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ROCHESTER GAS AND ELECTRIC CORPORATION . 89 EAST AVENUE, ROCHESTER N.Y. 14649



ROBERT C. MECREDY Vice President **Ginna Nuclear Production**

TELEPHONE AREA CODE 716 546-2700

January 11, 1991

' U.S. Nuclear Regulatory Commission Document Control Desk Washington, DC 20555

Subject: LER 90-015, Safeguards Bus Undervoltage Relay Actuation Due to a Failed Solid State Switch Causes an Automatic Start of the "A" Emergency Diesel Generator. R.E. Ginna Nuclear Power Plant Docket No. 50-244

In accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(iv), which requires a report of, "any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF) including the Reactor Protection System (RPS)", the attached Licensee Event Report LER 90-015 is hereby submitted.

This event has in no way affected the public's health and safety.

Very, truly yours, Robert C. Mecredy

xc:

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U.S. Nuclear Regulatory Commission Region I 475 Allendale Road King of Prussia, PA 19406

Ginna USNRC Senior Resident Inspector

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was normal and was still being supplied by its normal power supply. Subsequently, at 2322 EST, the power supply to Bus 14 was transferred from the normal supply to the "A" Emergency Diesel Generator per Maintenance Procedure M-48.14 (Isolation of Bus 14 Undervoltage System for Maintenance, Troubleshooting, Rework and Testing). This transfer was done so the Maintenance Department could troubleshoot, repair, test, and return to service the Bus 14 Undervoltage Monitoring System.

At 0644 EST, December 13, 1990, subsequent to the repair and return to service of the Bus 14 Undervoltage Monitoring System, Bus 14 normal power supply was restored and the "A" Emergency Diesel Generator was stopped and realigned for automatic standby.

C. INOPERABLE STRUCTURES, COMPONENTS, OR SYSTEMS THAT CONTRIBUTED TO THE EVENT:

None.

D. OTHER SYSTEMS OR SECONDARY FUNCTIONS AFFECTED:

None.

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	G.	SAFETY SYS	STEM RES	PONSES:					
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III.	CAUS	<u>SE OF EVENT</u>							
	А.	IMMEDIATE	CAUSE:						
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B. INTERMEDIA	TE CAUSE:		

The undervoltage signal from the Bus 14 Undervoltage Monitoring System was due to the internal failure of the system's solid state switch printed circuit board number two (2). This solid state switch printed circuit board is the interface mechanism between the solid state undervoltage monitoring relays and the mechanical actuation relays.

C. ROOT CAUSE:

The root cause was determined to be a failure of an electronic component.

IV. <u>ANALYSIS OF EVENT</u>

This event is reportable in accordance with 10 CFR 50.73, Licensee Event Report System, item (a)(2)(iv), which requires reporting of "any event or condition that resulted in manual or automatic actuation of any Engineered Safety Feature (ESF), including the Reactor Protection System (RPS)". The starting of the "A" Emergency Diesel Generator was an automatic actuation of an ESF system.

An assessment was performed considering both the safety consequences and implications of this event with the following results and conclusions:

There were no operational or safety consequences or implications attributed to the starting and loading of the "A" Emergency Diesel Generator because;

- o The "A" Emergency Diesel Generator operated as designed.
- o Both Bus 14 power supplies (i.e. normal and emergency) were either in use or available throughout the event.

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۷.	CORRE	CTIVE	ACTION										
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 Based on the review of thermography results by RG&E and Electro-Mechanics, the need for establishing a program for replacement of existing solid state switch printed circuit boards will be evaluated.

VI. ADDITIONAL INFORMATION

· A. FAILED COMPONENTS:

The failed solid state switch printed circuit board number 2 was supplied by Electro-Mechanics, part number 33013; assembly number 03021-288.

B. PREVIOUS LERS ON SIMILAR EVENTS:

A similar LER event historical search was conducted with the following results: LER 88-008 (Safeguards Bus Undervoltage Relay Actuation Due to a Failed Solid State Switch Caused Automatic Start of "B" Emergency Diesel Generator) was a similar event. The root cause of LER 88-008 was a random failure of an electronic component, and no corrective action was deemed necessary to prevent recurrence.

C. SPECIAL COMMENTS:

See LER 90-016 for a discussion of the Reactor Trip that occurred during this repair activity, and LER 90-017 for a discussion of other events caused by this repair activity.