

William J. Cahill, Jr.  
Vice President

**REGULATORY DOCKET FILE COPY**

Consolidated Edison Company of New York, Inc.  
4 Irving Place, New York, N Y 10003  
Telephone (212) 460-3819

November 18, 1977

Mr. George W. Knighton  
Environmental Projects Branch No. 1  
Division of Reactor Licensing  
United States Nuclear Regulatory Commission  
Washington, D.C. 20555

Re: Response to Questions Related to Hydrology and  
Thermal Analysis

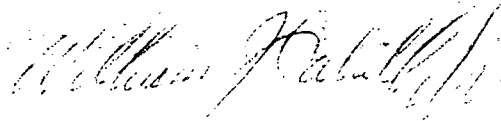
Dear Mr. Knighton:

Consolidated Edison Company of New York, Inc. hereby submits a response to Enclosure 1, items A through H, titled "Questions Related to Hydrology and Thermal Analysis" as specified in your letter dated July 26, 1977.

The following responses are based on 1975 operating data for the Bowline, Lovett, Indian Point, Roseton, Danskammer, 59<sup>th</sup> Street, and Albany Generating Stations.

We hope this submittal will facilitate a staff review of Consolidated Edison's request for a license amendment for Indian Point Unit No. 2 made March, 1977. Responses to Enclosure 2 will be submitted as data becomes available.

Very truly yours,



Attachments

JC.hk

cc:

Dr. Robert P. Geckler (7 copies)  
Environmental Project Manager  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Dr. Richard Rush (3 copies)  
Environmental Statements Project  
Oak Ridge National Laboratory  
P.O. Box X  
Oak Ridge, Tennessee 37830

811110448 771118  
PDR ADOCK 05000247  
PDR

775350138

Response to Enclosure 1, Items A through H.

Hydrology & Thermal Data  
of Albany, Bowline, Danskammer 59<sup>th</sup> Street,  
Indian Point, Lovett, and Roseton.

- A(1) 1975 daily average flow rates of water withdrawn from the Hudson River are presented in Tables 1, 2, 3, 4, 5, 6, & 7, respectively for Albany, Bowline, Danskammer, 59<sup>th</sup> Street, Indian Point, Lovett, and Roseton.
- (2) Since all power plants are operated with once-through cooling, the water discharged to the river is practically identical to the water withdrawn. (see response to Item A(1)).
- (3) 1975 daily average temperature difference between water withdrawn from the river and water discharged into the river for Albany, Bowline, Danskammer, 59<sup>th</sup> Street, Indian Point, Lovett, and Roseton are presented in Tables 1, 2, 3, 4, 5, 6, & 7.
- B(1) Only daily average operating data of water withdrawal rates are available for all power plants (refer to our response to question A).
- B(2) It should be pointed out that the flow rate of water withdrawn is practically identical to that of water discharged into the river.

- B(3) For all plants, only daily average temperature difference between water withdrawn from the river and water discharged into the river is available from operating data.
- C. Daily average data are presented in Item A.
- D. Not Applicable
- E. Refer to our response to Item A
- F. Refer to our response to Item A
- G. The temperature of water withdrawn and water discharged into the river for each power plant are measured on a regular basis by a system designed for that particular power plant. Usually, the frequency of data recording ranges from twice a day to continuous recording.

The temperatures of water withdrawn are measured by thermometers installed near the intake structure, while the temperatures of water discharged into the river are measured by thermometers installed near the discharged structure. The water flow rates are evaluated by knowing the numbers of circulating water pumps operating in conjunction with the pump performance characteristics.

- H. The accuracy of all temperatures measured by thermometers is estimated to be  $\pm 0.5^{\circ}\text{F}$ . The accuracy of the pump performance characteristics prepared by the pump manufacturer is assumed to be  $\pm 5\%$  of the actual flow.