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Additional Cause Description and Corrective Action

During periodic surveillance testing the LC auxiliary feedwater pump failed to start from the "B" steam supply. The pump was started successfully from the "A" steam supply and then started successfully from the "B" steam supply. No cause for the failure to start on the first attempt could be determined at the time of occurrence. Later pump operation indicates that the pump may not actually have failed to start.

On 7-16-79 during operator training exercises the LC auxiliary feedwater pump was started locally from the "B" steam supply header. An excessive quantity of water was observed issuing from the turbine exhaust, and the pump came up to speed at a much slower rate than normal. Further investigation revealed that a recent change to operating procedure 0700022 changed normally open warm-up valves V8384 and V8385 to normally closed to agree with the system P and 1D. Closing these valves created a trap for condensation build-up upstream of the "B" steam supply valve MV08-13.

It is now hypothesized that the build-up of condensation created a water turbine effect in the first seconds of the attempted pump start which resulted in a much slower rate of acceleration.

Normally, the pump reaches approximately 2000 rpm in 15-20 seconds and when the operator did not see any indication of rpm in that time frame, he manually tripped the pump. It is felt that the pump was slowly accelerating as the water was passing through the turbine and the pump would have started had it not been tripped manually.

Corrective action is to maintain the valves in a normally open configuration under OP 0010122.

Review by the Facility Review Group has determined that maintaining the valves open does not jeopardize plant safety. Engineering will be requested to verify the FRG's findings.