

LICENSEE EVENT REPORT (LER)

Form Rev 2.0

Facility Name (1) Dresden Nuclear Power Station, Unit Docket Number (2) 0 15 10 10 10 12 13 17 Page (3) 1 of 0 4

Title (4) Standby Gas Treatment System Due to Loose Reactor Building Ventilation System

Radiation Monitor Connection

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	9	2 4 8 9 8 9		0 2 6	0 0	1	0	1 9 8 9	Dresden Unit 3	0 15 10 10 10 12 14 19

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 8	<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)(x)	<input type="checkbox"/> Text)		

LICENSEE CONTACT FOR THIS LER (12)

Name	Scott Briley, Technical Staff System Engineer	Ext.	2526	TELEPHONE NUMBER	8 1 5 9 4 12 1 -12 19 12 10
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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 10 N	G 10 18 10	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

<input type="checkbox"/> Yes (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> 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 September 24, 1989 at 1715 hours with Unit 2 at 78% rated core thermal power, and Unit 3 at 98% rated core thermal power, the 2B Reactor Building Ventilation (RBV) radiation monitor began spiking erratically between the downscale trip setpoint and the Hi alarm setpoint. Work Request 87513 was initiated to investigate the problem. At 2018 hours, while the Instrument Maintenance Department (IMD) was preparing the work package to investigate this problem, the 2B radiation monitor spiked to the Hi Hi trip setpoint. This caused an unplanned automatic isolation of the RBV and automatic start of the Standby Gas Treatment (SBGT) system. The cause of the erratic spiking of the radiation monitor was found to be a loose monitor sensor converter cable connection. As an immediate corrective action, the redundant 2A RBV radiation monitor was checked to verify that a high radiation condition was not present. The connection was resoldered in accordance with Work Request 87513. Dresden Radiation Procedure (DRP) 2000-5, RBV Radiation Monitor Calibration, was then completed satisfactorily to ensure proper calibration of the 2B monitor. The SBGT system was then secured and the RBV system was returned to normal. This event was of minimal safety significance because the redundant 2A RBV monitor was operable, and the SBGT system started by design when challenged by the spurious trip signal. A previous event involving an auto initiation of SBGT due to a wire shorting across the monitor chassis was reported by LER 89-18/050237.

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

D. SAFETY ANALYSIS OF EVENT:

The RBV radiation monitors are designed to monitor radiation levels in the RBV system and, upon abnormal radiation levels, isolate the RBV system and initiate the SGBT system. The SGBT system will then maintain a small negative pressure in the Reactor Building, preventing the ground level release of airborne radioactivity, and treating 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 4mR/hr on either the 2A or 2B RBV radiation monitor will initiate a trip signal. Additionally, if both the 2A and the 2B monitors fail downscale, a trip signal is also initiated. Consequently, as a result of the spurious upscale spike, the unplanned SGBT auto initiation occurred. However, because the SGBT system initiation occurred by design upon receipt of the spurious signal, and the redundant 2A monitor was verified to be operating properly, the safety significance of this event is considered minimal.

E. CORRECTIVE ACTIONS:

As an immediate corrective action, the redundant 2A RBV radiation monitor was checked to verify that an actual high radiation condition was not present. The loose connection was resoldered in accordance with Work Request 87513. DRP 2000-5 was then completed satisfactorily to verify proper calibration of the 2B monitor. The SGBT system was secured and the RBV system was then returned to normal on September 25, 1989 at 1020 hours. Dresden Instrument Surveillance (DIS) 1700-7, Reactor Building Ventilation Radiation Monitor Functional Test, is performed on a quarterly basis and DIS 2000-5 is performed every refuel outage. Additionally, the Instrument Maintenance Staff will review DIS 1700-7 and add precautionary statements regarding checking the RBV radiation monitors for loose connections as well as exposed wiring during performance of the surveillance activity (237-200-89-13701).

As a further long term corrective action, the Technical Staff System Engineer will evaluate possible methods for providing improved IMD response time in this type of event. Included in this review will be possible development of procedures for performing temporary system alterations to SGBT system initiating signals (i.e., refuel area radiation monitors or RBV system radiation monitors provided that redundant monitor channels are operable) pending completion of repair work by the IMD (237-200-89-13702). The IMD is also currently evaluating a generic radiation monitor troubleshooting procedure (237-200-89-13703).

F. PREVIOUS EVENTS:

LER Number	Title
89-018/050237	Auto Start of Standby Gas Treatment System Due to Spurious Ventilation Radiation Monitor Trip

This event occurred during performance of DIS 1700-7 when a wire with a nick in the insulation made contact with the monitor chassis. The corrective actions included taping the nicked wire, scheduling of permanent repairs to the wire under Work Request 85823 (237-200-89-10301), and initiating revision of DIS 1700-7 to check for exposed wiring during performance of DIS 1700-7 (237-200-89-10302).

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G. COMPONENT FAILURE DATA:

<u>Manufacturer</u>	<u>Nomenclature</u>	<u>Model Number</u>	<u>Mfg Part Number</u>
General Electric	Radiation Monitor	Type DW-91	129B2802

An industry wide NPRDS data search revealed no failures of this type on these monitors.