



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

March 24, 1992  
BW/92-0175


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

Dear Sir:

Subject: Licensee Event Report 92-003-00

The enclosed Licensee Event Report from Braidwood Generating Station is being transmitted to you in accordance with requirement of 10CFR50.75(a)(2)(i)(B) which requires a 30-day written report.

This report is number 92-003-00, Docket No. 50-456.

  
K. L. Kofron  
Station Manager  
Braidwood Nuclear Station

KLK/AS/dla  
531/ZD85G

Encl: Licensee Event Report No. 92-003-00

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

REC 27  
11

## LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1)

Docket Number (2)

Page (3)

Braidwood 1

0 | 5 | 0 | 0 | 0 | 4 | 5 | 6 | 1 | of | 0 | 4

Title (4)

Personnel Error causes Inoperability of Safety Injection Accumulator

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)
0   3	0   9	9   2	9   2	0   0   3	0   0	0   3	2   4	9   2	None	0   5   0   0   0   1   1

OPERATING  
MODE (9)THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR  
(Check one or more of the following) (11)

POWER LEVEL (10)	0	9	9	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 (Specify
				20.405(a)(1)(iii)	X 50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	in Abstract
				20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	below and in
				20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	Text)

## LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER
P. Lau, HPES Coordinator	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	MANUFACTURER	REPORTABLE TO NRPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS

## 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 fifteen single-space typewritten lines) (16)

On March 9, 1992 at 0535 the volume of the 1A Safety Injection Accumulator was increased. Technical Specifications required verification of the boron concentration in the 1A Accumulator within the limits of 1900-2100 parts per million (ppm) in the next 6 hours. The Station Control Room Engineer (SCRE) notified a Chemistry Laboratory Supervisor (CLS) that a sample of the 1A Accumulator would be necessary. At 0805, a sample of the 1A Accumulator was obtained. The analysis of the boron concentration (2117.6 ppm) was completed at 0910. At 0943, the SCRE recorded the boron concentration as 2117.6 ppm for the 1A Accumulator in a surveillance procedure. Although the boron concentration of the 1A Accumulator was above the limit, the SCRE and the CLS signed the surveillance as being acceptable. At 1357, a Nuclear Station Operator (NSO) was informed of the 1A Accumulator boron concentration. The NSO realized that the 1A Accumulator boron concentration was above the limit. The 1A Accumulator was declared inoperable and a confirmatory sample was requested. At 1602, the boron concentration was determined to be within the limit and the 1A Accumulator was declared operable. The cause of the event was cognitive personnel error by the SCRE and CLS and programmatic deficiencies.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION												Form Rev 2.0											
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	3	-	0	0	0	2	OF	0	4
TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]																							

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

Unit: Braidwood 1; Event Date: March 9, 1992; Event Time: 0943  
 Mode: 1 - Power Operation; Rx Power: 99%  
 RCJ [AB] Temperature/Pressure: NOT/NOP

#### B. DESCRIPTION OF EVENT:

The Unit 1 Boric Acid Storage Tank (BAST) had been previously declared inoperable on March 2, 1992 because the concentration was below the Technical Specification limit of 7000 ppm. No Technical Specification Limiting Condition for Operation Action Statement was entered because the other borated water source was operable. The BAST inoperability was being tracked by an administrative program.

On March 9, 1992 at 0535 the volume of the 1A Safety Injection (SI) [BR] Accumulator was increased by greater than 70 gallons. In accordance with Technical Specification requirements, the boron concentration of the 1A Accumulator would need to be verified within the limits of 1900-2100 parts per million (ppm) in the next 6 hours.

The Station Control Room Engineer (SCRE) (licensed-SRO) began to track this 6 hour time clock by initiating surveillance 1BwOS SI-1a. The SCRE then notified the Chemistry Department that a sample of the 1A Accumulator would be necessary to measure the boron concentration. A representative of the Chemistry Department was requested to come to the control room and sign the applicable portion of 1BwOS SI-1a.

Shortly after 0630, the SCRE was relieved during a shift turnover. The turnover meeting included a discussion of the pending sample and the time limitation (1135). At 0658, a Chemistry Laboratory Supervisor (CLS) (non-licensed) entered the control room and acknowledged receipt of the sampling requirement notification.

At 0805, a sample of the 1A Accumulator was obtained. An analysis of the boron concentration was completed at 0910. The boron concentration was recorded on a data sample sheet as 2117.6 ppm. This concentration was identified as being above the Technical Specification limit of 2100 ppm and was brought to the attention of the CLS.

At 0940, the CLS went to the control room to report the boron concentration of the 1A Accumulator and that the six hour time clock had been satisfied. The CLS and SCRE began a discussion about the sample results of the 1A Accumulator and the BAST. The SCRE was told that the boron concentration of the BAST was above the Technical Specification limit of 7000 ppm. NOTE: Since the BAST had been previously declared inoperable, the higher boron concentration allowed the SCRE to restore the BAST to an operable condition.

At 0943, the SCRE then recorded the value of 2117.6 ppm for the 1A Accumulator in the applicable section of 1BwOS SI-1a. Although the boron concentration of the 1A Accumulator was above the limit, the SCRE and the CLS signed off the section as being satisfactory.

At 1135, the 6 hour surveillance time requirement expired without appropriately verifying that the 1A Accumulator was within the allowed boron concentration.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev. 2.0

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   3	-	0   0	0   3 OF 0   4

TEXT Energy Industry Identification System (EiIS) codes are identified in the text as [XX]

At 1357, the Nuclear Station Operator (NSO) (licensed-RO) called the Chemistry Dept. to obtain normal weekly boron sample results. The NSO obtained the boron concentrations as requested and additionally was informed of the 1A Accumulator boron concentration. The NSO realized that the 1A Accumulator boron concentration was above the Technical Specification limit and questioned the SCRE. The SCRE confirmed that the 1A Accumulator was above the limit and entered the Technical Specification Action Statement for an inoperable Accumulator. A confirmatory sample was requested.

At 1510, the boron concentration was reported as 2061.5 ppm. An additional sample was requested. At 1540 the result was obtained with a boron concentration of 2062.7 ppm. The 1A Accumulator was declared operable at 1602 and the Technical Specification Action Statement was exited.

This event is being reported pursuant to 10CFR50.73(a)(2)(i)(B) - any operation prohibited by the plant's Technical Specifications.

C. CAUSE OF EVENT:

The cause of the event was cognitive personnel error by the SCRE and CLS.

The SCRE failed to recognize the 1A Accumulator boron concentration sample result was above the Technical Specification limit even though the required concentration range was adjacent to the place provided for documenting the sample result. The SCRE believed that as long as the boron concentration was greater than 2000 ppm, it was acceptable. NOTE: 2000 ppm is the lowest boron concentration allowed by Technical Specifications for the Refueling Water Storage Tank.

The CLS was aware that the boron concentration was above the 200 ppm limit. The CLS signed, as being satisfactory, the section of 1BwSS SI-1a which addresses the sample limits. The CLS believed the signature was for sampling and analysis completion within the 6 hour time clock. Since the sample and analysis was done prior to expiration, the CLS signed the section without reading the action requirements.

Two contributing causes were due to programmatic deficiencies. When the sample result was obtained and identified to be outside of the range specified on the data sample sheet, no requirement existed to immediately notify licensed shift personnel. Additionally, no policy existed to obtain a confirmatory sample when the analysis yields a result outside the range specified in the Technical Specifications.

D. SAFETY ANALYSTS:

This event had no effect on the safety of the plant or the public. The 1A Accumulator boron concentration was determined to be within the Technical Specification limit. With a boron concentration slightly above the limit, more negative reactivity would have been inserted into the core following an Accumulator injection during a large break loss-of-coolant accident.

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		Year	///	Sequential Number	///	Revision Number							
Braidwood 1	0   5   0   0   0   4   5   6	9   2	-	0   0   3	-	0   0	0   4	OF	0   4				
TEXT Energy Industry Identification System (EIIIS) codes are identified in the text as [XX]													

E. CORRECTIVE ACTIONS:

A meeting was held with the SCRE and CLS with the discussions focused on the inappropriate actions taken and that these actions were contrary to management expectations.

The Chemistry Dept. will add a requirement to immediately notify a licensed shift supervisor whenever a sample result is outside the specified limits for each Technical Specification related system sample data sheet. This item will be tracked to completion by Action Item No. 456-180-92-00301.

The Chemistry Dept. will add a requirement to obtain a confirmatory sample whenever a sample result is outside Technical Specification limits. This item will be tracked to completion by Action Item No. 456-180-92-00302.

F. PREVIOUS OCCURRENCES:

LER 89-020  
LER 91-011

G. COMPONENT FAILURE DATA:

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