



TOLEDO EDISON COMPANY  
DAVIS-BESSE NUCLEAR POWER STATION UNIT ONE  
SUPPLEMENTAL INFORMATION FOR LER NP-32-80-07

DATE OF EVENT: April 25, 1980

FACILITY: Davis-Besse Unit 1

IDENTIFICATION OF OCCURRENCE: Hydraulic Snubber Deficiency

Conditions Prior to Occurrence: The unit was in Mode 6, with Power (MWT) = 0 and Load (Gross MWE) = 0.

Description of Occurrence: As a part of the corrective action described in Licensee Event Report NP-32-79-07 concerning hydraulic snubber deficiencies, the architect/engineer conducted a study to determine realistic requirements for hot and cold piston settings, and lockup and bleed rates. As expected, it was determined that for most snubbers the original tolerances were unnecessarily restrictive, and could be relaxed without impairing plant safety.

However, during this review, some uncertainties appeared regarding snubber bleed rates. Subsequent investigation, including discussions with the snubber manufacturer, showed that for 12 snubbers the as-installed bleed rate would be insufficient to permit adequate thermal growth of the piping during a transient concurrent with a locked snubber.

If the snubber were to lock up due to a seismic event which would cause or result in a concurrent event where a pressurizer relief valve lifted (either code safety or electric) or where auxiliary feedwater turbine 1-1 was started, the affected snubbers would have impeded the thermal expansion resulting from the steam flow in the associated piping. Resultant failure of the piping system was thus assumed without further analysis of the stresses involved.

Designation of Apparent Cause of Occurrence: As a result of combining a seismic event with either of the upset conditions described above, the bleed rates previously set were not adequate to allow unrestricted growth of the piping. The setting for bleed rate of 4 + 1 inches per minute was from the manufacturer's recommendations. The architect/engineer math model requires the bleed rate to be between 6-10 inches per minute. The bleed rates for all the remaining snubbers have been reviewed and found to be conservative.

Analysis of Occurrence: There was no danger to the health and safety of the public or to station personnel. The insufficient bleed rate of the hydraulic snubbers could have prevented the fulfillment of the functional requirements of systems required to cope with accidents analyzed in the Final Safety Analysis Report and therefore is a reportable occurrence per Technical Specification 6.9.1.8.f.

Only under extremely improbable conditions would the snubbers have been called upon to function as described.

Corrective Action: The 12 snubbers of concern will be reset during the current refueling shutdown and prior to restart of the unit.

Failure Data: There have been no known previous occurrences of non-conservative snubber settings.

LER #80-033