

TOLEDO EDISON COMPANY
DAVIS-BESSE UNIT ONE NUCLEAR POWER STATION
SUPPLEMENTAL INFORMATION FOR LER NP-33-77-43

DATE OF EVENT: August 1, 1977

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Boration Systems Flow Path Inoperable

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

Description of Occurrence: At 1147 hours on August 1, 1977, the Reactor Operator attempted to add makeup to the Reactor Coolant System volume by "batching" in the required ratio of boric acid from the Boric Acid Addition Tanks and water from the Primary Water Storage Tank, to maintain the Reactor Coolant Boron Concentration at the existing level. When he tried to pump in the boric acid, he was unable to get flow through either Boric Acid Pump. This placed the Station in the Action Statement of Technical Specification 3.1.2.2 as we did not have an operable flow path from the concentrated boric acid storage system.

A valve lineup check was made and two valves (MU349 & MU354), one in the path of each pump, were found closed. The valves were opened and the flowpaths for each pump were verified at 1200 hours. This removed the station from the Action Statement.

Designation of Apparent Cause of Occurrence: At 1444 hours on July 26, 1977, #2 Boric Acid Addition Tank was taken off recirculation following the weekly sampling to determine boron concentration in accordance with Surveillance Test ST 5052.02. At 1456 hours, the same day, #1 Boric Acid Addition Tank was taken off recirculation following its weekly Surveillance Test for boron concentration. Due to an error in the procedure, the lineup was not properly restored to normal in that MU349 was not re-opened. There was operator error in that MU354 should not have been closed to perform the recirculation in the first place.

Analysis of Occurrence: The boration path from the Borated Water Storage Tank was operable throughout this occurrence, and the Reactor Coolant System Boron Concentration was still at refueling concentration (1944 ppm), which gives a shutdown margin of $9\% \frac{\Delta K}{K}$. There was no threat to the health and safety of the public or Station personnel.

Corrective Action: The procedure has been modified to correctly position MU349 upon completion of recirculation of No. 2 Boric Acid Addition Tank. The

procedure has also been modified to perform an independent verification of the valve positions in the flow path following recirculation of the Boric Acid Addition Tanks.

Failure Data: No previous similar events have occurred.