

TOLEDO EDISON COMPANY
DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE
SUPPLEMENTAL INFORMATION FOR LER NP-33-79-78

DATE OF EVENT: July 4, 1979

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Failure of motor operator on Auxiliary Feed Pump 1-1 Stop Valve AF 3870 to Steam Generator 1-1

Conditions Prior to Occurrence: The unit was in Mode 5, with Power (MWT) = 0, and Load (Gross MWE) = 0.

Description of Occurrence: On July 4, 1979 at 2000 hours, operations personnel closed supply breaker BE 1147 for Auxiliary Feedwater Valve AF 3870 while performing lineups for Auxiliary Feedwater System Surveillance Test ST 5071.04. At 2100 hours, it was discovered that there was no position indication for AF 3870 at the Control Room switch. The problem was noted, and the test was continued for Auxiliary Feedwater Train 2. At 2330 hours, testing was completed on Auxiliary Feedwater Train 2. At this time, the operator attempted to operate AF 3870 electrically. The valve would not operate and was declared inoperable. Technical Specification 3.7.1.2 requires two independent steam generator auxiliary feedwater pumps and flowpaths be operable in Modes 1, 2, and 3.

This report is being submitted as documentation of a component failure.

Designation of Apparent Cause of Occurrence: The control circuits for the motor operator for AF 3870 were checked and found operational. The motor was determined to be defective due to low winding resistance, a damaged winding lead, and the open circuit through the overload heaters. The motor was returned to the vendor for further analysis. The analysis by the vendor resulted in two possible causes of this occurrence: (1) an electrical failure in the motor for AF 3870 from single phasing in the motor caused by damage to a motor lead during installation or maintenance, or (2) a premature winding failure due to internal shorting. Although damage was discovered to a winding lead, it could not be determined by the vendor that this caused the winding failure.

Analysis of Occurrence: There was no danger to the health and safety of the public or station personnel. The unit was in Mode 5, and the Auxiliary Feedwater Train 2 was operable at the time of the occurrence. Feedwater Train 1-1 could have been made functional if required by manually operating AF 3870.

Corrective Action: Under Maintenance Work Order 79-2739, the motor, the motor overload relay, and the overload heaters were replaced. The motor and control circuits were tested per ST 5071.04 and determined operable on July 5, 1979.

Failure Data: Although there have been several previous failures of motor operators, there have been no previously reported occurrences due to motor failure.