																		·	
								LICEN	SEE EV	VENT	REPOR	T (LER)						Form R	ev 2.0
Facility Name (1)									Docket N			ket Nu	umber (2) Page (3)						
•	Dresden Nuclear Power Station, U								Unit (	2	•		0 1	5 10 1	0 10 12	2   3	7 1	of	0 3
Title	(4)		<u></u>	<u>e</u>	<u></u>	<u></u>		<u>.</u>	and				4.* <u>*</u> *	×					<u> </u>
Une	vnarta	d Poact	on Sera	~ D.,	ring l	Que lla	dary	oltage T	ast Dr		- Sour	love In	tormod	ista P	ango Mr		· Soik	-	
	t Date					<u>bus un</u> ber (6		DILAYE D	Itage Test Due to Spurious Intermediate F   Report Date (7) Other						Facilities Involved (8)				
Month	Day	Year	Year					Revisio						Facility Names J Docket Number(s)					
				111	Numb		1///	Number								\$			<i>L</i>
				· ·										N/A		0 IS	10 10	101	1 1
		1.					'		1							-			
0 2	0 4	89	8 9			0 4					0 6		<b>_</b>	<u>N/A</u>		0 5	10 10		
OPER/	ATING							MITTED P				REQUIRE	MENTS	OF 10C	FR		• •		
MOL	DE (9)			<u>I Ch</u>			<u>more</u>	of the 1				t v 1e	- 72/-				173 7		
POWER			N	<u> </u> '	20.40	02(b) 05(a)(	1)/;		20.405 50.36(					)(2)(i )(2)(v			-	'1(b) '1(c)	
LEVEL				'		05(a)( 05(a)(			50.30( 50.36(					)(2)(v )(2)(v				r (Spe	-ifu
(10)	10	10	1 0	[!		05(a)(			50.30( 50.73(						''/ iii)(A)	I		bstrac	-
11////		//////	11/1/1			05(a)(					2)(ii)				iii)(B)			w and	
\ <i>\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\</i>				05(a)(					2)(iii)			)(2)(x			Text		,		
//////	<u> //////</u>	11111	<u>//////</u>										·						
Name								LICENSE	CON1	AUI	<u>tuk ir</u>	115 LER	<u>U41</u>		T		NE NU	MOED	
NGING														AREA		LEFN	INC NU	MOLK	
	Raymr	ond Mag	row, Tee	chni	cal St	taff E	nain	eer		Ext.	. 2491					9 4	12 1	-12 19	12 10
								ACH COMPO				SCRIBE	D IN T	+×+					_1 -1 -1 -7
CAUSE	SYSTE	M   COI	MPONENT		ANUFAC			TABLE ///		CAL		SYSTEM	-	ONENT	MANUF		REPO	RTABLE	1.1.1.1.1
	i				TURER		TO NF	PRDS	(,,,,,,						TURE	R	то	NPRDS	
X	IG	<u>i  c  </u> r	<u>B  L  1</u>	<u></u> !	3 5	12	`	<u>Y</u>	((()))	L		1					<b>_</b>		
								1/1/1/1											
SUPPLEMENTAL REPORT EXPECTED (14)									Expected Month Day Year										
								Submis				,							
Yes	Yes (If yes, complete EXPECTED SUBMISSION DATE) X NO																		
APSTRACT (Limit to 1400 space is a sparewingtaly fifteen single space typewintten limes) (16)																			

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

89031306 PDR ADC

On February 4, 1989 at 2249 hours, while in cold shutdown, the Unit 2 reactor scrammed during the performance of Dresden Operating Surveillance (DOS) 6600-6, Bus Undervoltage and ECCS Integrated Functional Tests for Unit 2/3 Diesel Generator. The bus undervoltage test was expected to generate a half scram on Reactor Protection System (RPS) Channel B. After RPS Channel B was tripped, an unexpected half scram on RPS Channel A, due to Intermediate Range Monitor (IRM) 13 spiking high-high, resulted in the unplanned Engineered Safety Feature (ESF) actuation.

The cause of the unexpected half scram was due to an induced signal picked up on IRM 13 as a result of Standby Gas Treatment (SBGT) System initiation (as expected) during the test and not as a result of neutron flux response. To prevent any further induced signals on IRM 13, the cable from the pre-amplifier to the detector was replaced with a new, triple shielded signal cable. A similar event had previously occurred as reported by LER 85-006 on Docket 050237. In that event an unexpected half scram on low water level and subsequent full scram took place as a result of a design deficiency in the RPS power supply. The design deficiency was subsequently corrected.

10

LICENSEL EVENT REPORT (LER) TEXT CONTINUATION								
FACILITY NAME (1)	ACILITY NAME (1) DOCKET NUMBER (2) LER NUMBER (6)							
		Year /// Sequential /// Revision						
Dresden Nuclear Power Station	0   5   0   0   0   2   3   7	8 9 - 0 0 4 - 0 0	0 2 OF 0 3					
TEXT Energy Industry Identification System (EIIS) codes are identified in the text as [XX]								

•

· Fr .

#### PLANT AND SYSTEM IDENTIFICATION:

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

# EVENT IDENTIFICATION:

Unexpected Reactor Scram During Bus Undervoltage Test Due to Spurious Intermediate Range Monitor (IRM) [IG] Spike.

## A. CONDITIONS PRIOR TO EVENT:

Unit: 2	Event Date: February 4, 1989	Event Time: 2249 hours
Reactor Mode: N	Mode Name: Shutdown	Power Level: 0%

Reactor Coolant System (RCS) Pressure: 0 psig

## B. DESCRIPTION OF EVENT:

While in cold shutdown, Unit 2 reactor scrammed during the performance of Dresden Operating Surveillance (DOS) 6600-6, Bus Undervoltage and ECCS Integrated Functional Test for Unit 2/3 Diesel Generator. The unexpected scram occurred at the test step that requires opening the feed breaker from Transformer (TR) 22 to Bus 23. Opening the breaker resulted in the expected half scram on Reactor Protection System (RPS) [JC] Channel B. But, simultaneously an unexpected half scram due to an Intermediate Range Monitor (IRM) 13 high-high spike also occurred on RPS Channel A resulting in a full reactor scram. The bus undervoltage test was temporarily halted, IRM 13 was bypassed and Work Request 82002 was generated to investigate the cause of the IRM high-high spike. All other IRMs functioned normally during the test.

## C. APPARENT CAUSE OF EVENT:

This event is being submitted in order to comply with 10CFR50.73(a)(2)(iv) which requires the reporting of any event that resulted in the unplanned Engineered Safety Feature (ESF) actuation.

The intermediate cause for the high-high spike on IRM 13 is an induced signal resulting from the initiation of the Standby Gas Treatment (SBGT) [BE] System during the bus undervoltage test. SBGT initiated during the test, as expected, when RPS Channel B was deenergized. The root cause of the IRM spike is the failure of the IRM 13 cable to adequately shield the signal cable from external electromagnetic interference.

### D. SAFETY ANALYSIS OF EVENT:

Since the IRM high-high signal which caused the reactor scram did not result from an actual neutron flux spike and the RPS functioned as designed, this event is considered to be of no safety significance.

L.	ICENSEL EVENT REPORT (LER) TE	XT CONTINUATION	Form Rev 2.0
FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)	Page (3)
		Year /// Sequential /// Revision	
Dresden Nuclear Power Station	0 5 0 0 0 2 3 7	8 9 - 0 0 4 - 0 0	0 3 OF 0 3
TEXT Energy Industry Identif	fication System (EIIS) codes a	are identified in the text as [XX]	

### E. <u>CORRECTIVE ACTIONS</u>:

Work Request 82002 was generated to investigate the cause of the IRM spike. The investigation revealed that the high-high spike on IRM 13 could be prevented whenever SBGT was initiated if the signal cable going from the pre-amplifier to the detector was interchanged with the cable from another IRM. Work Request 82227 was therefore generated to replace the IRM 13 cable going from the pre-amplifier to the detector with a new, triple shielded cable. Following the cable replacement, IRM 13 has exhibited satisfactory performance.

## F. <u>PREVIOUS EVENTS</u>:

A similar event has been previously reported in:

LER Number/Docket Number Title

### 85-006/050237

Reactor Scram During Undervoltage Test.

In this event, during the performance of the bus undervoltage test, an unexpected half scram on reactor water low level was received resulting in a full scram. The cause was a design deficiency in the RPS power supply divisions to the trip units. The corrective action was to redesign the power supply.

### G. <u>COMPONENT FAILURE DATA</u>:

<u>Manufacturer</u>	Nomenclature	Model Number	<u>Mfg. Part Number</u>
Rockbestos	Coaxial Cable	N/A	R\$\$6-116

A search of NPRDS revealed 18 events in which an IRM gave a false indication due to either a breakdown in the cable or the cable connectors.



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

March 6, 1989

EDE LTR #89-180

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

Licensee Event Report #89-004-0, 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/ade

Enclosure

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