LICENSEE EVENT REPORT (LER)

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

Title (4) Control Room Ventilation Shift to Emergency Makeup Mode Due to Spurious Radiation Monitor Noise Spike

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)
									NONE	0 5 0 0 0
0 4	1 5	8 8	8 8	0 1 1 1	0 0	0 5	1 1	8 8		0 5 0 0 0

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)			
POWER LEVEL (10)	0 0 0	___ 20.402(b)	___ 20.405(c)	X 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 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 AREA CODE
Richard Rountree, Technical Staff Engineer Ext. 2487	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 NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

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 fifteen single-space typewritten lines) (16)

At 0132 on April 15, 1988, at 0414 on May 3, 1988, and again at 0720 on May 6, 1988, high radiation signals were processed by the Control Room Train B Radiation Monitor. This caused the Control Room Ventilation System (VC) to shift to the emergency makeup mode of operation. The signal was determined to be spurious as verified by samples taken by the Radiation Chemistry Department. Immediate corrective action was to reset the monitor and return VC to normal. Electrocubes were installed in the monitor's circuitry to supress voltage spikes, following the April 15, 1988 occurrence. Subsequent spiking identified the need for additional investigation to determine the root cause. The results of this investigation will be documented in a supplement to this report. There has been one previous occurrence of VC shifting to its emergency makeup mode of operation as a result of a spurious radiation monitor spike.

A. PLANT CONDITIONS PRIOR TO EVENT:

Occurrence 1:

Unit: Braidwood 1 ; Event Date: April 15, 1988 ; Event Time: 0132
MODE: 5 - Cold Shutdown ; Rx Power: 0% ; RCS [AB] Temperature/Pressure: 105 degrees F/89 psig

Occurrence 2:

Unit: Braidwood 1 ; Event Date: May 3, 1988 ; Event Time: 0414
MODE: 1 - Power Operations ; Rx Power: 26% ; RCS [AB] Temperature/Pressure: 563 degrees F/2235 psig

Occurrence 3:

Unit: Braidwood 1 ; Event Date: May 6, 1988 ; Event Time 0720
MODE: 1 - Power Operations ; Rx Power: 27% ; RCS [AB] Temperature/Pressure: 562 degrees F/2235 psig

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.

Occurrence 1:

At 0132 on April 15, 1988 the OB Train of Control Room Ventilation System (VC) (VI) received a High Radiation signal from radiation monitor 0PR33J (IL) Gas Channel. This monitor is one of the Train B Control Room Air Intake Radiation Monitors. The signal caused the VC system to shift to its Emergency Makeup mode of operation. A high radiation alarm was also received in the Control Room at the radiation monitor (RM-11) Console. 0PR33J was declared inoperable and Limiting Condition for Operation Action Requirement (LCOAR) 1BwOS 3.3.1-1A, Monitoring Instrumentation Radiation Monitoring for Plant Operations, was entered. Radiation Chemistry (Rad Chem) was notified, and samples taken from the air filters and cartridges revealed no radioactivity in excess of background levels. It was concluded that the signal was spurious, not from actual radioactivity being present. 0PR33J was declared operable and LCOAR 1BwOS 3.3.1-1A was exited.

Operator actions neither increased nor decreased the severity of the event, and plant conditions remained stable throughout the event.

The appropriate NRC notification via the ENS phone system was made at 0400 on April 15, 1988, pursuant to 10CFR50.72(B)(2)(II).

B. DESCRIPTION OF EVENT: (Cont'd)

Occurrence 2:

At 0414 on May 3, 1988 the OB Train of Control Room Ventilation System (VC) (VI) received a High Radiation signal from radiation monitor 0PR33J (IL) Gas Channel. The signal caused the VC system to shift to its Emergency Makeup mode of operation. A high radiation alarm was also received in the Control Room at the radiation monitor (RM-11) Console. 0PR33J was declared inoperable and limiting condition for operation action requirement (LCOAR) 1BwOS 3.3.1-1A, Monitoring Instrumentation Radiation Monitoring for Plant Operations, was entered. Rad Chem was notified, and samples taken from the air filters and cartridges revealed no radioactivity in excess of background levels. It was concluded that the signal was spurious, not from actual radioactivity being present. 0PR33J was declared operable and LCOAR 1BwOS 3.3.1-1A was exited.

Operator actions neither increased nor decreased the severity of the event, and plant conditions remained stable throughout the event.

The appropriate NRC notification via the ENS phone system was made at 0440 on May 3, 1988, pursuant to 10CFR50.72(B)(2)(II).

Occurrence 3:

At 0720 on May 6, 1988 the OB Train of Control Room Ventilation System (VC) (VI) received a High Radiation signal from radiation monitor 0PR33J (IL) Gas Channel. The signal caused the VC system to shift to its Emergency Makeup mode of operation. A high radiation alarm was also received in the Control Room at the radiation monitor (RM-11) Console. 0PR33J was declared inoperable and limiting condition for operation action requirement (LCOAR) 1BwOS 3.3.1-1A, Monitoring Instrumentation Radiation Monitoring for Plant Operations, was entered. Rad Chem was notified, and samples taken from the air filters and cartridges revealed no radioactivity in excess of background levels. It was concluded that the signal was spurious, not from actual radioactivity being present. 0PR33J was declared operable and LCOAR 1BwOS 3.3.1-1A was exited.

Operator actions neither increased nor decreased the severity of the event, and plant conditions remained stable throughout the event.

The appropriate NRC notification via the ENS phone system was made at 0806 on May 6, 1988, 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, including the reactor protection system.

C. CAUSE OF EVENT:

The root cause of this event is unknown. The event was investigated by the Technical Staff (Tech Staff) and Rad Chem following the actuation. The exact cause for the actuation could not be determined. There were no construction or testing activities in progres in the area. Therefore, the actuation was considered spurious.

D. SAFETY ANALYSIS:

This event had no impact on plant or public safety. The spurious spike caused the ventilation system to re-align to it's emergency mode, however no actual radioactivity was found. In the worst case condition of actual radioactivity being present in the control room air intake, the ventilation system would have switched to its Emergency Mode of Operation. In addition redundant monitor 0PR34J was operable throughout the event.

E. CORRECTIVE ACTIONS:

Immediate corrective action, for all three occurrences, was to verify that the operation of the monitor was spurious and that there was no actual radioactivity present. The radiation monitor signal was reset and the VC system returned to normal.

The original noise/voltage supressors, varistors, were replaced with electrocubes, per agreement with the radiation monitor supplier, following occurrence 1. Subsequent spiking has identified the need for additional investigation to determine the root cause.

The results of this investigation will be documented in a supplement to this report. This will be tracked to completion by Item Number 456-200-88-08801.

F. PREVIOUS OCCURRENCES:

DVR/LER NUMBER	TITLE
20-1-87-335/LER 87-051	Control Room Ventilation Switchover Due to Spurious Noise on Channel 0RE-PR033B

G. COMPONENT FAILURE DATA:

To be addressed in the supplemental report.

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

BW/88-385

May 13, 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 88-011-00; Docket No. 50-456.

Very truly yours,

for R. E. Querio
Station Manager
Braidwood Nuclear Station

REQ/PMB/jab
(7091z)

Enclosure: Licensee Event Report No. 88-011-00

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

IE22
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