

TOLEDO EDISON COMPANY
DAVIS-BESSE UNIT ONE NUCLEAR POWER STATION
SUPPLEMENTAL INFORMATION FOR LER NP-33-78-132

DATE OF EVENT: November 9, 1978

FACILITY: Davis-Besse Unit No. 1

IDENTIFICATION OF OCCURRENCE: The maximum allowed test frequency for the boron injection heat trace was exceeded.

Conditions Prior to Occurrence: The unit was in Mode 1, with Power (MWT) = 1330.5 and Load (MWE) = 452.

Description of Occurrence: On November 9, 1978 at 0930 hours, the Surveillance Test Engineer discovered that Surveillance Test ST 5011.01, "Boron Injection Flow-path Test", was not performed to meet Technical Specification 4.1.2.2a. The test was completed 7.5 hours later than the allowed test frequency with the maximum allowable extension.

Technical Specification 4.1.2.2a requires that a weekly test be run to verify that the heat traced temperatures in the boric acid flowpath are $\geq 105^{\circ}\text{F}$. The test was completed at 1230 hours on November 9, 1978 and did meet the acceptance criteria.

Designation of Apparent Cause of Occurrence: It was found that the test was started within the allowable time interval but three of the heat traced temperature points did not meet the acceptance criteria of $\geq 105^{\circ}\text{F}$. This was due to the constant addition of primary or demineralized water through part of the heat trace line to the Reactor Coolant System for boron concentration control due to the transients encountered. Due to the design of this system, this addition of water reduced the temperature in the heat traced line below the required 105°F . When the surveillance test was first performed on November 8, 1978, the three heat traced temperatures had never recovered enough to pass the $\geq 105^{\circ}\text{F}$ requirement. Due to the frequent addition of water to the Reactor Coolant System, the test was delayed long enough that it exceeded the maximum time interval.

Analysis of Occurrence: There was no danger to the health and safety of the public or to unit personnel. If necessary, the makeup pump suction could be diverted to the Borated Water Storage Tank (BWST) which has capacity of 434,650 to 550,000 gallons minimum boron concentration of 1800 ppm.

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Corrective Action: Facility Change Request (FCR) 78-508 was written to either look into the possibility of modifying the Technical Specifications to reflect the fact that the much cooler makeup water flowpath utilizes the same section of heat traced piping, or to design a heat exchanger into the system to heat the water before it reaches the heat traced portion of the pipe, or to add additional heat trace to keep the temperatures $\geq 105^{\circ}\text{F}$ even if cold water is injected.

Failure Data: There have been no previous occurrences of exceeding surveillance requirement test frequency due to a boron injection flowpath design deficiency.

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