

January 24, 1974

William C. Parler, Esq., Chairman
Atomic Safety and Licensing
Appeal Board
U. S. Atomic Energy Commission
Washington, D. C. 20545

In the Matter of
Consolidated Edison Company of New York, Inc.
(Indian Point Nuclear Generating Station, Unit No. 2)
Docket No. 50-247

Dear Mr. Parler:

Submitted herewith, on behalf of Mr. Karman, are the staff responses to Questions 28, 29 and 30, posed by the Appeal Board by your letter to Mr. Karman, dated January 14, 1974.

Sincerely,

Joseph F. Scinto
Assistant Chief Hearing Counsel

Enclosure:

Staff responses to Questions
cc w/enclosure:

- Dr. John H. Buck
- Dr. Lawrence R. Quarles
- Leonard M. Trosten, Esq.
- Angus Macbeth, Esq.
- Anthony Z. Roisman, Esq.
- J. Bruce MacDonald, Esq.
- James P. Corcoran, Esq.
- Samuel W. Jensch, Esq., Chairman
- Dr. John C. Geyer, Chairman
- Mr. R. B. Briggs
- Atomic Safety and Licensing
Board Panel
- Atomic Safety and Licensing
Appeal Board
- Mr. Frank W. Karas

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Hearing

OFFICE>	OGC				
SURNAME>	JFScinto/db	B110240241 740124 PDR ADOCK 05000247 G PDR			
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Q. 28. Will an environmental impact statement be prepared after the receipt of the applicant's environmental report on closed-cycle cooling?

Staff Response

The staff will independently evaluate the information in applicant's report on closed-cycle cooling (Tr. 6961). The staff would prepare an environmental statement if the information contained in the report or resulting from our independent evaluation demonstrated impacts greater than those considered in the FES and the hearing. For the reasons outlined in Answer to Question 30d, we do not anticipate any significant changes, and, accordingly, do not anticipate that an environmental statement will be issued. Rather, the staff would prepare a brief assessment indicating the basis for its conclusion that no further environmental statement is required.

Q. 29. Assuming the time table for the towers as given in the initial decision is in effect, what assurance is there that review by the required agencies can be completed in six months?

Staff Response:

The staff has no absolute assurance that review by the required agencies can be completed in six months. However, the staff did estimate that three to six months would be a reasonable period of time required for the AEC Regulatory staff to complete its evaluation of the Environmental Report (Tr. 6957).

Q. 29. What approvals will be required for the closed-cycle cooling system?
(cont.)

Staff Response:

The Atomic Energy Commission (Tr. 6943; Tr. 6957)

The State of New York (Tr. 6943; Tr. 7572)

Department of Environmental Conservation
Public Service Commission

U. S. Corps of Engineers (Tr. 7572)

Environmental Protection Agency (Tr. 7572)

Federal Aviation Administration (Tr. 7572)

National Register of Historic Places (Tr. 7573)

Q. 30. The staff's position apparently is that the applicant already has the necessary environmental data or that it is readily available. (See Staff's Brief in Opposition at p. 38).

In this regard:

- a. What is the evidentiary basis for the staff's apparent conclusion that the accumulated meteorological information at the Indian Point site is adequate and that the upper atmosphere meteorology would not be expected to have a significant effect?

Staff Response:

The Staff stated that the applicant does have sufficient information to evaluate the impact of various alternative cooling system and to describe them (Tr. 6760). The upper atmosphere meteorology would not be expected to have a significant effect on the probability of ground icing and fogging since they are a function of the frequency of the plume at ground level and depend upon the ground level humidity (Tr. 6969).

Q. 30 b.(1) What is the basis of the staff's apparent conclusion that the applicant can use a fresh-water tower with water from Chelsea?

(2) Have the technical and economic feasibilities and environmental impact been considered?

Staff Response:

The basis for this conclusion was applicant's witness Newman's testimony, based on a study in 1971 in connection with another project where applicant seriously looked into the ability to import fresh water, that such import was technically feasible. (Tr. 7576). He also indicated two methods for such supply in that instance -- a 40-mile long 36" pipeline or barge shipment -- and indicated that for the case then under consideration the costs of both these systems were comparable and estimated to be about \$60 million. (Tr. 7675-7577).

The FES indicates that a fresh water pumping station has been constructed by the City of New York at Chelsea, some 22 miles upstream from Indian Point. The station is used to supply water to New York City during drought periods (FES I, p. II-10).

The staff has not separately assessed the technical, or economic feasibility or environmental impact of such a system yet, but would do so if seriously addressed as part of the applicant's environmental report on closed-cycle cooling. However, we do not dispute

witness Newman's testimony that such system is technically feasible.

The matter of fresh water towers arises only on cross-examination in connection with speculation as to problems of salt drift and salt blowdown from salt water towers (Tr. 7575), but the evidence generally indicates that no significant amount of serious adverse impact from salt drift or from saline blowdown is anticipated (Tr. 7549, 7565, 7570, 7571; FES XI-46 through 52). Consequently, although such towers could be used, we do not anticipate that such system would, in fact, warrant serious consideration since we do not believe that salt drift from natural draft towers at Indian Point will result in significant adverse impact.

Q. 30 c. What evidence is there which relates to whether or not any consideration has yet been given by the staff to the unique features, if any, of the Indian Point site which might be significant in the environmental studies for closed-cycle cooling?

Staff Response:

The staff considered the experience gained at other sites (Vermont Yankee, Palisades, and Davis-Besse Plants (Redirect - Rebuttal Testimony of George W. Knighton, Supporting Information for Staff Testimony on Cooling Towers, February 22, 1973, following Tr. 9892) and included information as to costs of excavation (Knighton, Cooling Towers, p. 4). The staff evaluated the environmental impacts from fogging, salt deposition, noise, chemical discharges and other discharges in Chapter XI, pp. XI-25 to XI-75 as presented by the applicant in Supplement No. 3 to the Environmental Report for Indian Point Unit No. 2 and Appendix XI-1 Cooling Tower Chemicals-Potential Environmental Degradation.

Q. 30 d. Please explain the rationale for the staff's position that a decision can be made requiring closed-cycle cooling prior to an analysis of the significant environmental impact which may result from closed-cycle cooling.

Staff Response:

The principal elements of the environmental impact and cost considerations for closed-cycle cooling systems have been considered in the proceeding (see staff's FES, Section XI; see also Initial Decision^{1/} 773-775). As a result of these considerations, the staff reached the conclusion that adverse impacts associated with closed-cycle cooling, considered together with increased costs, are offset by the countervailing benefits resulting from the greatly decreased damage to the Hudson River fishery so that the closed-cycle alternative should be required, FES Summary and Conclusions and Sec. XI.

However, the staff recognizes that closed-cycle systems have substantial costs and certain adverse characteristics. (Sec. XI).

While concluding that such costs and effects are outweighed by benefits when considered against once-through cooling, they should, nonetheless, be minimized in the selection of the specific closed-cycle cooling (FES, Sec. XI, p. XI-72 through 75, FES, XII-42).

^{1/} LBP-73-33; RAI-73-9, p. 751 et. seq.

It is the specific impact of specific systems and a final weighing of one closed-cycle system versus another which had not been analyzed in the FES, although it was generally agreed that based on preliminary consideration natural draft towers would entail the least environmental impact (FES, XI-18; Environmental Report, Supp. 3, p. 5-3; HRFA Exhibit V--The Burns and Roe Report, follows Tr. 10543). Nonetheless, the staff believes that while preliminary information would indicate that natural draft towers would entail the least impact, this should be addressed specifically for various systems considered for the specific site.