

Commonwealth Edison Company  
Braidwood Generating Station  
Route #1, Box 84  
Braceville, IL 60407-9619  
Tel 815-458-2801



December 15, 1995  
BW/95-0119

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

Gentlemen:

The enclosed Licensee Event Report from Braidwood Generating Station is being transmitted in accordance with the requirement of 10 CFR 50.73(a)(2)(iv), which requires a 30-day written report.

This report is number 95-016-00, Docket No. 50-456.

Yours Truly,

for T.J. Tulon  
Station Manager  
Braidwood Nuclear Station

TJT/MO/ema  
l:\shared\reg assur\b95-0119

Encl: Licensee Event Report  
No. 456-95-016-00

cc: NRC Region III Administrator  
NRC Resident Inspector  
INPO Record Center  
ComEd Distribution Center  
I.D.N.S.  
I.D.N.S. Resident Inspector

9512210006 951215  
FDR ADOCK 05000456  
S PDR

A Unicom Company

**LICENSEE EVENT REPORT (LER)**

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

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 (MNB 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.

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

TITLE (4) Manual Reactor Trip inserted during DRPI Operability testing due to a blown Stationary Gripper Fuse in CBB for Rod K-12.

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 NUMBERS
11	17	95	95	-- 016 --	00	12	15	95	FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)	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				
		20.405(a)(1)(iii)	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 M. Olson, Root Cause Team	TELEPHONE NUMBER (Include Area Code) (815)458-2801 x2028
-----------------------------------	---

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
x	RBK	CKTBRK	B569	NO					
X	RBK	INDREC	S156	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)

During the performance of Digital Rod Position Indication (DRPI) [RBK] operability testing, Rod Control Bank 'B' was being withdrawn. All rods in this bank indicated 12 steps withdrawn from the fully inserted position with the exception of Control Rod K-12, which indicated 0 steps. Following discussion with the Shift Engineer and Senior Operations Supervisor, the Reactor Trip Breakers were manually opened to allow re-insertion of all rods in Control Bank 'B'. All rods fully inserted following the manual Reactor Trip as designed. It was later determined that the Stationary Gripper Fuse (FU #19) was blown for Control Rod K-12. The fuse was subsequently replaced and DRPI testing completed satisfactorily. No administrative nor Technical Specification requirements directed the opening of the Reactor Trip Breakers. The breakers were opened based on a conservative decision. At 1340, the appropriate NRC notification was made via the ENS phone system pursuant to 10CFR50.72(b)(2)(ii).

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

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 (MNB 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.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)		PAGE (3)
Braidwood Unit 1	05000456	YEAR 95	SEQUENTIAL NUMBER -- 016 --	REVISION NUMBER 00
				2 OF 4

TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

**A. PLANT CONDITIONS PRIOR TO EVENT:**

UNIT: Braidwood Unit 1                      EVENT DATE: 11/17/95  
 EVENT TIME: 1149  
 MODE: 5                      RX POWER: 0%  
 RCS [AB] TEMPERATURE/PRESSURE: Cold Shutdown

**B. DESCRIPTION OF EVENT:**

There were no systems or components inoperable at the beginning of this event that contributed to the severity of the event.

On 11/17/95, in preparation for performing 1BwVS 1.3.3-1, Digital Rod Position Indication (DRPI) [RBK] Operability Testing, both Motor Generator sets were energized and the Reactor Trip Breakers closed.

Control Bank 'A' was the first bank fully withdrawn to 231 steps and then reinserted to 0 steps successfully. Control Bank 'B' was tested next. As Control Bank 'B' was being withdrawn, all rods in the group indicated motion except for Control Rod K-14. Control Rod withdrawal for Control Bank 'B' was halted with seven of the rods indicating 12 steps withdrawn and one rod indicating 0 steps by DRPI indication. The Rod Bank Demand Counters for Control Bank 'B' read 10 steps on counter B-1 and 9 steps on counter B-2. Following discussion with the Shift Engineer and Senior Operations Supervisor, the Reactor Trip Breakers were manually opened; re-inserting the remaining seven Control Rods in Control Bank 'B'. An Operations and Instrument Maintenance investigation revealed the indicator for the stationary gripper fuse, FU19, for rod K-14 in Power Cabinet 1BD (EPN 1RD05J) was blown. All components functioned as designed following insertion of the manual Reactor Trip signal.

The indicator and fuse FU19 were both tested with an ohmmeter and found to be open. The resistance of the CRDM stationary coil for rod K-14 was measured and found acceptable. The fuse and indicator were subsequently replaced.

Before continuing with the DRPI Operability Surveillance, a further inspection of the indicators in all five Rod Control Power Cabinets was performed. During this investigation, the indicator for the movable gripper fuse FU50 in Power Cabinet 2BD (EPN 1RD03J) for Shutdown Bank 'B' rod G-13 was also found open. The fuse and indicator were tested and replaced.

NRC FORM 366A (5-92)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95	
<b>LICENSEE EVENT REPORT (LER)</b> TEXT CONTINUATION				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.	
FACILITY NAME (1)		DOCKET NUMBER (2)	LER NUMBER (6)		PAGE (3)
Braidwood Unit 1		05000456	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
			95	-- 016 --	00
					3 of 4

TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

**B. DESCRIPTION OF EVENT (continued):**

The Reactor Trip Breakers were subsequently reclosed and the DRPI Operability Surveillance was completed satisfactorily.

The appropriate NRC notification was made via the ENS phone system at 1340 pursuant to 10CFR50.72(b)(2)(ii).

**C. CAUSE OF EVENT:**

The manual Reactor Trip was initiated as a conservative action resulting from the blown stationary gripper fuse on Control Rod K-14. There are no administrative nor Technical Specification requirements to open the Reactor Trip Breakers in this situation.

**D. SAFETY ANALYSIS:**

This event had no effect on the safety of the plant or the public. All systems operated as designed except for Control Rod K-14 which remained on the bottom of the core during DRPI Operability testing. All remaining rods in Control Bank 'B' automatically returned to 0 steps following the manual reactor trip signal.

At the time of the DRPI testing, RCS boron concentration was 2328.5 ppm as confirmed by a sample of the RCS at 0800 that morning. No plant evolutions were performed that would have decreased this boron concentration. The subsequent sample taken at 1652 on 11/17/95 confirm this showing RCS boron concentration at 2337 ppm. All other Control and Shutdown Bank rods remained in the fully inserted position during the testing of Control Bank 'B'.

During execution of the DRPI surveillance, all rods remained within a 12 step alignment and all rods remained trippable. All conditions and actions for Special Test Exceptions Tech Spec 3.10.5 were met.

**E. CORRECTIVE ACTIONS:**

The indicator and fuse FU19 were both tested with an ohmmeter and found open. The resistance of the CRDM stationary coil for rod K-14 was measured and found to be acceptable. The fuse and indicator were replaced.

NRC FORM 366A  
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104  
EXPIRES 5/31/95**LICENSEE EVENT REPORT (LER)**  
TEXT CONTINUATION

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 (MNB 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.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Braidwood Unit 1	05000456	95	-- 016 --	00	4 OF 4

TEXT (if more space is required, use additional copies of NRC Form 366A) (17)

**E. CORRECTIVE ACTIONS (continued):**

Prior to completing the DRPI Operability Surveillance, an inspection of all remaining indicators in all five Rod Control Power Cabinets was performed. During this inspection, the indicator for movable gripper fuse FU50 in Power Cabinet 2BD for Shutdown Bank 'B' rod G-13 was also found blown.

The indicator and fuse FU50 were both tested with an ohmmeter and found open. The fuse and indicator were subsequently replaced.

**F. PREVIOUS OCCURRENCES:**

One previous occurrence was found where a blown fuse in a Rod Drive Power Cabinet resulted in a dropped control rod at Braidwood Station:

DVR 20-1-87-144 CONTROL ROD DROPPED TO ZERO STEPS DUE TO A BLOWN FUSE

During the performance of a Rod Position Daily Surveillance prior to and after rod drop testing, it was observed that while pulling Control Bank 'B' that rod k-14 had dropped. It was discovered that Control Bank 'B' Power Cabinet had a blown fuse, FU15. Operators subsequently drove rods to the bottom as indicated by group and DRPI position, tripped the turbine, and manually opened the Reactor Trip Breakers. The fuse FU15 was subsequently replaced.

**G. COMPONENT FAILURE DATA:**

<u>MANUFACTURER</u>	<u>NOMENCLATURE</u>	<u>MODEL</u>	<u>MFG PART NO.</u>
Bussmann	fuses	N/A	2432B59
Gould-Shawmut	indicators	N/A	TI-600