



November 21, 1975

Mr. Norman C. Moseley, Director Region II
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
230 Peachtree Street, N.W., Suite 818
Atlanta, Georgia 30303

Dear Mr. Moseley:

ABNORMAL OCCURRENCE 251-75-11
TURKEY POINT UNIT 4
DATE OF OCCURRENCE: NOVEMBER 12, 1975

HIGH BORON CONCENTRATION IN THE "C"
BORIC ACID STORAGE TANK

A. CONDITIONS PRIOR TO OCCURRENCE

The Unit 4 reactor was in steady state power operation at about 99% rated power. The Unit 3 reactor was in the refueling shutdown condition.

B. DESCRIPTION OF OCCURRENCE

At about 11:00 AM on November 12, 1975, it was verified that the boron concentration in the "C" Boric Acid Storage Tank (BAST) was above the upper limit defined in Technical Specification 3.6.b.3. The measured concentration was 22,600 ppm which was slightly above the upper limit of 22,500 ppm.

C. DESIGNATION OF APPARENT CAUSE OF OCCURRENCE

This occurrence was caused by the addition of a concentrated boric acid solution to the "C" BAST which was in-service at the time. The addition was made to increase the quantity of boric acid solution in the "C" BAST to ensure that it was well above the minimum quantity required by Technical Specifications for single reactor operation. Under normal operating conditions, the "B" BAST, which is normally isolated, would have been placed in-service and the "C" BAST

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would have been isolated prior to the chemical addition. However, maintenance on the 4A Boric Acid Transfer Pump suction valve necessitated a system valve lineup that prevented the "B" BAST from being placed in-service. The action at this point would normally have been to complete the valve work and shift the in-service BAST, but the quantity of boric acid solution in the "C" BAST was near the low limit specified for single reactor operation, therefore, the decision was made to proceed with transferring the boric acid solution to the in-service "C" BAST. Under the circumstances, a judgment was made that the conservative action would be to add to the in-service BAST which could then be sampled and recirculated if necessary to bring the boron concentration into specification.

D. ANALYSIS OF OCCURRENCE

An increase in the boron concentration increases the potential for flow blockage caused by the possible precipitation of boric acid. During this occurrence, checks of the boric acid system indicated there was no significant precipitation. Temperatures throughout the system were well above the saturation temperature for a boron solution concentration of 22,600 ppm. In addition, the high boron concentration increased the available negative reactivity in the "C" BAST, so the availability of the tank as a source of negative reactivity was not reduced. Therefore, we conclude that the health and safety of the public were not adversely affected by this occurrence.

E. CORRECTIVE ACTION

Primary grade water was added to the "C" BAST and the contents of the tank were recirculated to dilute the boron concentration. The tank was resampled at about 12:30 PM on November 12, and the boron concentration was found to be within specifications.

Operating Procedure 2603.5 will be revised to include a requirement to sample the Boric Acid Batching Tank to ensure that its boron concentration is within the BAST specification whenever it is necessary to add boric acid solution to an in-service BAST.

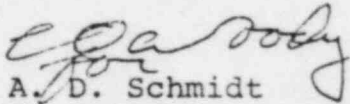
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F. FAILURE DATA

There has been one previous occurrence involving high boron concentration in a BAST. It was reported as Abnormal Occurrence 250-73-10.

Very truly yours,



A. D. Schmidt
Vice President
Power Resources

MAS/jar

cc: Jack R. Newman, Esquire
Director, Office of Inspection and Enforcement (40)
Director, Office of Management Information and Program
Control (3)