



**Commonwealth Edison**

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May 18, 1993  
BW/93-0184

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)(B) which requires a 30-day written report.

This report is number 93-003, Docket No. 50-457.

K. L. Kofron  
Station Manager  
Braidwood Nuclear Station

KLK/AJS/dla  
o:dept/zd85g

Encl: Licensee Event Report No. 93-003

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

260032

9305280246 930519  
PDR ADOCK 05000457  
S PDR

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 2

DOCKET NUMBER (2)  
05000457

PAGE (3)  
1 OF 4

TITLE (4)  
Technical Specifications violated due to Source Range Reactor Trip capability being blocked

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
04	19	93	93	-- 003 --	00	05	19	93	None	05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)				
POWER LEVEL (10)	000	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: B. McCue, Operations Supervisor  
 TELEPHONE NUMBER (Include Area Code): (815) 458-2801 x2215

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)  
 YES (If yes, complete EXPECTED SUBMISSION DATE):  NO   
 EXPECTED SUBMISSION DATE (15): MONTH \_\_\_\_\_ DAY \_\_\_\_\_ YEAR \_\_\_\_\_

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)  
 Two Nuclear Station Operators (NSOs) performed the task of blocking the SR monitors in tandem. The two NSOs did not clearly communicate their actions to each other. One of the NSOs informed a third, oncoming NSO of the blocking of the SR monitors. The oncoming NSO was given an inaccurate turnover of the SR monitor status. A Limiting Condition for Operation (LCOAR) was entered for having the SR monitors blocked. Later, when unblocking the SR monitors, the second NSO unblocked the "Hi Flux at Shutdown" alarm and reset the "Boron Dilution Prevention System" (BDPS) but failed to unblock the "Source Level Hi Reactor Trip" function. He was not aware that the latter function had been blocked. The NSO then exited the LCOAR based on this action. Approximately eight hours later, the blocked trip was identified and unblocked. The cause of this event is personnel error and procedural deficiency. Corrective actions include counselling of the individuals involved, and the development of a procedure for properly blocking the Source Range monitors. There has been one previous reportable occurrence of this type.

NRC FORM 366A  
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

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

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Braidwood 2	05000457	93	-- 003 --	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 2; Event Date: April 19, 1993;  
 Event Time: 0911;  
 Mode: 5 - Cold Shutdown; Rx Power: 000%;  
 RCS [AB] Temperature/Pressure: 0 psig / 99°F;

**B. DESCRIPTION OF EVENT:**

There was no equipment or systems inoperable at the beginning of the event that contributed to the severity of the event.

On April 19 1993 with Unit 2 in mode 5 an order came in from the Load Dispatcher to perform Switch Yard switching on ACB 9-10 (Air Circuit Breaker). This activity, per standard operating practice, requires that the Source Range (SR) Instruments be blocked due to electrical noise generation caused by the switching activity. At 0811 the Unit 2 NSO had to leave the Control Room. He was relieved by the Acting Unit 2 NSO. The Acting Unit 2 NSO in cooperation with an extra NSO performed the task of blocking the SR monitors. The Extra NSO blocked the "Hi Flux at Shutdown" alarm at NI31 and NI32 as well as the "Source Range Level Hi Reactor Trip" functions. The Acting Unit 2 NSO blocked the "Boron Dilution Prevention System" (BDPS) function. The extra NSO did not clearly communicate to the acting Unit 2 NSO what he had blocked. The acting Unit 2 NSO assumed that only the "Hi Flux at Shutdown" alarm was blocked.

The Acting Unit 2 NSO informed the actual Unit 2 NSO of the blocking of the Source range instruments when he turned the unit back to the Unit 2 NSO. He informed him that the "Hi Flux at Shutdown" Alarm and BDPS were blocked. The Unit 2 NSO then entered the proper Limiting Condition for Operation (LCOAR) to ensure the action was properly tracked and that all Technical Specification requirements are met.

At 0827 the switching activities on ACB 9-10 were complete and the Source Range Instruments were unblocked. The Acting Unit 2 NSO performed the unblocking actions unassisted. He unblocked the "Hi Flux at Shutdown" alarm and Re-Set BDPS but failed to unblock the SR Rx Trip. The Unit 2 NSO then exited the LCOAR based on this action.

At 1545 on April 19 1993 the afternoon Unit 2 NSO identified that the SR Rx Trip was blocked and entered the appropriate LCOAR. At 1605 the SR Rx Trip was unblocked and the LCOAR properly exited. The effect of having the SR Rx Trip blocked from 0811 to 1605 without being in the appropriate LCOAR constitutes a violation of the plants Technical Specifications. The

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actions that were required to be taken were to suspend all operations involving positive reactivity changes and to verify the dilution paths isolated within 1 hour of making the Rx Trip inoperable.

### C. CAUSE OF THE EVENT:

The primary cause of this event was personnel error. The Extra NSO blocked what he felt was appropriate but did not communicate to the acting Unit 2 NSO that he had blocked both the "High Flux at Shutdown Alarm" and the "High Reactor Trip." The Acting Unit 2 NSO was unaware of the "High Reactor Trip" being blocked, therefore did not communicate that to the Unit 2 NSO upon his return. When the Acting Unit 2 NSO unblocked the SR monitors he failed to unblock the "Reactor Trip" as he was unaware that it had been blocked. Additionally, no procedural guidance currently exists on how to properly block SR instrumentation when performing switching activities.

The investigation revealed that there are two practices utilized by the NSOs to block Source Range. One method is to only block the Alarm and BDPS the other method is to block the Alarm, BDPS and the Rx Trip. This choice is standard within a crew but is not standard within the department. The two NSOs involved used different practices to block Source Range.

### D. SAFETY ANALYSIS:

At the time of the event the RCS was borated to greater than 2000 ppm boron and no positive reactivity additions were being made. The Reactor Trip Breakers were maintained in the open condition throughout the event. The Boron Dilution Prevention System was inoperable with the corresponding LCOAR having been entered, and all proper actions in place throughout this event. BDPS was inoperable for reasons unrelated to any actions taken during this event.

With the BDPS system inoperable the dilution flow path valves CV-111b, CV-8428, CV-8439, CV-8441 and CV-8435 were Out Of Service closed and verified closed once every 12 hours per the BDPS Technical Specification. Additionally the Shutdown Margin was being verified once per every 12 hours per the BDPS Technical Specification requirements. The only action required by the SR Technical Specification action statement 3.3.1-5 that was not taken was a verification within 1 hour that the valves were closed.

Based on the above items there was no safety significance to having the Source Range Reactor Trip Blocked.

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The worst case situation for this event to occur would be during a Unit Startup. If it had occurred during a startup the Intermediate Range and Power Range Nuclear Instrumentation would have been available to trip the reactor prior to exceeding 20% power.

E. CORRECTIVE ACTIONS:

The immediate corrective actions taken upon identifying the SR Rx Trip blocked were to verify all actions required by Technical Specifications were accomplished and the SR was unblocked.

The other corrective actions taken were to counsel the 2 NSO's involved on the proper use of communication techniques to be used when operating controls in the plant. The Unit Supervisor was counseled to ensure that the NSO's obtain his concurrence prior to making Safety Related Equipment inoperable.

A procedure is being written to identify how to properly block the Source Range. This will be tracked to completion by action item 457-180-93-00301.

A placard will be placed by the Switch Yard controls that will require the use of the procedure when blocking Source Range during switching operations. This will be tracked to completion by action item 457-180-93-00302.

F. PREVIOUS OCCURRENCES:

There has been one previous occurrence of events in which verbal communication failures caused conditions prohibited by Technical Specifications.

LER 2-91-005; SAMPLE REQUIRED BY TECHNICAL SPECIFICATIONS OBTAINED LATE DUE TO PERSONNEL ERROR

G. COMPONENT FAILURE DATA:

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