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## (effective full power days) into Operating Cycle 6. II. Status of Structures, Components, or Systems that were

## II. Status of Structures, Components, or Systems that were Inoperable at the Start of the Event and that Contributed to the Event

There were no structures, systems, or components known to be inoperable at the time of the event that had any effect on the failure of Breaker #4 to trip during the test of the undervoltage device.

## III. Event Description

At approximately 1100 hours on March 16, 1988 during the performance of Surveillance Procedure 1303-4.1, "Reactor Protection System" [AA/-], Step 8.10.2.2a, Control Rod Drive (CRD) Breaker CB-4 [AA/BKR] failed to trip during the undervoltage (UV) trip test. CRD Breaker CB-4 did however trip via the shunt trip device. This event was determined not to be reportable in accordance with 10 CFR 50.72 and 50.73. Therefore this LER is being submitted voluntarily. This event has previously been reported via the Nuclear Plant Reliability Data System (NPRDS) and the Nuclear Network.

The UV device was tested several times to establish the failure mechanism. Prior to replacing CB-4, the failure was identified as the UV trip paddle lodging itself over the UV armature disk. This failure mode prevented the UV device (when de-energized) from moving upward and striking the UV trip paddle to trip the breaker (See Figure 1).

Defective Breaker CB-4 was replaced with a spare breaker. The replacement breaker was then tested to verify proper operation of the UV and shunt trip devices. The replacement breaker tested satisfactorily. Breaker CB-4 was moved to the Electrical Maintenance Shop for further

NRC Form 366A (9.83)	LICENSEE EVENT REPO	RT (LER) TEXT CONTIN	UATION	UŠ	APPROVED ( EXPIRES 8/3		
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	observation, and ir problem.	nvestigation of t	he root	cause	e of th	ne	
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	CRD Breaker CB-4 ha 1987 and had functi performance of Surv February 18, 1988.	oned normally du	ring th	ne last	t	16,	
IV.	Component Failure I	Data					
		d.c. breaker par Device, Type 56 Trip Paddle, Pa	B309G7				
v.	Automatic or Manual	ly Initiated Safe	ety Sys	stem Re	esponse	05	
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VII.	Previous Events of	a Similar Nature					

None

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## VIII. Corrective Actions Planned

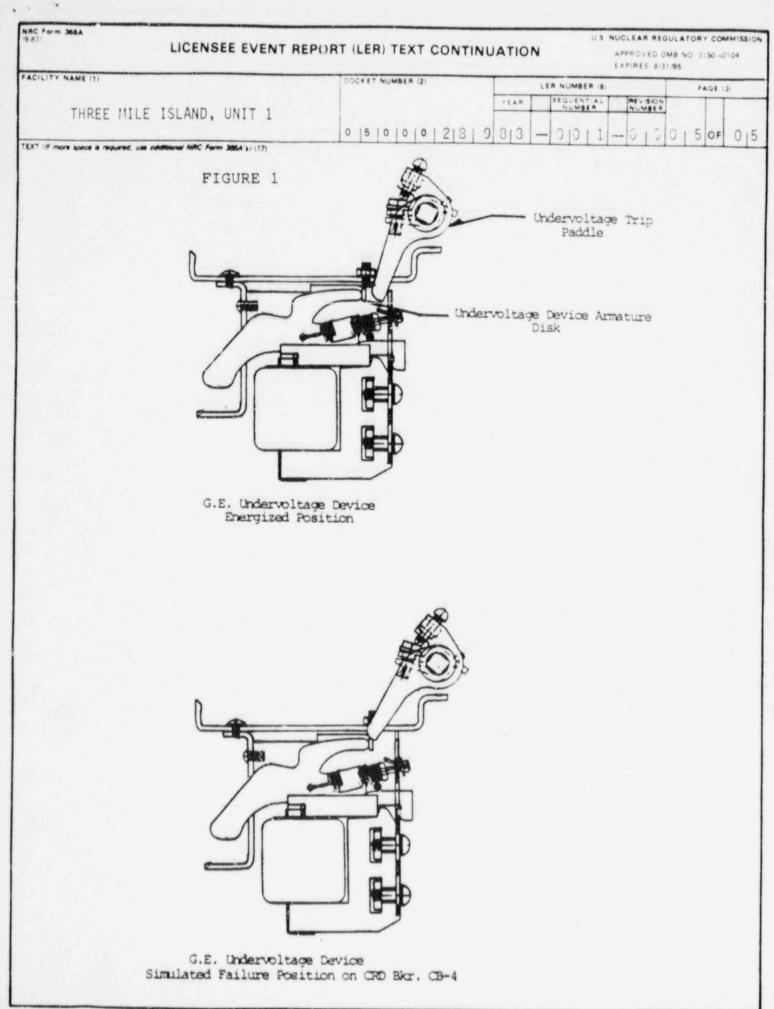
A procedure has been prepared to check the remaining in-service and spare CRD breakers and the spare undervoltage devices. These checks will include verifying the:

- 1. Interface between the undervoltage device armature disk and the undervoltage trip paddle.
- 2. Length of the trip paddle.
- 3. Distance between the disk and the armature.

Preventive Maintenance Procedure E-36 will be changed to provide additional direction to verify the proper location of the undervoltage trip paddle and the undervoltage device armature disk. Receipt inspection for replacement parts will be required if the vendor cannot provide dimensional certification.

GPUN intends to complete CRD breaker checks by August, 1988 and procedural changes by September, 1988.

NOTE: The Energy Industry Identification System (EIIS), System Identification (SI) and Component Function Identification (CFI) Codes are included in brackets, "[SI/CFI]", where applicable, as required by 10 CFR 50.73(b)(2)(ii)(F).





**GPU Nuclear Corporation** 

Post Office Box 480 Route 441 South Middletown, Pennsylvania 17057-0191 717 944-7621 TELEX 84-2386 Writer's Direct Dial Number:

June 3, 1988 C311-88-2063

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

Dear Sir:

Three Mile Island Nuclear Station Unit I, (TMI-1) Operating License No. DPR-50 Docket No. 50-289 LER 88-001-00

This letter transmits Licensee Event Report (LER) No. 88-001-00 which deals with the Failure of a CRD Breaker Undervoltage Device During Surveillance Testing. Public health and safety were unaffected.

This LER is being submitted pursuant to 10 CFR 50.73, using the required NRC forms (attached). NRC Form 366 contains an abstract which provides a brief description of the event. For a complete understanding of the event, refer to the text of the report which appears on Form 366A.

Sincerely,

D. Hukill

Vice President & Director, TMI-1

HDH/MRK/spb

Attachment

cc: R. Hernan

W. Russell R. Conte

A. CONCE

0014C

GPU Nuclear Corporation is a subsidiary of the General Public Utilities Corporation 014C