

LER 83-024/01X-1
EVENT DATE - July 3, 1983

I. EXPLANATION OF THE OCCURRENCE

At 1747 hours on July 3, 1983, a failure of the Unit Substation (USS) 2-11E transformer occurred. This caused a loss of power to USS 2-11E and its loads. As a result, seven (7) Technical Specification Action Statements were entered. They were:

- Loss of power to USS 2-11E -- Technical Specification 3.8.2.1
- 3-4 p 5 Loss of fuel pool radiation monitor -- Technical Specification 3.3.3.1
- 6-7 Auxiliary and Fuel Handling Building HVAC inoperable -- Technical Specification 3.9.12.1 and 3.9.12.2
- 8-9 ✓ One nuclear service closed cooling pump inoperable -- Technical Specification 3.7.3.1
- 10-11 One mini-decay heat pump inoperable -- Technical Specification 3.7.3.3
- 12-13 "A" diesel generator - both fuel pumps inoperable -- Technical Specification 3.8.1.1

The USS 2-11E transformer was electrically isolated and the tie breaker to USS 2-21E was closed to restore power to the USS 2-11E loads. This terminated all the associated Technical Specification timeclocks except Technical Specification 3.8.2.1 (due to the tie breaker being closed) at 2145 hours on July 3, 1983.

At 0147 hours on July 3, 1983, the Action Statement for Technical Specification 3.8.2.1 was exceeded. Therefore, this event is considered prompt reportable pursuant to Section 6.9.1.8(b) of the Technical Specification.

II. CAUSE OF THE OCCURRENCE

3-4 p 5
1-3- This event was the result of the USS 2-11E transformer failure. Based on an investigation by Plant Engineering, General Electric, and Reading Maintenance and Test, it was determined that [the most probable cause of the transformer failure was a turn-to-turn insulation failure near the top outer layer of the middle high voltage winding.] Ionized air, combined with fine metal particles, could have been released through a rupture in the outer insulation (a loose flap of insulation near the top of the winding appears to have been caused by the buildup and release of pressurized gases) in the vicinity of the buswork and bushings. The effect would have been reduced insulation of the air, resulting in arc-over between buses.

III. CIRCUMSTANCES SURROUNDING THE OCCURRENCE

At the time of the occurrence, the Unit 2 facility was in a long-term cold shutdown state. The reactor decay heat was being removed via loss to ambient. Throughout the event there was no effect on the Reactor Coolant System or the core.

IV. CORRECTIVE ACTIONS TAKEN OR TO BE TAKEN

Immediate - The transformer was electrically isolated and the bus was meggered. The electrical checks were satisfactory and, therefore, the bus was cross-tied to USS 2-21C.

Long-Term The transformer was replaced and the Unit Substation returned to service at 1820 hours on July 15, 1983.

V. COMPONENT FAILURE DATA

General Electric transformer 1500 KVA 3 ϕ 4160-277/480 volt Δ -Y 60Hz open air cooled.

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TDT A
MODEL #



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US Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

Three Mile Island Nuclear Station, Unit 2 (TMI-2)
Operating License No. DPR-73
Docket No. 50-320
Updated Licensee Event Reports

The Licensee Event Reports listed in Attachment 1 have been updated and are enclosed as Attachment 2 to this letter.

If you have any questions concerning this information, please contact Mr. J. J. Byrne of my staff.

Sincerely,

F. R. Standerfer
Vice President/Director, TMI-2

FRS/RDW/jep

Attachments

cc: Regional Administrator - Office of I & E, Dr. T. E. Murley
Program Director - TMI Program Office, Dr. B. J. Snyder
Deputy Program Director - TMI Program Office, Mr. L. H. Barrett

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