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

March 22, 1993
BW/93-0112

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 with the requirement of 10CFR50.73(a)(2)(i) which requires a 30-day written report.

This report is number 93-003, Docket No. 50-456.

K. L. Kofron
Station Manager
Braidwood Nuclear Station

ELK/AJS/ccz
ZCRBG/30

Encl: Licensee Event Report No. 50-456/93-003

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

250024

NRC FORM 366 (5-92) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555-0001, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Braidwood 1	05000456	1 OF 4

TITLE (4)
Missed Technical Specification Surveillance Due to Preservice Design Deficiency in SSPS Test Circuitry

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 NAME	DOCKET NUMBER
									Braidwood 2	05000457
02	23	93	93	-- 003 --	00	03	22	93	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	099	20.402(b)		20.405(c)		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
		20.405(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	(Specify in Abstract below and in Text, NRC Form 366A)
		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 (Include Area Code)
D. Comisky, Technical Staff Engineer	(815)458-2801 x2775

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
				No						

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 15 single-spaced typewritten lines) (16)

A lead for the SSPS test logic circuitry was identified as being landed on the wrong terminal board point, preventing independent testing of Containment Isolation Phase "B", as required by Technical Specification 4.3.2.1. At 1543, Technical Specification 3.0.3 was entered for both units. The root cause of the event was a preservice design deficiency. The test logic circuitry, as supplied by Westinghouse, was wired in accordance with the Westinghouse wiring list, which was incorrect. The incorrectly wired leads were moved to the positions specified on the schematic drawings. Subsequent testing proved the test circuitry was functioning properly. There have been previous reportable events involving wiring discrepancies. However, the causes and corrective actions from these events are not applicable to this event.

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 1; Event Date: February 23, 1993;
Event Time: 1543;
Mode: 1 - Power Operation; Rx Power: 099%;
RCS [AB] Temperature/Pressure: NOT / NOP;

Unit: Braidwood 2; Event Date: February 23, 1993;
Event Time: 1543;
Mode: 1 - Power Operation; Rx Power: 082%;
RCS [AB] Temperature/Pressure: NOT / NOP;

B. DESCRIPTION OF EVENT:

On the afternoon of February 22, 1993, the Solid State Protection System (SSPS) System Engineer at Braidwood Station was informed of a possible concern identified at Byron Station. While checking the wiring of a switch that was replaced, Byron identified a lead as being landed on the wrong terminal board point, according to the schematic drawings. However, the wiring matched the wiring list drawing. On the morning of February 23, the field wiring at Braidwood Station was independently verified to be as shown on the wiring list. Westinghouse (the SSPS manufacturer) and Site Engineering were contacted and requested to identify the proper position of the lead in question.

On the afternoon of February 23, Westinghouse and Site Engineering informed Braidwood Station that the wiring in the field was incorrect. The effect of this incorrect wiring was to prevent independent testing of the Actuation Logic Test surveillance requirement for Containment Isolation Phase "B", as required by Technical Specification 4.3.2.1. At 1543, Technical Specification 3.0.3 was entered for both units. The provisions of Technical Specification 4.0.3 were invoked, which allow for the action requirements to be delayed 24 hours to permit the completion of the missed surveillance.

C. CAUSE OF EVENT:

The root cause of the event was a preservice design deficiency. The test logic circuitry, as supplied by Westinghouse, was wired incorrectly. The wiring was in accordance with the Westinghouse wiring list, which was incorrect.

Routine surveillance testing was unable to detect the incorrect wiring. The wiring configuration was set up such that, when performing the Actuation Logic Test for Containment Isolation Phase "B", the circuit was actually performing the Containment Spray Actuation Logic Test. Since the Containment Spray and Containment Isolation Phase "B" utilize the same inputs (containment pressure) and the same logic (2/4 pressures above 20 psig), the logic testing portion of SSPS did not detect any abnormalities.

D. SAFETY ANALYSIS:

There was no impact on safety. The incorrect leads were only utilized for testing purposes, and had no effect on the required automatic actuations. The actuation circuitry was verified to operate every 36 months during the performance of the ESF Response Time Surveillances. The net effect of the rewiring is to ensure that the bimonthly testing requirement is met for the Containment Isolation Phase "B" Automatic Actuation Logic.

E. CORRECTIVE ACTIONS:

The incorrectly wired leads were moved to the positions specified on the schematic drawings. Testing was performed which verified that the correct leads were moved and that both the Containment Spray and Containment Isolation Phase "B" logic circuitry were tested. This testing also verified that the integrity of the existing actuation circuitry was maintained. The testing for both Units was completed by 2157 on February 23, and all related LCOARS were exited.

The Westinghouse wiring list drawing will be changed to reflect the proper wiring configuration. This will be tracked by action item 456-180-93-00301.

An INPO Nuclear Network entry was made on March 3, 1993 (OE 5844) to alert other Westinghouse plants of the identified wiring discrepancy. Additionally, this item is currently under review by the Commonwealth Edison Corporate Part 21/Technical Issues Committee for possible other reporting requirements.

F. PREVIOUS OCCURRENCES:

There have been previous reportable events involving wiring discrepancies. However, the causes and corrective actions from these events are not applicable to this event.

LER 1-87-005; INCORRECT WIRING OF DRPI SYSTEM CAUSES UNRELIABLE ROD POSITION INDICATION AND SUBSEQUENT MANUAL RX TRIP - the external wiring connections to the DRPI data cabinets were reversed for rods D-12 and M-12. The electrical installation drawings were in error.

LER 1-87-058; BOTH TRAINS OF CONTROL ROOM VENTILATION INOPERABLE DUE TO INCORRECT DESIGN INCORPORATION - The original system design change which revised the heater interlocks was inadequate due to a miscommunication between two divisions of the architect engineer. The design change was correctly shown schematically in ECN 34272, but incorrectly incorporated electrically in ECN 34446.

G. COMPONENT FAILURE DATA:

This event was neither the result of a component failure nor did any components fail as a result of this event.