

TENNESSEE VALLEY AUTHORITY
CHATTANOOGA, TENNESSEE 37403
830 Power Building

Central File
50-390
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JAN 23 1978

Mr. James P. O'Reilly, Director
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Region II - Suite 1217
230 Peachtree Street, NW.
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

OFFICE OF INSPECTION AND ENFORCEMENT BULLETIN 77-04, 50-327, 50-328,
50-390, 50-391, 50-438, AND 50-439 - SEQUOYAH, WATTS BAR, AND BELLEFONTE -
CALCULATIONAL ERROR AFFECTING THE DESIGN PERFORMANCE OF A SYSTEM FOR
CONTROLLING pH OF CONTAINMENT SUMP WATER FOLLOWING A LOCA

This is in response to your November 4, 1977, letter which transmitted
IE Bulletin 77-04. Enclosed is TVA's response to the subject bulletin.

Very truly yours,

J. E. Gilleland
J. E. Gilleland
Assistant Manager of Power

Enclosure

cc: Dr. Ernst Volgenau, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, DC 20555

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Sequoyah Nuclear Plant Units 1 and 2 (50-327 and 50-328) and Watts Bar Nuclear Plant Units 1 and 2 (50-390 and 50-391)

Post-LOCA containment emergency sump water pH control is achieved by the use of sodium tetraborate contained in the ice of the ice condenser. Based on conservative calculations using conservative water volume and boron concentration values, a sump pH of at least 7.0 will be attained if the boron concentration in the ice due to the sodium tetraborate is approximately 1800 ppm. This limiting concentration is included in the plant technical specifications.

Bellefonte Nuclear Plant Units 1 and 2 (50-438 and 50-439)

Sodium hydroxide is utilized at Bellefonte for post-LOCA containment emergency sump water pH control. Conservative calculations have shown that the minimum design specified volume of 22 weight percent sodium hydroxide will ensure attainment of a sump water pH in excess of 7.0. Limits of the sodium hydroxide volume and weight percent will be incorporated into the plant technical specifications.