

50-289

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TO: J.P.O'REILLY

FROM: METROPOLITAN EDISON CO.
READING, PA.
J.G.. HERBEIN

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PLANT NAME: THREE MILE ISLAND # 1
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ENCLOSURE

LICENSEE EVENT REPORT FOR R.O.# 77-11/1T, ON
5/19/77 CONCERNING THE "B" ENGINEERED SAFEGUARDS
MOTOR CONTROL CENTER TRIPPED DUE TO A MECHANICAL
BINDING OF THE TRIPPING STEM ON THE OVERLOAD
DEVICE.....

(1P)

NOTE: IF PERSONNEL EXPOSURE IS INVOLVED
SEND DIRECTLY TO KREGER/J. COLLINS

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EXTERNAL DISTRIBUTION

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CONTROL NUMBER

1476 515

771660041

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METROPOLITAN EDISON COMPANY

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TELEPHONE 215 - 929-3801

June 2, 1977
GQL 0764

REGULATORY DOCKET FILE COPY

Mr. J. P. O'Reilly, Director
Office of Inspections and Enforcement, Region 1
U.S. Nuclear Regulatory Commission
631 Park Avenue
King of Prussia, Pa. 19406



Dear Sir:

Docket No. 50-289
Operating License No. LPR-50

In accordance with the Technical Specifications of our Three Mile Island Nuclear Station Unit I (TMI-1), we are reporting the following reportable occurrence.

- (1) Report Number: 77-11/1T
- (2a) Required Report Date: 06-02-77
- (2b) Date of Occurrence: 05-19-77
- (3) Facility: Three Mile Island Nuclear Station - Unit I
- (4) Identification of Occurrence:
Title: Engineered Safeguards Motor Control Center Tripped During Power Operation

Type: A reportable occurrence as defined by Technical Specification 6.9.2.A.(2) in that, the 1B Engineered Safeguards Motor Control Center Tripped during power operations, thus, leading to operation of that system with a parameter subject to a limiting condition for operation less conservative than the least conservative aspect of that limiting condition for operation established in Technical Specification 3.7.2.F.

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(5) Conditions Prior to Occurrence:

Power:	Core <u>1899 Mw (75%)</u>
	Elec. <u>620 MWe</u>
RC Flow:	<u>144 x 10⁶</u>
RC Pressure:	<u>2170 psia</u>
RC Temp:	<u>580</u>
PRZR Level:	<u>219 inches</u>
PRZR Temp:	<u>655°F</u>

(6) Description of Occurrence:

While attempting to start the 1B Instrument Air Compressor (IA-P-1B), the feeder breaker to the 1B Engineered Safeguards Motor Control Center tripped. The motor control center breaker apparently tripped incorrectly due to the air compressor motor starting current. The motor control center was out of service for approximately eleven (11) minutes resulting in a violation of Technical Specification 3.7.2.f.

(7) Apparent Cause of Occurrence:

The cause of this occurrence has been determined to be material in that the tripping stem on the A phase overload device was binding. When the current through the breaker exceeds the long delay pickup setting, the tripping stem moves up toward the trip bar. If current is reduced before the tripping stem reaches the trip bar, the breaker will not trip and the tripping stem should return to its "reset" position. Mechanical binding prevented the A phase device from resetting on the feeder breaker to 1B ES MCC.

The motor current inrush from starting IA-P-1B caused the total current to exceed the long delay pickup setting of 1000 amps and the overload device tripped the breaker before the starting current decreased.

(8) Analysis of Occurrence:

The 1B ES MCC being out of service resulted in a loss of redundancy on some Engineered Safeguards equipment. Adequate redundant equipment was available to provide the required safeguards functions in the event of an accident.

Based on the short time the 1B ES MCC was out of service, and the availability of redundant equipment, it is concluded that the event did not result in a threat to the health and safety of the public or to station personnel.

(It should be noted that the ES loads constitute a small portion of the load on the 1B ES MCC. It is unlikely that block loading would have caused the breaker to trip.)

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(9) Corrective Action:

IMMEDIATE: A visual inspection was made in an attempt to determine the cause for the trip. No apparent faults were observed and the motor control center was re-energized. The normal loads from the motor control center were re-energized (except for the 1B Instrument Air Compressor).

LONG TERM:

1. The 1B Instrument Air Compressor motor was tested to verify that no faults were present.
2. Visual inspection of the 1B ES MCC feeder breaker indicated an overload device tripping stem not fully reset. (With the tripping stem not reset the breaker could trip in less than the required time if current were above the pickup value.)

The motor control center was removed from service for a short period of time to permit removal of the suspect breaker for testing. The breaker was replaced with a tested spare.

3. Testing of the breaker removed from service confirmed that the tripping stem was binding on the A phase overload device. Some binding was also noted on the C phase device.
4. The preventive maintenance procedure will be modified to include a check for the tripping stem resetting.

The Plant Operations Review Committee and Unit Superintendent have reviewed and approved the above corrective action and have taken steps to assure its completion.

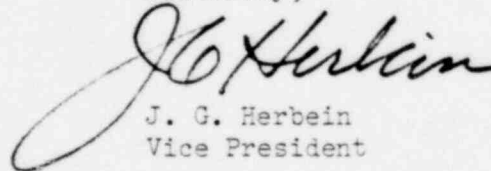
(10) Failure Data:

Westinghouse DB 50 Circuit Breaker
1600 Amps, 600 V AC
Series overcurrent trip device
1000 Amp, 60 cycle, #24X645883

Similar Events:

74-26 1B ES MCC Tripping

Sincerely,



J. G. Herbein
Vice President

JCH:DGM:js

Enclosure;Licensee Event Report

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