

Harry G. Woodbury
Executive Vice President

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N Y 10003
Telephone (212) 460-6001



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Mr. Daniel R. Muller, Assistant Director
for Environmental Projects
Directorate of Licensing
U. S. Atomic Energy Commission
Washington, D. C. 20545

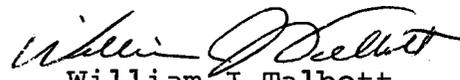
Dear Mr Muller:

Re: Docket No. 50-247

Consolidated Edison Company of New York, Inc. (Con Edison) respectfully submits the enclosed response to the Comments dated June 1, 1972 of the Hudson River Fishermen's Association (HRFA) on the Draft Detailed Statement (the Statement) concerning environmental impacts of Indian Point Unit No. 2, prepared by the Atomic Energy Commission's Regulatory Staff. This response is limited to those aspects of the HRFA Comments which Con Edison considers significant and require a response.

We hope these comments may be of use to you.

Very truly yours,


William J Talbott
Acting Executive
Vice President

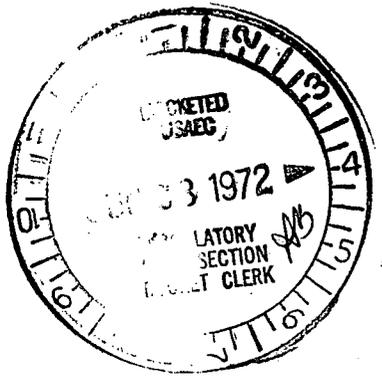
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Response of Con Edison
to Comments of Hudson River Fishermen's Association
on Draft Detailed Statement
re Indian Point Unit No. 2

1. Impingement (pp. 2-4)

HRFA, as an Intervenor before the Atomic Safety and Licensing Board, has taken the position that fish collection data from all past years of operation of Indian Point 1 must be used to project future collections regardless of changes in the design and operating procedures of the plant. HRFA implies that the Commission will take the same position.

This position is contrary to both logic and facts. Experience from one design and operating mode cannot properly be used to predict the impact of a different design and operating mode. Furthermore, the experience of recent years justifies Con Edison's position that the present design and operating procedures will result in substantially less fish collections than occurred in the years of operation of Indian Point 1 prior to 1971.

HRFA attacks the "trustworthiness of Con Edison's figures" because of certain data referred to by the Commission. This attack shows HRFA's complete misunderstanding

of the data. Con Edison never attempted to obtain, and does not purport to have, accurate data on all fish collections prior to December 1970. The data were obtained at irregular intervals for the purpose of comparing different procedures and occasionally to determine the magnitude of specific incidents. The data are admittedly incomplete and cannot properly be used to determine the total experience over the entire period of time Indian Point 1 was operating. Additional data cannot be inconsistent with Con Edison's data because Con Edison does not claim to have total fish counts.

HRFA appears to agree with the Staff's estimate of potential entrainment of fish eggs and larvae. As noted in Con Edison's comments to the Commission dated May 30, 1972, Con Edison believes the Staff's estimate is based on erroneous equations and ignores certain known phenomena.

2. Density Dependent Mortality and Compensatory Factors (pp. 4-7)

The statements by the Hudson River Fishermen's Association concerning the type of mortality (density dependent or density independent) experienced by young striped bass imply that compensatory mechanisms do not operate. Although there are no scientific data known which deal specifically with the operation of compensatory mechanisms in striped bass populations, compensation is a generally accepted mechanism in the dynamics of fish populations. If compensatory mechanisms did not exist, a fish population would realize unlimited expansion or a gradual decline to extinction.

Density dependent mortality factors may not be operative at all times in a fish population, but eventually, the population would increase in density to a point where compensatory processes would become activated and reduce the reproductive rate or increase the mortality; or the population might decline in abundance until the remaining individuals, relieved of competition, and having accessible choice habitats and unlimited food supplies, would experience an increase in survival or reproductive rate which would lead to a compensatory increase in the population

over preceding generations.

Compensatory processes may be much more active at one life history stage than at others. As a generality it is to be expected that compensation will be most effective during the earlier, more sensitive life history stages of a fish and that the strength of each year class will be determined by the end of the first year of life. Subsequent variations in environmental factors may cause additional fluctuations in abundance but these are usually independent of the density of the stock.

It is because of the ability of fish populations to respond in a compensating fashion to removals of stock that sport and commercial fisheries can operate for indefinite periods of time continually removing fish from a population without depleting the stock. Many studies providing estimates of the percentage of fish populations removed on a sustained basis have been carried out. Removals of 25% to 35% have been sustained over periods of many years without harm to a population.

The research of Ted S. Y. Koo (Chesapeake Science 11 (2): 73-93, 1970) indicates that the New York populations of striped bass have been experiencing a healthy increase in abundance in recent years. Recent striped bass landings

on the Atlantic coast are nine times greater than those of the early 1930's and even greater still if increases in sport fishing landings are included. The effects of the operation of Indian Point 2 would, therefore, be imposed upon a healthy and apparently expanding fish stock rather than one which has declined to a low ebb and which might be maximally sensitive to imposition of further mortality. Koo also points out that the relationship between the size of the parent stock and the number of young produced in Atlantic coast striped bass is inverse rather than direct. Dominant year classes have originated from lower abundances of spawners than have those year classes occurring between the cyclic peaks.

On the basis of available data it simply cannot be argued that the abundance of year classes of striped bass is directly or closely related to the abundance of spawners. This suggests that temporary reductions in year class strength will not be subsequently translated through reduced reproductive potential into population decline. Koo's finding of an inverse relationship between parental stock abundance and recruitment for the Chesapeake Bay population strongly suggests the operation of significant compensatory processes.

The comparison between the growth rates of white perch from the Hudson River, Delaware River and Chesapeake Bay is used by HRFA to indicate that overcrowding (and stunting) is not occurring in the Hudson because growth rates there equal those in the Delaware and Chesapeake Bay. This comparison is not valid evidence because it was not established that the populations in the Delaware River and the Chesapeake Bay are not also stunted.

The testimony of Drs. Lauer, McFadden and Raney referenced by HRFA noted that one observer concluded that the Delaware River white perch population showed evidence of stunting. (Wallace, D.C. 1971. Chesapeake Sci. 12(4): 205-218.) Furthermore, contrary to the implications of HRFA, this testimony stated that the size distribution of white perch year classes in the Hudson River is less than reported for the size of comparable white perch year classes in the Delaware River.

3. Consideration of Environmental Effects
of Other Power Plants (pp. 7-13)

HRFA, in their Comment C, state that since "Bowline Point and Roseton are not scheduled to undergo a NEPA review" and "Danskammer and Lovett have not undergone a NEPA review", the law should and does follow a "common sense" approach which requires the consideration of the environmental effects of those facilities in this proceeding.

This argument evidences a fundamental misinterpretation of Ely v. Velde, 451 F.2d 1130 (4th Cir. 1971) and Calvert Cliffs v. AEC, 449 F.2d 1109 (D.C. Cir. 1971), cited in intervenors' comment, as well as the quoted excerpt from the legislative history of NEPA. The phrase "to the fullest extent possible" refers not to the necessity of examining the impact of other present and future facilities, especially those not within the jurisdiction of the Commission, but rather to the scope of the AEC's responsibility as to its study of the impact of the "proposed action."

Careful reading of Ely v. Velde and Calvert Cliffs as well as the views of the House and Senate conferees (115 Cong. Rec. 40417-40418) makes apparent the fallacy in intervenors' argument. The court in Ely v. Velde, basing its decision substantially on Judge Wright's opinion in Calvert

Cliffs, stressed the burden that the phrase "to the fullest extent possible" placed on a Federal agency. That burden was to be borne, however, by the agency in its study of the "environmental impact of the proposed action" (451 F.2d at 1139). Judge Wright speaking for the Court of Appeals in Calvert Cliffs set forth the extent and range of the meaning of the phrase "to the fullest extent possible" but the Court's observations as to that phrase were addressed to the study of the environmental impact of "the proposal" or "the proposed action," in the language of Section 102 of NEPA, and to "a particular project." (449 F.2d at 1114.)

In addition, the language of the Congressional conferees, while making it clear that the requirements of Section 102 are not narrow in range but rather must be followed "to the fullest extent possible," when read in the context of the Act as a whole, also makes it apparent that the language refers to the extent and intensity of agency review of a "proposed action." The "proposed action" in the instant case is the licensing of operation of Indian Point 2 -- not the licensing of the Bowline or Roseton plants or a complex consisting of Indian Point 2 and all these other plants.

The foregoing interpretation of NEPA and the

applicable decisions has been upheld by the Atomic Safety and Licensing Appeal Board in the Vermont Yankee proceeding in its Memorandum and Order of June 6, 1972. There the Board said:

"The scope of the inquiry required by Section 102(2)(c) is repeatedly defined, by the language of that section and as reflected in the language of Appendix D, as the impact, the consequences and alternatives of the 'proposed action,' which in the present case is the licensing of a specific nuclear power reactor. The language of Section 102 directs that the environmental statement shall be accomplished 'to the fullest extent possible.' But 'the proposed action' is the licensing of the Vermont Yankee reactor and not of other present and future facilities at other places to be operated by other firms and having at best a contingent and presently undefinable relation to this facility. Paragraphs A.3, A.4, and A.8 of Appendix D repeatedly refer to the environmental impact of 'the facility' as defining the scope of the analysis. Paragraph A.10 refers to 'the proposed licensing action' meaning the licensing of the particular facility which is before the Licensing Board and before us in a specific proceeding." (ASLAB Memorandum and Order, pp. 10-11.)

The HRFA comment is particularly inappropriate to the extent that it seeks to have the AEC examine the impact of plants which it is "reasonably foreseeable" will operate in the future. Neither NEPA nor the cases which have clarified and elucidated that statute require that possible future environmental impacts from facilities which

are planned to operate some time in the future need to be factored into the environmental review of the facility being considered. In fact, in discussing the concept of alternatives under NEPA one court has clearly stated that "the requirement in NEPA . . . does not require 'crystal ball' inquiry." (Natural Resources Defense Council v. Morton, 3 ERC 1558, 1564 (D.C. Cir. Jan. 13, 1972).)

It is illogical to conclude that because a facility is scheduled or planned to become operational in the future it should be a proper subject for immediate consideration in this proceeding. Plans and schedules are subject to change. Projects have been modified at every stage of completion. The present design of facilities scheduled to be completed may be changed, thus altering their environmental impact. To determine under what conditions Indian Point 2 should operate on the basis of such "crystal ball inquiry" would result in a speculative, unrealistic analysis of environmental impact, benefits and costs which would be contrary to the requirements of NEPA and the AEC's implementing regulations and to the "common sense" approach advocated by the intervenors.

Intervenors contend, however, that Indian Point 2 will operate in an environment on which Bowline, Roseton,

Lovett and Danskammer will have a significant impact and thus that the effects of the operation of those plants are part of the "environment" which should be considered in this proceeding. Insofar as the Lovett and Danskammer plants are concerned, they commenced operation over a period of twenty years commencing in 1949. They have had an effect on the "environment" of the Hudson River during that time, as have all the countless other natural and artificial forces which now influence the River, including commercial and sports fishing. In its analysis of the present environment of the plant, therefore, Con Edison has already considered the effects of these plants. (See, for example, the April 5, 1972 testimony of Dr. John Lawler on entrainment.) The AEC Staff also has done so, for instance, in connection with use of the Carlson-McCann fishery data which were collected during the period these plants were operating. Accordingly, the AEC's NEPA review has already considered the effects of the Lovett and Danskammer plants to the extent appropriate.

With regard to the Bowline and Roseton plants the intervenors' contention is contrary to the policy of NEPA. NEPA "must be construed in the light of reason and is not to demand what is fairly speaking, not meaningfully

possible." Natural Resources Defense Council v. Morton, supra, at 1564. NEPA therefore requires that a reasonable approach be followed in determining what constitutes the "environment" upon which the Indian Point 2 facility will have an impact. If the time frame for the purpose of establishing the make-up of the environment to be considered were not reasonably limited, an indefinable series of factors interacting with the environment of the facility would have to be considered. An essentially endless cycle would be established, a cycle which would effectively halt the licensing process for all facilities everywhere NEPA was applicable.

Intervenors' statement that the Bowline plant will not undergo a NEPA review is simply inaccurate. Both units of the Bowline facility are the subject of a NEPA review by the Corps of Engineers in connection with an application for a Refuse Act permit. A Draft Detailed Statement has been circulated and comments have been received from appropriate agencies. Roseton will be reviewed by the Corps, pursuant to its statutory obligations and regulations, in connection with the application for a discharge permit.

At the time of commencement of the Corps of Engineers' environmental review of Bowline, Indian Point 2

was scheduled to be operational before both of the Bowline units. To the extent that the Corps deems the combined impact of Indian Point 2 and Bowline to be environmentally significant, the Corps has considered the impact in its environmental review.

The argument that "common sense" requires a NEPA review of every project ignores the fact that many licenses and permits are required for a power plant such as Roseton or Bowline. Whether or not the procedures of NEPA apply is determined by the terms of that statute, discussed above, but the environment can be protected by other procedures. The permits directly relevant to the concerns expressed by HRFA are those required from the New York State Department of Environmental Conservation, which must issue permits for waste discharges and exercises continuing jurisdiction relating to environmental matters.

When the environmental review of future plants is concluded at both the State and Federal level, the incremental impact of those plants, in relation to an environment which the pre-existing facilities already affect, will to the extent considered necessary have been examined by the reviewing agencies.

HRFA's argument on this issue would in effect

4. Failure to Consider New York Law (pp. 13-15)

HRFA requested the Commission to consider certain alleged violations of New York law. The Attorney General of New York State commenced a suit against Con Edison on May 23, 1972 in the Supreme Court of New York County alleging violations of the statutes referred to by HRFA. An earlier suit involving similar contentions with respect to Indian Point Unit No. 1 was filed on May 12, 1970 and has not been brought to trial. Con Edison is defending both suits and has denied violation of any New York statute. The Atomic Energy Commission should not attempt to prejudge a matter of New York State law which is currently pending before the courts of New York State.

We also note that the Commission has deleted from its regulations the portion of 10 C.F.R. 50, Appendix D, cited by HRFA.

convert the Atomic Energy Commission into a planning agency for the entire Hudson River and, to the extent this is a precedent for other cases, eventually for the whole country. If future power plants are to be considered, why not other programs to improve the aquatic environment? There is no end to the possible speculation, and the proceeding, as indicated above, becomes a "crystal ball inquiry."

Regardless of the wisdom or desirability of having an agency plan the development of the Hudson River, it is obvious that the Atomic Energy Commission is ill-suited to this task and has not been authorized to undertake it by any statute.

5. Research Program (pp. 15-18)

HRFA stated that a research program should not be conducted by Con Edison because Con Edison is incompetent, is interested in the outcome and no standard of acceptable damage has been fixed.

Since the testimony that HRFA has submitted to the Atomic Safety and Licensing Board has relied almost entirely on research financed by Con Edison, it cannot now claim that the research is incompetent without impeaching its own testimony. The Regulatory Staff has likewise relied heavily on Con Edison data. HRFA does not in fact contest the research data but only the conclusions derived therefrom. It will be similarly free to contest conclusions derived from the data developed by the proposed research program.

The fact that Con Edison is interested in the outcome of the research presents a problem which Con Edison has tried to solve in every way available to it. The problem would be solved if someone other than Con Edison would finance the research, but no one is willing to undertake this burden. Con Edison therefore organized the Hudson River Policy and Technical Committee with representatives of cognizant Federal and state agencies

to guide and monitor the research in order to ensure that Con Edison's self-interest would not introduce an improper bias to the work. This committee has a full time representative on site. Con Edison is willing to permit the committee to control the research and is also anxious to get comments on the research program from all other interested persons, including HRFA. A request for comments and recommendations several months ago is thus far without a meaningful response.

It is not necessary under NEPA for the Staff to establish now the firm criteria by which the result of the research effort will be judged. In the absence of the data which the research program is designed to obtain, it would be fruitless to attempt to decide what results should flow from such data. What is necessary is for the Staff to have enough information available to it by which to judge whether operation during the period of the research proposed will have a significantly adverse effect on the fishery and, if so, whether such effect can be redressed.

The HRFA proposal to take immediate action in the absence of knowledge rather than attempt to develop the knowledge is totally irresponsible. Environmental

problems can only be solved by developing a clear understanding of the problems and then developing solutions to the identified problems. Indeed NEPA requires a weighing of the costs and benefits of alternatives. In the absence of the research data there would be no basis for such an evaluation. Thus the proposed study is fully in accord with the philosophy of NEPA. To take corrective action on a potential problem before its dimensions are truly known will only compound environmental problems rather than solve them.

The Regulatory Staff has proposed environmental monitoring conditions, subject to the Commission's continuing scrutiny. This will permit the plant to be operated during the study program and provides a means for preventing irreversible or irretrievable damage to the fish populations.

6. Cooling Towers (pp. 18-20)

While the Statement describes the estimates of salt drift from natural draft cooling towers as reported by Con Edison, it should be kept in mind that these figures are estimates. The Statement is conservative in recognizing that to require the building of these cooling towers on the basis of current data would be irresponsible. Not only is there no adequate basis to impugn a cost to the Hudson River fishery from the operation of Indian Point 2, neither is there adequate data on the effect of salt deposition on the botanical growth in northern Westchester County.

Again Con Edison agrees with the Commission's Staff that post-operational studies should be made rather than hasty decisions based on speculation that would cause economic burdens that are not speculative and environmental burdens which can only be quantified with study.

7. Con Edison's Power Crisis (pp. 20-23)

HRFA criticizes the Regulatory Staff for relying on information supplied by other agencies. The Staff's action is not only permissible, but the Staff is legally required to obtain comments of other regulatory agencies, in this case the Federal Power Commission and the New York Public Service Commission. Although the Commission must evaluate the comments in reaching its own judgment, it certainly is entitled to use and rely on the information supplied by these other agencies.

HRFA appears to make much of the fact that Con Edison, the PSC and the FPC all produced different numbers for anticipated reserves. These variations are based on varying assumptions. If all persons looking at the question came up with the exact same number, HRFA would have a more serious criticism than it does now.

HRFA also appears to be upset by the fact that estimates made in December 1971 are different from the facts that existed in May 1972. The world does not stand still and changes necessarily occur. Sources of power which were expected to be available become unavailable and vice versa. Describing this as "chaotic jumble of figures" is merely an indication of HRFA's ignorance of

the subject.

We do agree with HRFA that the Statement should not focus on the summer of 1972 but should consider a longer term analysis.

8. Cost Benefit Analysis (pp.24-27)

HRFA criticized the Staff's cost benefit analysis for referring to environmental costs described in the Statement as conservative. The Statement clearly discusses environmental impacts which might occur - a speculative maximum damage. This is certainly conservative from the standpoint of environmental damage. A cost benefit analysis must not be artificially weighted in either direction. It therefore should use reasonably anticipated environmental impacts, not maximum speculative damage estimates.

HRFA also suggests that the cost benefit analysis take into account the maximum fines alleged in the suit brought by the Attorney General of New York State referred to above. As noted above, it is improper for the Commission to do this before the matter has been determined by the New York courts. It should also be noted that the State has vacated the order which stopped operation of the circulating water pumps, on conditions which are satisfactory to the State and Con Edison.

HRFA also refers to the possibility that Indian Point 2 might be shut down because of fish collection problems. HRFA fails to mention that the Order of the New

York State Department of Environmental Conservation, to which it referred, applied to testing operations only.

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