

TOLEDO EDISON COMPANY
DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE
SUPPLEMENTAL INFORMATION FOR LER NP-33-79-97

DATE OF EVENT: July 20, 22, 1979

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Absolute position indication for Rods 4 and 6 of Group 5 inoperable

Conditions Prior to Occurrence: The unit was in Mode 1, with Power (MWT) = 2758 and Load (Gross MWE) = 913.

Description of Occurrence: On July 20, 1979 at 2300 hours, Rod 4 of Group 5 was declared inoperable because of a fluctuating absolute position indication and placed in asymmetric bypass. This placed the unit in the Action Statement (a) of Technical Specification 3.1.3.3 which requires all absolute position indication (API) channels to be operable and capable of determining the group rod position within $\pm 6.5\%$ in Modes 1 and 2. On July 22, 1979 at 0705 hours, while verifying relative position indication (RPI) for Rod 4 of Group 5, it was discovered that Rod 4 of Group 5 was no longer in an asymmetric alarm state but at approximately 85% withdrawn. It was also discovered Rod 6 of Group 5 API was at 50% while the RPI was at 100%. Zone reference indication for all rods in Group 5 showed 100%. At 0710 hours, all rods in Group 5 showed asymmetric alarm on the PI panel except Rod 4 of Group 5. This placed the unit in the Action Statement (b) of Technical Specification 3.1.3.3 which allows operation for 24 hours with more than one API channel inoperable provided all RPI channels are operable. All RPI channels were operable.

Designation of Apparent Cause of Occurrence: The cause of the occurrence has been determined to be defective position indicator reed switches. The reed switch failures may be caused by an oxide film buildup on the reed switch contacts resulting in faulty indication. Further investigation into the cause of this event will be performed when the necessary equipment is received.

Analysis of Occurrence: There was no danger to the health and safety of the public or to station personnel. The relative position indication and zone reference position for both rods were operable and provided proper indication of actual rod position indication.

Corrective Action: On July 22, 1979 at 0912 hours, Rod 6 of Group 5 was inserted enough to pick up a lower reed switch. When this was done, the API for Rod 6 of Group 5 indicated properly and the asymmetric alarm for Rod 6 cleared. The same procedure was performed for Rod 4 of Group 5 which cleared the remaining asymmetric rod alarms for Group 5 and the asymmetric fault alarm. At 0934 hours on July 22, 1979, the asymmetric alarm was taken out of bypass, removing the unit from the Action Statement of Technical Specification 3.1.3.3.

Station plant personnel are investigating with Diamond Power Specialty Corporation (the position indicator manufacturer) possible methods of removal of the oxide buildup. At 0934 hours, Group 5 rods were taken out of asymmetric bypass and declared operable.

Failure Data: There have been various previously reported occurrences of API failures. Only one has been identified as oxide buildup on reed switch contacts, see Licensee Event Report NP-33-79-90.

LER #79-083

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