

CONTROL BLOCK: | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

81021.80653.

REPORTABLE OCCURRENCE 335-80-71
LICENSEE EVENT REPORT
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ADDITIONAL CAUSE DESCRIPTION

The charging pumps, which take suction on the VCT, pump borated water into the RCS for boron concentration control and makeup. While blending boric acid and water to the VCT to slightly dilute the RCS and add makeup, a relief in the line to the blending valve failed. This returned the boric acid to the boric acid makeup tank instead of into the VCT. This resulted in the dilution of the VCT and therefore the dilution of the RCS.

The plant is designed to safely accommodate this transient but the event is potentially significant due to the misleading indication given. The relief valve is downstream from the boric acid flow element so the operators had indication of a normal blend to the VCT. Due to the small amount of acid involved (a few gallons) and the large boric acid tank size (8,000 gallons), tank level did not respond with noticeable indication. Increasing power was the first indication of the transient and the cause was not readily apparent. Since dilution via the VCT is a slow process, the transient had been in progress for several minutes before there was any indication. An alternate boron injection path was used to reduce power.

The relief was disassembled and found to have a cut seat and a bent stem. The seat was repaired and the stem replaced. The bent stem was the root cause of the dilution. How the stem became bent is unknown.

A review by Plant Operators of this LER and of the proper actions taken, will increase awareness of this problem and will help the operator to deal with similar events, should they occur in the future.

