

Natural Resources Defense Council, Inc.

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October 26, 1971

Myron Karman, Esq.
Counsel, Regulatory Staff
U.S. Atomic Energy Commission
Washington, D.C. 20545

In Re: Consolidated Edison Company of New
York (Indian Point Unit No. 2)
Docket No. 50-247

John H. Adams, Esq.
Executive Director

Dear Mr. Karman:

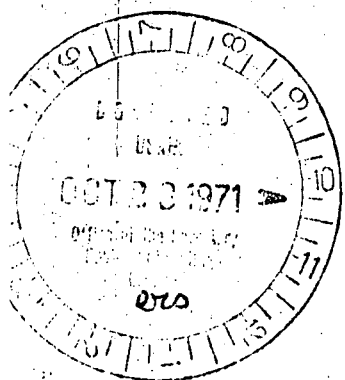
I enclose a copy of Questions and Inquiries (Set I) and Requests for Production of Documents (Set B) addressed to Consolidated Edison. In accordance with the usual procedure I request that the Staff comment on the responses which are received from Con Edison. As you know, the Intervenor's are meeting an expedited hearing schedule which includes discussing the matters in dispute with Con Edison on December 1, 1971. The comments should be received from you before that date in order to be useful for resolving issues in this proceeding.

Anthony Z. Roisman, on behalf of EDF, joins me in making this request.

Yours sincerely,
Angus Macbeth
Angus Macbeth

AM/js
Enclosures
cc:

- Mr. Stanley T. Robinson, Jr. ✓
- Samuel W. Jensch, Esq.
- Dr. John C. Geyer
- J. Bruce MacDonald, Esq.
- Leonard M. Trosten, Esq.
- Anthony Z. Roisman, Esq.
- Mr. R.B. Briggs
- Honorable William J. Burke



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October 22, 1971

Leonard M. Trosten, Esq.
LeBoeuf, Lamb, Leiby & MacRae
1821 Jefferson Place, N.W.
Washington, D.C. 20036

In re: Consolidated Edison Company of New
York (Indian Point Unit No. 2)
Docket No. 50-247

Dear Mr. Trosten:

On behalf of the Hudson River Fishermen's Association, I enclose Set I of inquiries to Consolidated Edison to which we request a response in writing.

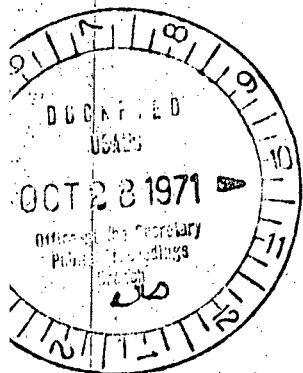
I also enclose an additional set of requests for documents, Set B. Some of the records and studies requested were asked for in my letter to you of September 23, 1971. If Consolidated Edison has the information in its possession or control, I would like to have it promptly made available. If Consolidated Edison does not have the information in its possession or control, I would like a written response to that effect.

The orderly progress of these expedited hearings require speedy and complete answers from Consolidated Edison on the questions and requests put to them. I hope for your full cooperation on this matter.

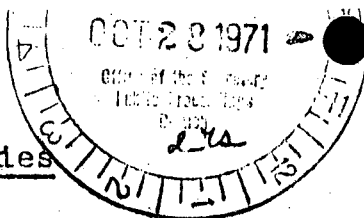
Anthony Z. Roisman, on behalf of EDF, joins me in these requests.

Yours sincerely,

Angus Macbeth
Angus Macbeth



cc: Samuel W. Jensch, Esq.
Dr. John C. Geyer
J. Bruce MacDonald, Esq.
Myron Karman, Esq.
Anthony Z. Roisman, Esq.
Mr. R.B. Briggs
Honorable William J. Burke



Set I: Questions and Inquiries

1. What was the peak summer power demand on the entire Consolidated Edison system on the day of greatest production in a) 1971, b) 1970, c) 1969?
2. What is the anticipated peak summer power demand in the entire Consolidated Edison system for the day of greatest production in a) 1972, b) 1973 c) 1974?
3. What are the present power demands in the entire Consolidated Edison system, on an hour by hour basis, during the course of an average day in a) January b) April c) August d) October? A graphical presentation of these data showing twenty-four (24) hour continuous demands would be most useful.
4. How is the discharge of copper from Indian Point Unit No. 1 monitored?
- 5a. How will the discharge of copper and copper elements from Indian Point Unit No. 2 be monitored?
 - b. Will there be monitoring of Cu^{++} , Cu^+ and Cu metal?
6. What is the sensitivity of the/^{copper}detection system in theory and practice?
7. Various reports of Consolidated Edison show a discrepancy of sensitivities/^{of copper detection}(0.1 mg/liter vs. 0.006 mg/liter). What is the source of this discrepancy?
8. What amounts of copper over what periods of time have been discharged in the Hudson River from Indian Point Unit No. 1?

9. What amounts of copper over what periods of time does Consolidated Edison anticipate discharging into the Hudson River from Indian Point Unit No. 2?

10a. What is 1) the maximum, 1i) the minimum rate of flow of water through the water box of Indian Point Unit No. 2?

b. What is the rate of flow of water through the water box of Indian Point Unit No. 2 under normal operating conditions?

11a. What is 1) the maximum, 1i) the minimum rate of flow of water through outfall of Indian Point Unit No. 2?

b. What is the rate of flow of water through outfall of Indian Point Unit No. 2 under normal operating conditions?

12. What is the lowest practicable rate at which to operate the intake pumps to a) Indian Point Unit No. 1, b) Indian Point Unit No. 2, c) Indian Point Unit No. 3?

13. When the intake pumps are being operated at the lowest practicable rate, what is the dwell time of non-screenable organisms in the condensers of a) Indian Point Unit No. 1, b) Indian Point Unit No. 2, c) Indian Point Unit No. 3?

14. When the intake pumps are being operated at normal rates, what is the dwell time of non-screenable organisms in the condensers of a) Indian Point Unit No. 1, b) Indian Point Unit No. 2, c) Indian Point Unit No. 3?

15. When the intake pumps are being operated at the lowest practicable rate, what is the dwell time of non-screenable organisms from the point of entrance to the water box until

exit from the discharge channels into the river for

- a) Indian Point Unit No. 1, b) Indian Point Unit No. 2,
- c) Indian Point Unit No. 3?

16. When the intake pumps are operating under normal conditions what is the dwell time of non-screenable organisms from the time of entrance to the water box until exit from the discharge channel into the river for a) Indian Point Unit No. 1, b) Indian Point Unit No. 2, c) Indian Point Unit No. 3?

17. When the intake pumps are operating at the lowest practicable rate, what is the peak temperature rise of the water passing through the hottest of the condensor tubes in a) Indian Point Unit No. 1, b) Indian Point Unit No. 2, c) Indian Point Unit No. 3?

18. When the intake pumps are operating under normal conditions, what is the peak temperature rise of the water passing through the hottest of the condensor tubes in a) Indian Point Unit No. 1, b) Indian Point Unit No. 2, c) Indian Point Unit No. 3?

19. What is the temperature rise gradient through the water box (i.e. the temperatures within the different tubes as one moves vertically and horizontally through the water box) of a) Indian Point Unit No. 1, b) Indian Point Unit No. 2, c) Indian Point Unit No. 3? A diagram of the tube array with indications of ΔT at 1 degree F intervals would be most useful.

20. In the course of the average winter how frequently are there frazzle ice formations at Indian Point?

21. What is the a) geographic distribution, b) the quantity of frazzle ice at Indian Point during a typical frazzle ice formation?
22. Does the use of heated water or exhaust steam to counteract frazzle ice buildup or formation seem to attract fish to the intake of Indian Point Unit No. 1 or Indian Point Unit No. 2?
23. If the answer to No. 22 is yes, what action does Consolidated Edison plan to take to reduce fish attraction?
- 24a. Has mechanical agitation been used to counteract frazzle ice clogging of the intake structure of Indian Point Unit No. 1 or Indian Point Unit No. 2?
- b. If so, what have been the results of mechanical agitation?
25. To what extent would relocation of the intake structure towards midstream partially or wholly avoid the frazzle ice problem?
- 26a. To what extent can Consolidated Edison control the timing of the injection or release of chemicals so that they are mixed and neutralized in the outfall?
- b. If it is not possible to control the timing of the injection or release of chemicals, why is that so?
- 27a. Is it possible to release alkali from one ion exchange column so as to coincide with the release of acid from another?
- b. If not, why is it not possible?

29. Can the three hourly chlorination periods at Indian Point Unit No. 2 per week be reduced without substantial impairment of function?

30a. Are the chlorination periods at Indian Point Unit No. 1, Indian Point Unit No. 2, and Indian Point Unit No. 3 staggered (i.e. a single pump being chlorinated at a time)?

b. If not, can such staggering be done?

c. If such staggering is impossible, why is it impossible?

31a. i) For Indian Point Unit No. 1, ii) For Indian Point Unit No. 2, iii) for Indian Point Unit No. 3, in the passage of water from the intake to discharge into the river, are the most severe mechanical restrictions and turbulence encountered in the water box?

b. For each unit where are there any other constrictions of flow?

32. Why did Consolidated Edison choose to employ 3/8 inch mesh screens at the point of intake rather than some other mesh?

33a. Has Consolidated Edison made or does it know of any studies to determine the least harmful mesh size for the intake screens in terms of a) physical damage to the plant (eg. abrasion) or b) environmental damage?

b. If Consolidated Edison has control of such studies, produce them for inspection and copying.

34. Indicate all investigations made by Consolidated Edison of methods of removing fish impinged on intake screens.

35. Within the power generating industry, what is the state of the art with regard to fish protection?

36a. To the knowledge of Consolidated Edison, what other power generating corporations or authorities have had problems of fish protection at specific generating stations?

b. To the knowledge of Consolidated Edison, indicate how the fish protection problems indicated in a) above have been resolved.

37. What is the surface area of copper actually or potentially exposed to the flow of cooling water in a) Indian Point Unit No. 1, b) Indian Point Unit No. 2, and c) Indian Point Unit No. 3?

38. What is the effect (eg. oxidation) on the copper condensors of chlorination under/proposed program of chlorination?
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Set B: Requests for Production of Documents

1. All records indicating the days on which Indian Point Unit No. 1, 2, or 3 was operated so as to withdraw water from or discharge water into the Hudson River between August 7, 1970 and the present.
2. All records for the period August 7, 1970 to the present which indicate the daily mode of operation of Indian Point Unit No. 1, 2, and 3 in withdrawing water from and discharging water into the Hudson River (eg. periods of heated and unheated discharge, number of pumps operating, variations of velocity of intake water).
3. All records for the period August 7, 1970 to the present which indicate the approximate number, size and/or type of fish collected or killed at the intake screens to Indian Point Unit No. 1, 2 or 3.
4. All records or studies for the period January 1, 1971 to the present which indicate the distribution of fish eggs, larval fish, juvenile fish and mature fish in the Hudson River.
5. All records or studies indicating the effect on non-screenable biota of passage through the cooling system of Indian Point Unit No. 1, 2, or 3.