

LICENSEE EVENT REPORT (LER)

Facility Name (1) Braidwood Unit 1

Docket Number (2)

Page (3)

0 | 5 | 0 | 0 | 0 | 4 | 5 | 6 | 1 | of | 0 | 3

Title (4) Reactor Trip Due Negative Rate Trip as a Result of Improper Administrative Controls

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 8	1 1	8 8	8 8	0 1 6	0 0	0 8	2 3	8 8	None	0 5 0 0 0 1 1	
										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)

1	20.402(b)	20.405(c)	X	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10)	20.405(a)(1)(i)	50.36(c)(1)		50.73(a)(2)(v)	73.71(c)
1 0 0	20.405(a)(1)(ii)	50.36(c)(2)		50.73(a)(2)(vii)	Other (Specify in Abstract below and in Text)
	20.405(a)(1)(iii)	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	
	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
Craig Chovan, Shift Engineer	AREA CODE: 8 1 5 4 5 8 - 2 8 0 1
Ext. 2202	

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS
X	A A	F U	S I S S	N					

SUPPLEMENTAL REPORT EXPECTED (14)

Yes (If yes, complete EXPECTED SUBMISSION DATE)	X NO	Expected Submission Date (15)	Month Day Year
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ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)

On August 11, 1988, the Rod Control Urgent Alarm annunciated three times. Also, the C-11 Rod Stop alarm was annunciating prior to 2.73 steps on Bank D control rods. Preparations were made to check the power cabinet 1BD fuses. Separate discussions were held to discuss the details of checking the fuses. The unit operator was instructed to place rod control in MANUAL and to perform no rod movement during the time the power disconnect switch was open. The unit operator was occupied with normal duties and observed that the C-11 Rod Stop alarm had annunciated again and attempted to clear it by manually moving rods. When rod motion was demanded, the stationary gripper coils deenergized and Control Bank D Group 1, rods dropped. This caused an automatic reactor trip on High Flux Negative Rate. Contributing to this event was a lack of administrative controls to indicate an off-normal system status. The cause of the Rod Urgent alarms is attributed to two bad fuses in cabinet 1BD which were replaced. This event has been reviewed with the individuals involved. Additional administrative controls will be developed to aid the operator in identifying off-normal equipment status. This report will be included in the licensed operator Required Reading Program. There have been no previous occurrences.

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 PDR ADOCK 05000456
 PDC

IEC 1/1

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						Page (3)															
		Year	Sequential Number	Revision Number																			
Braidwood Unit 1		0	5	0	0	0	4	5	6	8	8	-	0	1	6	-	0	0	0	2	OF	0	3

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: August 11, 1988 Event Time: 1316
 Reactor Mode: 1 Mode Name: Power Operation Power Level: 100%
 RCS [AB] Temperature/Pressure: NOT/NOP

B. DESCRIPTION OF EVENT:

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

On August 11, 1988, during normal operations on the day shift the Rod Control Urgent Alarm [AA] annunciated three times. It was determined that the problem was a phase failure on the movable gripper coil in power cabinet 1BD. It was decided to check and if necessary replace the fuses in the cabinet.

During the day shift and on previous shifts, the C-11 Rod Stop alarm was annunciating prior to 223 steps on Bank D control rods. The alarm was also clearing at the wrong setpoint.

At approximately 1300, preparations were made with the Station Control Room Engineer (SCRE), the unit Nuclear Station Operator (NSO), an extra NSO and the Technical Staff to check the power cabinet 1BD fuses. Separate discussions were held by the SCRE, prior to the start of the work; one discussion with the unit NSO and the other discussion with the extra NSO and the Technical Staff to discuss the details of checking the fuses.

At approximately 1311, the unit NSO was instructed to place rod control in MANUAL and to perform no rod movement during the time the power disconnect switch was open to replace the movable gripper coil fuses. The extra NSO and the Technical Staff Engineer met the Shift Engineer (SE) by the 1BD power cabinet. The Technical Staff Engineer showed the SE what the job entailed and the SE left. The extra NSO opened the disconnect switch at power cabinet 1BD and proceeded to take voltage readings across the fuses to ensure it was de-energized. The unit NSO was occupied with normal duties and observed that the C-11 Rod Stop alarm had annunciated again.

At 1316, while the extra NSO was taking the voltage reading across the third fuse, the unit NSO attempted to clear the C-11 Rod Stop alarm by moving manually moving rods.

When rod motion was demanded the stationary gripper coils deenergized. Since power was removed from the movable gripper coils for cabinet 1BD, they could not energize.

As a result, Control Bank D Group 1, rods D4 and M12 dropped. This caused an automatic reactor trip on High Flux Negative Rate.

The appropriate NRC notification via the ENS phone system was made at 1458 on August 11, 1988, pursuant to 10CFR50.72(b)(2)(i).

This event is being reported pursuant to 10CFR50.73(a)(2)(iv) - Any event or condition that resulted in manual or automatic actuation of any engineered safety feature, including the reactor protection system.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1) Braidwood Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 4 5 6	LER NUMBER (6)			Page (3)	
		Year 8 8	Sequential Number - 0 1 6	Revision Number - 0 0	0 3	OF 0 3

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

C. CAUSE OF EVENT:

The root cause of the reactor trip was a cognitive personnel error by the licensed un.. V50.

Contributing to this event was a lack of administrative controls to indicate an off-normal system status.

The cause of the C-11 Rod Stop alarm annunciating prematurely on day shift was the failure to reset the Pulse/Analog converter when resetting the Rod Urgent Failure alarms which had occurred earlier in the day.

The cause of the Rod Urgent alarms is attributed to two bad fuses in cabinet 1B0.

D. SAFETY ANALYSIS:

There was no effect on plant or public safety as all systems operated as designed in response to the High Flux Negative Rate. This event is enveloped by the Final Safety Analysis Report (FSAR). A dropped Rod Control Cluster Assembly (RCCA) bank typically results in a reactivity insertion greater than 5E-3 delta K/K which will be detected by the power range negative neutron flux rate trip circuitry. The reactor is tripped within approximately 2.5 seconds following the drop of a RCCA bank. The core is not adversely affected during this period, since power is decreasing rapidly.

E. CORRECTIVE ACTIONS:

The immediate corrective actions were to establish stable plant conditions following the reactor trip.

The fuses in cabinet 1B0 were replaced and the system line-up was returned to normal.

Action to prevent recurrence include:

1. This event has been reviewed with the individuals involved.
2. Additional administrative controls will be developed to aid the operator in identifying and maintaining off-normal equipment status. The controls being considered are fabrication of a movable guard and additional guidance on pre-job briefing and communication requirements. This will be tracked to completion by Action Item 456-200-88-18211.
3. This report will be included in the Licensed Operator Required Reading Program. This will be tracked by Action Item 456-200-88-18202.

F. PREVIOUS OCCURRENCES:

There have been eight previous reactor trips due to personnel error. In each case corrective actions were implemented addressing both root and contributing causes. However, the cognitive personnel error in this event is different in that it involved a conditioned response to an alarm. Previous corrective actions are not applicable to this event.

G. COMPONENT FAILURE DATA:

Manufacturer	Nomenclature	Model Number	MFG Part Number
Chase-Shmut	Fuse	Type 1 30 amp	A60X30



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

BW/88-1022

August 29, 1988

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 in accordance with the requirements of 10CFR50.73(a)(2) (iv) which requires a 30 day written report.

This report is number 88-016-00; Docket No. 50-456.

Very truly yours,

R. E. Querio
Station Manager
Braidwood Nuclear Station

REQ/AJS/jab
(7126z)

Enclosure: Licensee Event Report No. 88-016-00

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

1522
11

DEVIATION REPORT

DVR NO.

20 - 01 - 88 - 182
STA UNIT YEAR NO.

PART 1 | TITLE OF DEVIATION

Rx Trip Due to Negative Rate Trip

OCCURRED

8-11-88 1316

DATE TIME

SYSTEM AFFECTED

PLANT STATUS AT TIME OF EVENT

N/A

TESTING

RD

MODE _ _ 1 _ _ POWER% _ 99 _ 5 _ _

WORK REQUEST NO.

YES NO

DESCRIPTION OF EVENT

At 1316, 8-11-88, Unit 1 Rx tripped. The first out annunciator was NIS power range neutron flux negative rate reactor trip. The negative rate trip occurred due to Control Bank D Group 1, being dropped. The control rods were dropped when movable gripper coil, in power cabinet 180, bus disconnect fuses were being replaced and simultaneous rod movement occurred. The Reactor Trip with Lo Tave 514°F caused FW isolation and subsequent S/G Lo Lo level caused AFW actuation.

POTENTIALLY SIGNIFICANT EVENT PER MSD DIRECTIVE A-07

YES NO

10CFR50.72 NRC RED PHONE 1 HOUR

NOTIFICATION MADE 4 HOUR 1458 NO

J. Kuchenbecker

8-11-88

RESPONSIBLE SUPERVISOR

DATE

PART 2 | OPERATING ENGINEER'S COMMENTS

None

NON REPORTABLE EVENT

30 DAY REPORTABLE/10CFR50.73(a)(2)(iv)

5 DAY REPORT PER 10CFR21

ANNUAL/SPECIAL REPORT REQUIRED

NOTIFICATION Resident Inspector 8/12/88 1200
REGION III DATE TIME

T.J. Maiman/D.P. Galle 8/12/88 1200
NSD DATE TIME

CEEO CORPORATE NOTIFICATION MADE
IF ABOVE NOTIFICATION IS PER 10CFR21

A.I.R. # _ _ _ _ _

L.E.R. # 8_8_0_1_6_ _ _

TELECOPY N/A
CEEO CORPORATE OFFICER DATE TIME

PRELIMINARY REPORT

COMPLETED AND REVIEWED

Robert J. Ungeran

8/12/88

OPERATING ENGINEER

DATE

INVESTIGATION REPORT & RESOLUTION

ACCEPTED BY STATION REVIEW

David J. Miller

J.P. Duke

Robert J. Ungeran 8/29/88
RESOLUTION APPROVED AND
AUTHORIZED FOR DISTRIBUTION

J.P. Duke

9/1/88

STATION MANAGER

DATE

86-5176 (Form 15-52-1) 11-20-85

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