

blockout silicone foam sealant which has effectively insulated whatever insulation was violated. The containment lighting circuit from BE 1167 was re-energized after some preliminary checks and the fault has not re-occurred. Amperage checks of the circuits show no problems. A megger check of the cable, AP BE1167, also shows that the cable is good. Since non-Q AP BE1167 (Containment Lighting) was the only circuit running through the effected conduit and all electrical checks indicate a good cable, removal of the cable from the penetration for further visual inspection will be performed at the first refueling outage. BE 1101 trip is not unusual under a short circuit situation, as selective breaker tripping is only for overload conditions.

Analysis of Occurrence: Since the reactor has not reached initial criticality, and there is no decay heat in the reactor core, the loss of Auxiliary Feedwater for 35 minutes posed no threat to the health and safety of the public or to station personnel.

Corrective Action: The defective "lower" speed relay and blown control power fuse were replaced and AFPT 1-2 was returned to service. The circuits were inspected and the breakers were reclosed successfully on AFPT 1-1. Investigation into the relay failure indicated an insufficient current breaking capability. The control circuit was changed to put additional contacts in series to resolve this problem. Testing of the circuit change was successful and no future failures are expected.

Failure Data: No previous similar events have occurred.

TOLEDO EDISON COMPANY
DAVIS-BESSE UNIT ONE NUCLEAR POWER STATION
SUPPLEMENTAL INFORMATION FOR LER NP-32-77-11

DATE OF EVENT: July 27, 1977

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Both Auxiliary Feedwater Systems inoperable.

Conditions Prior to Occurrence: The plant was in Mode 3, with Power (MWT) = 0 and Load (MWE) = 0.

Description of Occurrence: At 1145 hours on July 27, 1977, while running the Auxiliary Feed Pump Turbine (AFPT) 1-2 per a Surveillance Test, ST 5071.01 for Maintenance to check out the governor, all speed control and indication was lost to this turbine. The turbine was at 2500 RPM and increasing when control and indication were lost (the speed could not be raised or lowered) from the Control Room. The AFPT 1-2 was then shutdown locally and declared inoperable.

While AFPT 1-2 was inoperable, Motor Control Center (MCC) E11C tripped, de-energizing MCC E11E at 1145 hours on July 27, 1977. This resulted in a loss of power to two valves, MS 106 (Main Steam Line to Auxiliary Feed Pump Turbine in Header Isolation Valve, and FW 612 (Steam Generator 1-1 Main Feedwater Stop Valve), which in turn resulted in AFPT 1-1 being declared inoperable. This made both Auxiliary Feedwater Systems inoperable in violation of Technical Specification 3.7.1.2.

It was found after investigation that there were no faults on MCC E11C or MCC E11E and they were re-energized successfully at 1220 hours. This returned AFPT 1-1 to operable status and removed the station from violation of Technical Specification 3.7.1.2.

Designation of Apparent Cause of Occurrence: Investigation into the loss of speed control and indication on AFPT 1-2 revealed a blown fuse in the control power circuit which was caused by the failure of the "lower" speed relay. The failure caused a raise and lower speed signal to be applied to the control circuit simultaneously which caused the fuse to blow. The relay and fuse were replaced and AFPT 1-2 was then tested and returned to operable status on July 28, 1977.

The cause of the trip of BE 1101 (feeder for E11C) has been determined to have been caused by construction personnel (Bisco) working on penetration PAP2PX in conduit #38357A, which is AP BE1167. The worker noticed a flash as he was manipulating his equipment around noon on Wednesday, July 27, which corresponds to the time BE1167 (Containment Lighting Disconnect Switch BSWX79D3) feeder breaker tripped. This penetration was inspected and no evidence of burns or insulation integrity deterioration was found. It is speculated that the construction equipment shorted one of the wires to ground in an area that is now surrounded by the