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Evaluation of a Deviation in Pump Seizure Methodology

On October 6, 2000 a deviation was determined to exist in the pump model of the COTRANSA2 computer code. The deviation was discovered during the code verification and validation (V&V) activity that has been ongoing since the Nuclear Regulatory Commission's Core Performance Inspection (Inspection Report 99900081/97-01) of Siemens Power Corporation in 1997. The deviation was determined to have been introduced about 20 years ago in the COTRANSA code, the predecessor to the COTRANSA2 code. The pump model was found to improperly calculate the pump flow resistance during a pump seizure event.

A Part 21 evaluation of the deviation was completed for the plants affected – Dresden Units 2 and 3 and Susquehanna Units 1 and 2. The deviation was determined not to be reportable under 10 CFR 21.21(c) for Dresden Units 2 and 3 and for events initiated during two-loop operation of Susquehanna Units 1 and 2. However, SPC does not have the capability to determine whether the deviation is reportable for events initiated during single-loop operation (SLO) of Susquehanna Units 1 and 2, because the licensee independently establishes higher MCPR operating limits for SLO based on MCPR values provided by SPC. The SLO MCPR limits calculated by SPC with the pump error corrected did not exceed the SLO MCPR COLR limits in effect at the time of discovery.

The affected licensees have been informed of the error and SPC's Part 21 evaluation results.

Very truly yours,



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