

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



September 22, 1995
BW/95-0092

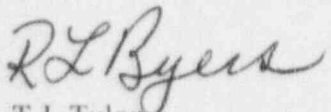
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U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

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)(i)(b) and 10 CFR 50.36(c)(2), which require a 30-day written report.

This report is number 95-006-00, Docket No. 50-457.

Yours truly,

for 
T.J. Tulon
Station Manager
Braidwood Nuclear Station

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Encl: Licensee Event Report
No. 457-95-006-00

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

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NRC FORM 366 (5-92)		U.S. NUCLEAR REGULATORY COMMISSION			APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95						
LICENSEE EVENT REPORT (LER)											
(See reverse for required number of digits/characters for each block)											
FACILITY NAME (1) Braidwood 2					DOCKET NUMBER (2) 05000457			PAGE (3) 1 OF 5			
TITLE (4) Failure to perform surveillance as required when the AFD Alarm was inoperable due to personnel error.											
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 None	DOCKET NUMBER	
08	23	95	95	-- 006 --	00	09	22	95	FACILITY NAME	DOCKET NUMBER	
OPERATING MODE (9)	1		THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)								
POWER LEVEL (10)	100		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)		X	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 M. Biegel, Management Information Services								TELEPHONE NUMBER (Include Area Code) (815)458-2801 x2841			
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	
				N							
SUPPLEMENTAL REPORT EXPECTED (14)											
YES (If yes, complete EXPECTED SUBMISSION DATE).					X NO		EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)											
<p>On August 22 the Unit 2 Plant Process Computer (PPC) crashed, causing the Axial Flux Difference (AFD) alarm to be inoperable. The AFD Monitor Alarm Inoperable surveillance was begun. The PPC was rebooted by Management Information Services(MIS) personnel, but at that time it was not noted that the correct AFD setpoints were not updated, causing the alarm to be inoperable. On August 23 the AFD Monitor Alarm Inoperable surveillance was terminated. Later that day MIS discovered the alarm had not rebooted with the correct setpoints, and notified System Engineering, who entered the correct values, making the alarm operable. The Unit Supervisor was notified and the LCOAR entered. The Alarm Inoperable Surveillance was started and the LCOAR exited. System Engineering performed an analysis of Point History Data and determined the alarm limits were not exceeded. The cause of the event was Personnel Error. The MIS Technician had decided to wait until both PPCs were changed before procedure development. Immediate corrective actions were to enter the LCOAR, start the surveillance, and update the PPC. Further corrective action include development of a Unit 2 specific procedure and a review of planned PPC changes to determine procedural requirements. The MIS Technician was counselled and will conduct Lessons Learned sessions with MIS and System Engineering. There have been no previous occurrences.</p>											

**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 (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 2		05000457		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 5
				95	-- 006 --	00	

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

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 2; Event Date: August 23, 1995;
 Event Time: 1040;
 Mode: 1 - Power Operation; Rx Power: 100%;
 RCS [AB] Temperature/Pressure: NOT/NOP

B. DESCRIPTION OF EVENT:

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

During the first week of June 1995 the Unit 2 Plant Process Computer (PPC) had hardware enhancements installed. Similar Unit 1 PPC enhancements were to be installed immediately after Unit 2 had been completed, but due to debugging problems on Unit 2 it was decided to delay the Unit 1 installation. As the debugging continued it was continually thought the Unit 1 installation would take place in the near future. It was decided by Management Information Services (MIS) personnel (non licensed technician) to wait until the enhancements had been debugged and installed on both units before a procedure describing the rebooting of the PPC was developed to reflect the current hardware conditions.

On August 22 at 0150 the Unit 2 PPC crashed at which time the Axial Flux Difference (AFD) alarm became inoperable. Surveillance 2BwOS 2.1.1.b-1 (AFD Monitor Alarm Inoperable) was begun by operations personnel.

At 0402 the Unit 2 PPC was rebooted by MIS personnel. At that time it was unknown the AFD alarm was inoperable.

On August 23 at 0500 2BwOS 2.1.1.b-1 (AFD Monitor Alarm Inoperable) surveillance performance was terminated, since it is only required to be performed for 24 hours after a PPC reboot.

On August 23 at 1040 MIS personnel discovered that the AFD alarm setpoints had not been properly re-entered when the PPC had been rebooted. This meant the AFD alarm was never returned to operable status since the PPC crashed at 0150 on August 22 1995.

On August 23 at 1048 MIS notified System Engineering (non licensed personnel) who then re-entered the correct values.

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

At 1050 the Unit Supervisor (Senior Reactor Operator) was then notified of the problem and LCOAR 2BwOS 2.1-1a was entered. Surveillance 2BwOS 2.1.1.b-1 (AFD Monitor Alarm Inoperable) was started at 1100 and the LCOAR was exited. The surveillance was terminated at 1100 on August 24.

Surveillance 2BwOS 2.1.1.b-1 (AFD Monitor Alarm Inoperable) had been in progress previously from the time the PPC was restored on August 22 at 0402. The surveillance was terminated at 0500 August 23, 24 hours after the PPC was restored. The Surveillance is required to be performed once per hour for the first 24 hours and once every 30 minutes thereafter while the alarm is inoperable. It is also required to be performed once per hour for 24 hours after the alarm is restored to operable status. Because the alarm was believed to be operable, the Surveillance was not performed as required. It should have been performed once per 30 minutes from 0150 August 22, 1995 until 1048 August 24. However it was performed once per hour from 0150 August 22 until 05:00 August 23 and not at all from 0500 August 23 until 1100 August 23.

On August 23, following the notification by MIS, System Engineering performed an analysis of the Point History Data and determined that at no time were the AFD alarm limits exceeded.

As the PPC debugging effort continued, in early September, it was decided to wait until after A1R05 to install the enhancements on Unit 1.

This event is being reported pursuant to 10CFR50.36(c) (2) - When a limiting condition for operation of a nuclear reactor is not met and 10CFR50.73(a)(2)(i)(B) - Any operation or condition prohibited by the plant's Technical Specification.

C. CAUSE OF THE EVENT:

The cause of the event was Personnel Error. The MIS Technician incorrectly decided to wait until both Process Plant Computers were changed before rewriting the procedure for rebooting. A procedure for this new configuration would have prevented the setpoints from not being re-entered.

D. SAFETY ANALYSIS:

This event had no effect on plant or public safety. An analysis of Point History Data revealed that no Delta Flux values exceeded the allowed operating band during the time period in which the Delta Flux Limits Exceeded alarm was inoperable with the operating department not aware that it was inoperable.

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

If Delta Flux values had exceeded the allowed operating band in the positive direction, no alarm function existed that would have alerted the Nuclear Station Operator (NSO) to this condition. Delta Flux Target values entered into the PPC are used to calculate the Delta Flux Target, and the maximum negative and positive allowed deviation from the Delta Flux Target for the present indicated reactor power. This information is displayed for the NSO by an iconics display. It is used to calculate time spent outside of the allowed Delta Flux operating band. Time spent out of the allowed Delta Flux operating band is limited by Technical Specification 3/4.2.1. The PPC provides the only tracking mechanism for these values at the plant. If the PPC is known to be inoperable, Technical Specification Surveillance requirement 4.2.1.1.a.2 requires the operations department to monitor once per hour until 24 hours after the alarm is restored to operable status to provide this indication. The surveillance is required only once per 7 days if the alarm is considered to be operable. The seven day surveillance frequency is not sufficient to fulfill the Technical Specification requirement if the alarm is not operable.

The possibility existed that operations could have been conducted outside of the allowed Delta Flux operating band without the occurrence of an alarm. If this had occurred, no indication would have been provided to the NSO that time outside of the Delta Flux allowed operating band had accumulated.

Operation within the allowed Delta Flux operating band is assumed as an initial condition for certain safety analyses. If Delta Flux is maintained within the allowed band, the reactor axial power distribution, and axial distribution of fission daughter products of concern, can be assumed to be within a limited range. This limits the potential number of reactor neutron flux distributions occurring during analyzed accidents, which is necessary to demonstrate that the licensing basis is met. Operation outside of the allowed operating band is allowed for a limited time at lower power levels because the axial distribution of fission daughter products of concern would still be within safety analysis assumptions. If the allowed time cannot be verified, safety analysis assumptions also cannot be verified without review of the specific instance.

E. CORRECTIVE ACTIONS:

Immediate corrective actions were conducted by System Engineering entering the correct values which restored the alarm function.

NRC FORM 366A
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95LICENSEE EVENT REPORT (LER)
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Immediate Corrective actions were conducted by operations entering LCOAR 2BwOS 2.1-1a and starting of surveillance 2BwOS 2.1.1.b-1. The surveillance was performed until 1100 on August 24.

Further corrective action was taken by MIS in developing a unit specific procedure for Unit 2 (2BwVP 300-1) that reflects the new hardware configuration specific to Unit 2. This procedure was implemented on September 7, 1995.

In addition, a review of planned PPC changes will be performed to determine where procedural revisions or developments are necessary. This action will be tracked to completion under commitment 457-180-95-00601.

The MIS Technician was counselled on his inappropriate decision making and the requirement to immediately have current procedures to reflect plant installed conditions. This Technician will conduct a Lessons Learned session with the MIS personnel and System Engineering personnel. This will be tracked to completion under commitment 457-180-95-00602.

F. PREVIOUS OCCURRENCES:

There have been no previous occurrences of a softboot producing these undesirable results.

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.