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FEB 23 1976

Docket No. 50-289

Mr. Bruce P. Smith  
U. S. Environmental Protection  
Agency, Region III  
6th and Walnut Streets  
Philadelphia, Pennsylvania 19106

Dear Mr. Smith:

This is in response to your letters dated November 21, 1975 and January 13, 1976, inquiring about the rationale used by NRC in formulating the temperature requirements contained in the technical specifications for operation of the Three Mile Island Unit 1 Station.

We have reviewed the material you sent to us, as well as having reconsidered our position as set forth in the technical specifications, and offer the following comments for your consideration.

The general goal in establishing the specification under consideration was to minimize the difference between effluent temperature and ambient temperature (taken as intake temperature). It was recognized that ambient temperatures rose above the 87° that state regulations permitted. The -3 degrees permitted by the NRC specification was to permit flexibility in operating the mechanical draft cooling towers which are not "fine tunable."

We can see no benefit to biota or to water quality by cooling the Susquehanna to below ambient at the point of discharge. It is possible that some harm could occur, since organisms exposed to the cooled plume would be acclimated to the warmer ambient temperatures. For example, the material you sent to us indicates that on August 3, 1975 and August 4, 1975 ambient temperatures were in the vicinity of 95°. The  $\Delta T$  of some 8° resulting from a forced 87° upper limit would seem to potentially cause unnecessary and undesirable stress on aquatic biota in the vicinity of the discharge.

From a different perspective, the benefits are absent or slightly negative while costs both in terms of dollars and lost energy to cool the water to

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more than 3° below ambient are quite real. From the cost/benefit standpoint, a rigid 87° standard which does not recognize the occurrence of higher ambient temperatures seems undesirable.

We hope that this information is responsive to your request and invite any further comments on the matter should you believe it desirable.

Sincerely,

Original signed by W. H. Regan, Jr.

Wm. H. Regan, Jr., Chief  
Environmental Projects Branch 3  
Division of Site Safety and  
Environmental Analysis

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