DCS No: 502898509
Date: September 27, 1985

PRELIMINARY NOTIFICATION OF EVENT OR UNUSUAL OCCURRENCE--PNO-I-85-67A

This preliminary notification constitutes EARLY notice of events of POSSIBLE safety or public interest significance. The information is as initially received without verification or evaluation, and is basically all that is known by the Region I staff on this date.

Facility: GPU Nuclear Corporation
Three Mile Island, Unit 1
Docket Number 50-289

Licensee Emergency Classification:
___Notification of Unusual Event
___Alert
___Site Area Emergency
___General Emergency
_X_Not Applicable

Subject: REACTOR PROTECTION SYSTEM BREAKER MALFUNCTION (UPDATE)

The licensee removed the failed breaker (GE Model AK-2-25) and examined it on September 24 and 25 to attempt to determine the failure mode. Vendor representatives participated in this process. The TMI-1 Restart Staff examined the breaker and met with the licensee on September 25 to obtain the current findings of the licensee's examination. The failure was diagnosed by the licensee as mechanical binding within the breaker closure assembly. Two rotating members (one adjacent to the other that normally come together positioning one on top of the other during closure) became laterally displaced and rotated into a bound configuration during the closure process. As a result, the breaker would not fully open or close from the failed mid-position. The GE representative was not aware of any prior failures of this type on their breakers.

The failed breaker and the installed breakers were shipped offsite in late 1984 and early 1985 for modifications which involved some disassembly of the breaker. The licensee is attempting to determine whether the problem resulted from that activity. The breaker, which is an original component of TMI-1, was installed in the plant in early June 1985 subsequent to the modification and removed in July 1985 from the distribution panel for an apparently unrelated problem of immediately tripping upon closure. It was later installed on September 15, successfully tested on September 16, and failed during testing on September 23.

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Licensee: _____
(Reactor Licensees)

Region I Form 83
(Rev. July, 1984)

IE-34
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The licensee completed its inspection of the 2 AC and 4 DC breakers that are currently installed for the rod control system. The licensee factored into the inspection criteria the observations of visual damage and physical dimensions from the failed breaker. No significant discrepancies were identified for the 4 DC breakers, but one of the 2 AC breakers had a metal discoloration (evidence of wear) in the same area of the breaker closure assembly where mechanical binding was noted on the failed breaker. The licensee is continuing to evaluate the implication of the breaker failure and, as of this time, has not presented its final position to the TMI-1 Restart Staff. The TMI-1 Restart Staff is evaluating current information and obtaining a machinery history for the breaker modifications maintenance and testing.

The TMI-1 Restart Staff will follow the licensee's actions and is independently reviewing the breaker history.