0	0 3	OF	0 3	
TEXT Energy Industry Identification System (EIS) codes are identified in the text as (XX)										

C. CAUSE OF EVENT:

The cause of the jumper being placed on TB611-1 and TB611-2 was the location of the Terminal Board labeling, cramped work area conditions, and the requirement to directly see the connection point on Terminal Board during attachment of the jumper.

The label identifying the Terminal Board was not directly attached.

The cramped work area forced the EMD electrician to enter the cabinet in a horizontal position. This position caused the EMD electrician to become spatially misoriented. When the EMD electricians and the work group were verifying the jumper connection points, they were outside the cabinet with an unobstructed view. Upon entering the cabinet, the EMD electrician obscured the available lighting in the area of the Terminal Board which made it difficult to see where to place the jumper. Also, the EMD electrician's body position prevented the other members of the work group from observing the placement of the jumper.

The requirement to directly see the connection point forced the EMD electrician to completely enter the cabinet because TB610-1 and TB610-2 were located at the far end of the Terminal Board. With the head of the EMD electrician in this location, the Terminal Board labels could not be read.

D. SAFETY ANALYSIS:

This event had no effect on the safety of the plant or the public. All systems operated as designed. The closure of valve 1W0006A was later expected to occur when relay K605 was functionally tested. The early closure of the valve had no safety significance. Additionally, during accident conditions, the containment chilled water system (WC) (NH) is isolated and is not designed to provide any containment cooling.

E. CORRECTIVE ACTIONS:

After identifying that the jumper had been placed on the incorrect terminals, the testing was stopped and the jumper was removed. SP 92-002 was later reperformed with the jumper placed on the correct terminals.

A committee will be formed to evaluate the method to use for proper jumper placement in the AEER and other locations in the plant. This item will be tracked to completion by Action Item No. 456-180-92-00401.

F. PREVIOUS OCCURRENCES:

None

G. COMPONENT FAILURE DATA:

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