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

June 18, 1990
BW/90-0638

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 90-006-00; Docket No. 50-457.

Very truly yours,

R. E. Querio
Station Manager
Braidwood Nuclear Station

REQ/JDW/sjs
(7126z)

Enclosure: Licensee Event Report No. 90-006-00

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

IE22
1/1

LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1)	Docket Number (2)	Page (3)
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Title (4)

Containment Ventilation Isolation due to a Failed Detector on Containment Area Radiation Monitor

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 6	1 2	9 0	9 0	0 0 6	0 0	0 6	1 8	9 0	None	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	4	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	
Mike Auer, Tech Staff Engineer Ext. 2770	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
X	I L	D E T	S 6 3 7	NO					

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)

At 1117 on May 21, 1990 a Containment - Fuel Handling Incident Area Radiation Monitor failed its automatic checksource test due to a low countrate. The checksource test is generated by the microprocessor circuitry of the monitor every 24 hours. Upon failure, the monitor reverted to the interlock position. This generated a Containment Ventilation Isolation Signal for train A which resulted in the closure of Mini-Purge Exhaust valves and tripped the running Mini-Purge Exhaust Fan. The operator acknowledged the Checksource Failure Alarm and verified all automatic actions. The cause of this event was component failure. The detector checksource circuit failed causing the Radiation Monitor to revert to the interlock condition which resulted in the Train A Containment Ventilation Isolation. The Detector was replaced, recalibrated and returned to service. The containment Fuel Handling Incident Radiation Monitor detectors are replaced on an 18 month frequency in accordance with the Environmental Qualification program. The failed detector in this event had been in service since April 26, 1990. A review of component failure histories did not identify any adverse trend concern for this type of detector. Previous corrective actions were not applicable to this event.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6) Year	Sequential Number	Revision Number	Page (3)
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TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]

PLANT CONDITIONS PRIOR TO EVENT:

Unit: Braidwood 2; Event Date: May 21, 1990; Event Time: 1117;

Mode: 4 - Hot Shutdown; Rx Power: 0%;

RCS [AB] Temperature/Pressure: NOT/NOT;

DESCRIPTION OF EVENT:

There were no systems or components inoperable at the beginning of the event which contributed to the severity of the event. Containment Release G-0102 was in progress.

At 1117 on May 21, 1990 the Containment - Fuel Handling Incident Area Radiation Monitor (AR) [IL], 2RT-AR011, failed its automatic checksource test due to a low countrate. The checksource test is generated by the microprocessor circuitry of the monitor every 24 hours. Upon failure of the self diagnostic test the monitor reverted to the interlock position. This generated a Containment Ventilation Isolation Signal for Train A which resulted in the closure of Mini-Purge Exhaust (VQ) [VA] valves 2VQ005A and C, and tripped the running Mini-Purge Exhaust Fan.

The Unit 2 Nuclear Station Operator (NSO) (Licensed Reactor Operator) acknowledged the Checksource Failure Alarm and verified all automatic actions.

The 2RT-AR011 was declared inoperable and the appropriate Technical Specification Action Statements were entered and complied with.

The appropriate NRC notification via the ENS phone system was made at 1222 pursuant to 10CFR50.72(b)(2)(ii).

An investigation revealed that the Detector Checksource circuit had failed. The Detector was replaced.

At 1050 on May 24, 1990 the 2RT-AR011 was declared operable and the Technical Specification Statements were exited.

This event is being reported pursuant to 10CFR50.73(a)(2)(iv) - any event of condition that resulted in manual or automatic actuation of any Engineered Safety Feature, including the Reactor Protection System.

CAUSE OF EVENT:

The root cause of this event was component failure. The detector checksource circuit failed causing the Radiation Monitor to revert to the interlock condition which resulted in the Train A Containment Ventilation Isolation.

D. SAFETY ANALYSIS:

This event had no effect on the safety of the plant or the public. All systems operated as designed. The monitor reverts to its Engineered Safety Feature (ESF) safe configuration upon detector checksource failure. The redundant AR monitor, 2RT-AR012 was operable and available to provide indication and Train B Containment Ventilation Isolation.

Under the worst case condition of total monitor failure there would still be no effect. The radiation monitoring system is designed such that the monitor reverts to the tripped condition and the appropriate ESF actuation occurs upon failure of the monitor, detector, or automatic diagnostic testing as was the case in this event.

E. CORRECTIVE ACTIONS:

The Detector for 2RT-AR011 was replaced. The monitor was recalibrated and returned to service.

The Containment Fuel Handling Incident Radiation Monitor detectors are replaced on an 18 month frequency in accordance with the Environmental Qualification program. The failed detector in this event had been in service since April 26, 1990. A review of component failure histories did not identify any adverse trend concern for this type of detector.

F. PREVIOUS OCCURRENCES:

There have been previous occurrences of radiation monitor failures resulting in ESF actuations. The corrective actions were implemented addressing both root and contributing causes. Previous corrective actions are not applicable to this event.

G. COMPONENT FAILURE DATA:

Manufacturer	Nomenclature	Model Number/MFG Part Number
Sorrento Electronics	Area Detector Assy	0281-0760-002