

ATTACHMENT TO LER

NO. 79-044/99X-0

COMMONWEALTH EDISON CO.

ZION GENERATING STATION

50-295

Description of Event: At 0626 hrs. on 6/8/79, Unit 1 experienced an inadvertent reactor trip due to 1D steam generator low level and feedwater flow mismatch caused by a 1C feedwater pump trip. Following the reactor trip, the steam generators were initially refilled at 150 gpm. While operators were throttling back auxiliary feedwater from 150 gpm to 100 gpm, a waterhammer shock occurred in loop D steam generator. The shock momentarily spiked 1B and 1D steamline pressure transmitters high. A momentary safety injection signal indicating "Steamline A High ΔP " was received. Recording equipment indicates that this signal was present for less than 1/60th of a second. The signal duration was apparently sufficient to set off the solid state electronics which operate the control room annunciator but was not sufficient to latch in the SI actuation relays. Thus, operators received SI annunciation but no actuation of safeguards equipment took place. Operators immediately began analyzing plant parameters. Although no abnormalities were apparent, operator's conservatively initiated manual SI about 1.5 minutes later.

Consequence of Occurrence: Visual inspection of the Unit 1 containment and steam tunnel indicated no structural damage occurred as a result of the safety injection or water hammer. All safeguards equipment operated as required. The effects of the thermal transient on the SI nozzles were evaluated and were found to be of minimal consequence. The integrity of the reactor coolant system remained intact. The health and safety of the public were not affected.

Cause of Occurrence: Operators manually initiated safety injection since a control room annunciator and the computer printout indicated safety injection had occurred but no safeguards equipment had actuated. A "Steamline A High ΔP " safety injection signal was received for less than 1/60th of a second due to a waterhammer in loop D steam generator. This caused the control room annunciation and computer printout of safety injection actuation, but was not of sufficient duration to latch in SI relays, so no safeguards equipment actuated until the SI was manually initiated.

Corrective Actions: Proper operation of the safeguards logic was verified by special PT-10A and 10B testing. Zion Station is currently investigating the cause of waterhammer shocks.