



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

April 5, 1991
BW/91-0303

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 require a 30-day written report.

This report is number 91-003-00; Docket No. 50-456.

Very truly yours,

K. L. Kofron
Station Manager
Braidwood Nuclear Station

KLK/DN/clf
(226/ZD85G)

Enclosure: Licensee Event Report No. 91-003-00

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

IF22
11

LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Braidwood 1 Docket Number (2) 0 | 5 | 0 | 0 | 4 | 5 | 6 Page (3) 1 | of | 0 | 3

Title (4) Control Room Ventilation to Emergency Mode on a Loss of Power to Outside Intake Radiation Monitor ORT-PR034

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
0 3	1 2	9 1	9 1	0 0 3	0 0	0 4	0 5	9 1	NONE
								Docket Number(s) <u>0 5 0 0 0 </u>	

OPERATING MODE (9) POWER LEVEL (10) 0 | 0 | 0

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

<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)
<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.36(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)
<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> Other (Specify
<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<input type="checkbox"/> in Abstract
<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)	<input type="checkbox"/> below and in
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> Text)

LICENSEE CONTACT FOR THIS LER (12)

Name	TELEPHONE NUMBER
<u>H. Aver, Technical Staff Engineer</u>	AREA CODE <u>8 1 5</u> Ext. <u>2770</u> <u>4 5 8</u> - <u>1 2 8 0 1</u>

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPROS
				NO					

SUPPLEMENTAL REPORT EXPECTED (14)

Yes (If yes, complete EXPECTED SUBMISSION DATE) NO

Expected Submission Date (15) _____

ABSTRACT (Limit to 1400 spaces, i.e. approximately fifteen single-space typewritten lines) (16)

At 2022 on March 12, 1991, the Main Control Room Ventilation system shifted to the emergency mode of operation. The actuation was caused by a momentary loss of voltage to control Room Outside Intake Radiation Monitor ORT-PR034. The voltage drop occurred when 345 Kilovolt Line 0104, an offsite power distribution circuit to Braidwood Station, de-energized due to outside weather conditions. ORT-PR034 automatically restarted and returned to normal operation. The cause of the event was a momentary fluctuation in voltage available to the monitor. When Line 0104 tripped, it resulted in a disturbance to the onsite power distribution system. The cause of Line 0104 tripping was attributed to severe weather conditions in the area. Ice buildup on the Commonwealth Edison distribution system increased the weight of the power lines and reduced the phase-to-phase clearance required. Protective relays actuated to protect the integrity of the offsite power supply distribution network. Within seconds, the monitor regained the required voltage and returned to its pre-event condition. The Main Control Room Ventilation system was restored to a normal alignment. The weather conditions in the vicinity of Braidwood Station improved and the grid returned to a normal condition. There have been previous occurrences of ESF actuations caused by voltage transients. Previous corrective actions are not applicable to this event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

Form Rev 2.0

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (5)						Page (3)		
		Year	Sequential Number	Revision Number						
Braidwood 1	0 5 0 0 0 4 5 6	9 1	- 0 0 3	- 0 0			0 2	OF	0 3	

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

A. PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 1; Event Date: March 12, 1991; Event Time: 2022;
 Mode: Defueled; Rx Power: 0%;
 RCL [:-] Temperature / Pressure: Ambient

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.

At 2022 on March 12, 1991, the Main Control Room Ventilation [VI] (VC) system automatically shifted to the emergency mode of operation. The actuation was caused by a momentary loss of voltage to Control Room Outside Intake Radiation Monitor [IL] ORT-PR034. The voltage drop occurred when 345 Kilovolt (KV) Line 0104, an offsite power distribution circuit to Braidwood Station, de-energized due to outside weather conditions.

Within seconds, ORT-PR034 automatically restarted and returned to normal operation. The actuation signal immediately reset. After verification that radiation levels were normal, the VC system was restored to a normal line-up.

The voltage transient also caused several other radiation monitors to experience a temporary loss of power. These monitors were restored without incident.

The appropriate NRC notification via the ENS phone system was made at 2233 pursuant to 10CFR50.72(b)(2)(ii).

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 (ESF), including the Reactor Protection System.

C. CAUSE OF EVENT:

The cause of the event was a momentary fluctuation in voltage available to the monitor. When Line 0104 tripped, it resulted in a disturbance to the onsite power distribution system. The monitor sensed a loss of power when the available voltage dropped below the interlock setpoint. This failsafe design ensures that the required protective actuation(s) will occur during a loss of power. The cause of Line 0104 tripping was attributed to severe weather conditions in the area. Specifically, icing of the Commonwealth Edison distribution system resulted in numerous power outages. The ice buildup increased the weight of the power lines and reduced the phase-to-phase clearance required. The protective relays actuated as designed to protect the integrity of the offsite power supply distribution network.

D. SAFETY ANALYSIS:

This event had no effect on the safety of the plant or the public. All systems operated as designed. There were no abnormal levels of radioactivity detected or released during the event. The other Main Control Room Outside Intake Radiation Monitors were available and unaffected by this event. During the worst case condition, the system response would be identical.

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Braidwood 1	0 5 0 0 0 4 5 6	9 1	- 0 0 3	- 0 0	0 3	OF 0 3

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

E. CORRECTIVE ACTIONS:

After line 0104 tripped, the onsite distribution voltage level stabilized. The monitor regained the required voltage and returned to its pre-event condition. The Main Control Room Ventilation System was restored to a normal alignment. The weather conditions in the vicinity of Braidwood Station improved and the grid returned to a normal condition. No further corrective action is considered necessary.

F. PREVIOUS OCCURRENCES:

There have been previous occurrences of ESF actuations caused by voltage transients. Previous corrective actions are not applicable to this event.

G. COMPONENT FAILURE DATA:

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