Commonwealth Edison
Dresden Nuclear Power Station
R.R. #1
Morris, Illinois 60450
Telephone 815/942-2920

August 2, 1989

EDE LTR #89-598

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

Licensee Event Report #89-018-0, Docket #050237 is being submitted as required by Technical Specification 6.6, NUREG 1022 and 10 CFR 50.73(a)(2)(iv).

E.D. Eenigenburg
Station Manager
Dresden Nuclear Power Station

EDE/jt

Enclosure

cc: A. Bert Davis, Regional Administrator, Region III
File/NRC
File/Numerical

(0631k)

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LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1)	Docket Number (2)	Page (3)
Dresden Nuclear Power Station, Unit 2	0 5 0 0 0 2 3 7	1 of 0 3

Title (4)

Auto Start of Standby Gas Treatment System Due to Spurious Ventilation Radiation Monitor Trip

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)
											N/A	0 5 0 0 0
0 7	0 7	8 9	8 9	—	0 1 8	—	0 0	0 8	0 2	8 9	N/A	0 5 0 0 0

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR (Check one or more of the following) (11)			
POWER LEVEL (10)	0 7 2	___ 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
		___ 20.405(a)(1)(iii)	___ 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 AREA CODE
Scott Briley, Technical Staff System Engineer Ext. 2526	8 1 5 9 4 2 - 2 9 2 0

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	I L	M O N	G O 8 0	Y					

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 July 7, 1989 during normal Unit 2 power operation at 72% rated core thermal power, Dresden Instrument Surveillance (DIS) 1700-7, Reactor Building Ventilation Radiation Monitor Functional Test, was being performed. At 1410 hours, the Unit 2 Reactor Building Ventilation (RBV) system tripped and the Standby Gas Treatment (SBGT) system auto initiated. At the time of the event, an Instrument Mechanic was removing the Channel B RBV radiation monitor indicator and trip unit from its holder for a voltage check. After verifying that high radiation was not present in the RBV system, SBGT was secured and RBV was returned to normal. The cause of this event has been attributed to a nick in the insulation on one of the RBV radiation monitor trip unit wires. While the unit was being removed from its holder, the exposed wire came in contact with the chassis and caused the trip unit to spike high. The exposed wire was wrapped with electrical tape and the procedure was satisfactorily completed without any further problems. As further corrective action, Work Request 85823 was written to repair the wire, and the Instrument Maintenance Staff will revise DIS 1700-7 to include checks of the wiring for insulation damage. A previous event involving auto initiation of SBGT due to a faulty refuel floor radiation monitor test switch was reported by LER 88-19/050237.

PLANT AND SYSTEM IDENTIFICATION:

General Electric - Boiling Water Reactor - 2527 MWt rated core thermal power.

Nuclear Tracking System (NTS) tracking code numbers are identified in the text as (XXX-XXX-XX-XXXXX).

EVENT IDENTIFICATION:

Auto Initiation of Standby Gas Treatment [BH] System due to Exposed Wire on Reactor Building Ventilation System [VA] Radiation Monitor [IL]

A. CONDITIONS PRIOR TO EVENT:

Unit: 2 Event Date: July 7, 1989 Event Time: 1410 hours

Reactor Mode: N Mode Name: Run Power Level: 72%

Reactor Coolant System (RCS) Pressure: 984 psig

B. DESCRIPTION OF EVENT:

On July 7, ~~1~~989 during normal Unit 2 power operation at 72% rated core thermal power, Dresden Instrument Surveillance (DIS) 1700-7, Reactor Building Ventilation Radiation Monitor Functional Test, was being performed. At 1410 hours an Instrument Mechanic (IM) was removing the Channel B Reactor Building Ventilation (RBV) radiation monitor indicator and trip unit RM 1705-8B from its holder for a voltage check. As the unit was being removed, the indicator spuriously spiked high and caused an isolation of the Unit 2 RBV system and the auto start of the Standby Gas Treatment (SBGT) system. After verifying that high radiation was not present in the RBV system, SBGT was secured and RBV was returned to normal.

Upon investigation, it was discovered that one of the wires in the RBV Radiation Monitor indicator and trip unit had a nick in its insulation and the wire was exposed. The IM then notified his supervisor of the problem and Work Request 85823 was initiated for permanent repair of the wiring. The IM then wrapped the wire with electrical tape and completed the procedure without any further problems.

C. APPARENT CAUSE OF EVENT:

This report is submitted in accordance with the requirements of 10CFR50.73(a)(2)(iv) which requires the reporting of any event or condition that results in the manual or automatic actuation of any Engineered Safety Feature (ESF).

The cause of this event has been attributed to a nick in the insulation on one of the RBV radiation monitor indicator and trip unit wires. While the unit was being removed from its holder, the exposed wire came in contact with the chassis and caused the trip unit to spike high. The cause of the nick in the wire insulation is unknown, but may be the result of the repeated removal and installation of the unit during surveillance testing. Review of maintenance records does not indicate that this is an adverse trend.

D. SAFETY ANALYSIS OF EVENT:

The Reactor Building Ventilation radiation monitors are designed to monitor radiation levels in the RBV system and, upon abnormal radiation levels, isolate the RBV system and initiate the SBGT system. The SBGT system will then maintain a small negative pressure in the Reactor Building, thereby preventing the ground level release of airborne radioactivity, and treat the effluent from the Reactor Building prior to discharging it through the 310 foot chimney so as to minimize the release of radioactive material to the environs. The initiation logic for the RBV radiation monitors is arranged such that a single upscale reading of greater than 4 mR/hr on either the Channel A or B RBV radiation monitor will initiate a trip signal. Additionally, if both Channel A and B monitors fail downscale, a trip signal is also initiated. Consequently, as a result of the shorted trip unit wire, a spurious unplanned SBGT auto initiation occurred. However, as all systems performed as required, the safety significance of this event is considered minimal.

E. CORRECTIVE ACTIONS:

As an immediate corrective action, the Channel A RBV radiation monitor was checked to verify that a high radiation condition was not present. The exposed wire was wrapped with electrical tape, the SBGT system was secured and RBV was returned to normal. The DIS 1700-7 procedure was then satisfactorily completed. As a long term corrective action, Work Request 85823 was written for Instrument Maintenance to repair the wire. This work is expected to be completed during the third quarter of 1989 (237-200-89-10301). Additionally, the Instrument Maintenance Staff will review DIS 1700-7 and add precautionary statements regarding checking the RBV radiation monitors for exposed wiring during performance of the surveillance activity (237-200-89-10302).

F. PREVIOUS EVENTS:

LER Number	Title
88-019/050237	Auto Initiation of the Standby Gas Treatment System Due to Faulty Refuel Floor Radiation Monitor Test Switch The cause of this event was due to a faulty trip check pushbutton switch. The corrective action was to replace the switch.

G. COMPONENT FAILURE DATA:

Manufacturer	Nomenclature	Model Number	Mfg. Part Number
General Electric	Radiation Monitor	Type DW-91	129B2802

An industry-wide NPRDS data search revealed no failures of this monitor due to contact with an exposed wire.