TENNESSEE VALLEY AUTHORITY

CHATTANOOGA, TENNESSEE 37401

400 Chestnut Street Tower II

83 FEB 23 A10:41

February 17, 1983

U.S. Nuclear Regulatory Commission
Region II
ATTN: James P. O'Reilly, Regional Administrator
101 Marietta Street, Suite 3100
Atlanta, Georgia 30303

Dear Mr. O'Reilly:

OIE BULLETIN 81-03 - FLOW BLOCKAGE OF COOLING WATER TO SAFETY COMPONENTS BY CORBICULA SP. (ASIATIC CLAM) AND MYTILUS SP. (MUSSEL)

As requested by E. L. Jordan's letter to me dated December 14, 1982, enclosed is TVA's action response to the supplemental questions transmitted by that letter. Since Hartsville Plant B and Phipps Bend have been cancelled and Hartsville Plant A and Yellow Creek have been deferred, the enclosed response centers on activities at Bellefonte Nuclear Plant (Docket Nos. 50-438, -439). If you have any questions, please call Jim Domer at FTS 858-2725.

To the best of my knowledge, I declare the statements contained herein are complete and true.

Very truly yours,

TENNESSEE VALLEY AUTHORITY

L. M. Mills, Manager
Nuclear Licensing

Enclosure
cc: Mr. R. C. DeYoung, Director (Enclosure)
Office of Inspection and Enforcement
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

IE31

ENCLOSURE

Response to NRC request for Supplemental Information on IE Bulletin 81-03 - Flow Blockage of Cooling Water to Safety System Components by Corbicula Sp. - Bellefonte Nuclear Plant.

Question

2. Provide safety system history of most recent inspections and performance tests, including all components filled as well as those potentially affected. Inasmuch as no attempt was made to inspect these systems as a result of this bulletin, the basis for TVA's assessment of "no infestation" should be documented.

Response

Inspections

During the past six months, inspections of the essential raw cooling water (ERCW) system have produced no evidence of Asiatic clam infestation. Below is a representative sample of areas which have been inspected.

1. Tube side of component cooling water heat exchanger.

2. Cooling water passages of the water cooler for the unit 1 air compressors.

3. ERCW side of the control rod drive cooling water heat exchangers.

4. Cooling water jacket and passages for unit 1 air compressor.

5. The ERCW supply headers from the intake pumping station to the Auxiliary Building.

Similarly, during the past six months, the raw service water/high pressure fire protection (HPFP) system has been inspected and no evidence of clam infestation found.

Portions inspected were (among others):

1. Four fire hydrants located in the yard that had been in service for approximately three years.

2. Eight-inch fire protection header in the Auxiliary Building.

3. Numerous valves (valves removed and piping on each side inspected).

To date, no performance tests have been conducted on the raw water systems at Bellefonte.

Question

3. e. Provide a description of planned biocide treatment for Corbicula control. Include frequency of application and dosage levels specific to sodium hypochlorite systems.

Response

The ERCW system will be chlorinated continuously during the clam spawning period. The water will be treated with total residual chlorine of 0.6 to 0.8 ppm concentration. Based on our studies to date, this level of chlorine is necessary to obtain assurance that our program is adequate; however, the chlorine concentration will be changed if our further studies indicate a necessity to do so. Our main goal is to optimize chlorine level while maintaining adequate clam control. Equipment failures resulting in loss of chlorination in excess of 14 days will be evaluated to determine if additional flushing or shock chlorination is required to return the system to a normal condition.

To effect clam control in the HPFP system which is supplied by the raw service water system, a small continuous flow of chlorinated water will be established during clam spawning season through all major fire protection headers except those fire protection systems or parts thereof ordinarily not exposed to raw water, (i.e., filled with chemically-treated water or stored dry). Equipment failures resulting in loss of chlorination in excess of 14 days will be evaluated to determine if additional flushing or shock chlorination is required to return the system to a normal condition.