

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Cooper Nuclear Station DOCKET NUMBER (2) 05000298 PAGE (3) 1 OF 03

TITLE (4) Unplanned Actuation of the Group 6 Isolation Engineered Safety Feature During Normal Operation Due to a Failed Electronics Component

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	3	8	8	8	8	8	0	2	4	0	0	1	0	2	1	8	8	0	5	0	0	0

OPERATING MODE (9) N THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)

20.405(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)(vi)	<input type="checkbox"/>	OTHER (Specify in Abstract below and in Text, NRC Form 306A)	
20.405(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(vii)(A)	<input type="checkbox"/>		
20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(vii)(B)	<input type="checkbox"/>		
20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(viii)(B)	<input type="checkbox"/>		
20.405(a)(1)(vi)	<input type="checkbox"/>	50.73(a)(2)(iv)	<input type="checkbox"/>	50.73(a)(2)(ix)	<input type="checkbox"/>		

LICENSEE CONTACT FOR THIS LER (12)

NAME Donald L. Reeves TELEPHONE NUMBER 402 825-3811

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRCDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRCDS
X	I	L R I	G O 8 2	Y					

SUPPLEMENTAL REPORT EXPECTED (14) YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15) MONTH DAY YEAR

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

On September 23, 1988, at 4:14 A.M., several Group 6 Isolations (Reactor Building isolation and actuation of the Standby Gas Treatment [SBGT] System) occurred due to intermittent tripping of the B Reactor Building Ventilation Radiation Indicator/Trip Unit. An Operator was stationed at the control panel in the Control Room to maintain the malfunctioning trip unit in a reset condition while monitoring the companion "A" Indicator Trip Unit. The Operator remained stationed at the panel until the trip function of the "B" Indicator/Trip Unit was removed in accordance with Surveillance Procedure 6.3.7.5, Reactor Building Ventilation Radiation Monitor Calibration and Functional/Functional Test, as part of the investigative process. When these actuations occurred, the plant was in normal steady state operation at 100 percent power.

An investigation into the spurious operation of the Radiation Indicator/Trip Unit revealed a defective zener diode in the Indicator/Trip Unit power supply. The effect of this malfunction was to reduce the Indicator/Trip Unit trip setpoint to the normal (background) range. The zener diode was replaced and, following performance of a satisfactory surveillance test, the Indicator/Trip Unit was returned to service.

In an effort to prevent recurrence, a revision is being made to the surveillance procedure to require additional output voltage checks. It is anticipated that these checks will enable early detection of power supply degradation.

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TEXT (if more space is required, use additional NRC Form 366A's) (17)

A. Event Description

On September 23, 1988, at 4:14 A.M., several Group 6 Isolations (Reactor Building isolation and actuation of the Standby Gas Treatment [SBGT] System) occurred due to intermittent tripping of the B Reactor Building Ventilation Radiation Indicator/Trip Unit. Upon receiving the first trip, the Indicator/Trip Unit readout in the Control Room was checked and appeared normal, consistent with the readout of the "A" Indicator/Trip Unit. The Group 6 isolation was reset. This process repeated several more times until an Operator was stationed at the panel in the Control Room to maintain the malfunctioning trip unit in a reset condition while monitoring the companion "A" Indicator/Trip Unit. The Operator remained stationed at the panel until Instrument and Control Technicians were able to remove the "B" Indicator/Trip Unit trip function in accordance with Surveillance Procedure 6.3.7.5, Reactor Building Ventilation Radiation Monitor Calibration and Functional/Functional Test, as part of the investigative process to determine the source of the problem.

B. Plant Status

Operating at 100 percent power in normal steady state operation.

C. Basis for Report

Unnecessary actuations of an Engineered Safety Feature (ESF), Group 6 Isolation, reportable in accordance with 10CFR50.73(a)(2)(iv).

D. Cause

An investigation into the spurious operation of the Radiation Indicator/Trip Unit revealed a defective zener diode (General Electric Part No. 287A5840P002) in the Indicator/Trip Unit Power Supply (Area Radiation Monitor Power Supply, manufactured by General Electric - Model No. 112C2235G4). The zener diode (circuit designation - VRI) was installed in the -24 VDC circuit. The effect of this malfunction was to reduce Indicator/Trip Unit trip setpoint to the normal (background) range.

E. Safety Significance

None. The Group 6 Isolation circuitry functioned as designed, effecting isolation of the Reactor Building and startup of the SBGT System.

F. Safety Implication

None. Operation of the Group 6 Isolation circuitry, upon being actuated, was satisfactory. Had an actual radiological condition existed during the repair of the "B" Indicator/Trip Unit, the "A" Indicator/Trip Unit trip setpoint would have been reached and the response of the Group 6 Isolation circuitry to the condition would have been as expected.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

G. Corrective Action

An investigation into the problem revealed a defective zener diode in the Power Supply Unit for the "B" Indicator/Trip Unit. The zener diode was replaced and a surveillance test of the Indicator/Trip Unit, conducted in accordance with Surveillance Procedure 6.3.7.5, was satisfactorily performed. At 1:53 P.M. the unit was returned to service.

In an effort to prevent recurrence, a revision to Surveillance Procedure 6.3.7.5 is being made to require additional output voltage checks. It is anticipated that these checks will enable early detection of power supply degradation.

H. Similar Events

None.