50-286

ENVIRONMENTAL DEFENSE FUND

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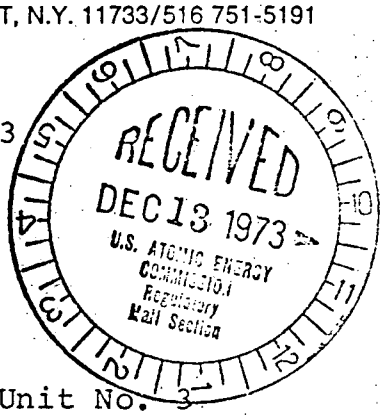

December 10, 1973

U.S. Atomic Energy Commission
Deputy Director for Reactor Projects
Directorate of Licensing
Washington, D. C. 20545

RE: Draft Environmental Statement for Indian Point Unit No. 3
[AEC Docket Number 50-286]

Dear Sirs:

Having participated actively in an examination of the environmental impacts of Indian Point Unit No. 2, the Environmental Defense Fund reiterates its position in that licensing proceeding (AEC Docket No. 50-247). The issue before the staff regarding Indian Point Unit No. 3 is perfectly parallel to that delineated in the licensing of Indian Point Unit No. 2.

EDF calls the attention of the staff to a recent publication by John Clark and Willard Brownell entitled "Electric Power Plants in the Coastal Zone: Environmental Issues," American Littoral Society Special Publication No. 7, October 1973 (published December 8, 1973). This publication summarizes and tabulates the impact of electric power generation in the U.S. coastal zones.

The Indian Point nuclear units offer a spectacular example of inadequate site selection procedures; unless the operator of these units is compelled to generate electric power in a fashion most compatible with the highly sensitive local aquatic environment, site selection by utility managers will continue to be made without judicious foresight. The importance of the Indian Point Units in this matter cannot be overstated. The rapidly profilerating nuclear sector of the electric power generating industry engenders cooling water demands that are growing somewhat more rapidly than the aggragate demand for electric power. As Clark and Brownell point out: "The potential for environmental damage from a massive entrainment and death of these organisms -- fishes, plankton, and larvael stages of shellfish -- is of such a magnitude as to require sweeping change in policy governing design and location of power plants in the coastal zones." Unless the costs of such damage are internalized swiftly a "sweeping change" will materialize slowly, if at all.

EDF urges the speedy retrofitting of Indian Point Unit No. 3 with closed-cycle cooling towers. Such an order has already

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been issued for Indian Point Unit No. 2. The interim operation of these two units should be conducted in such a fashion as to minimize adverse impacts on the Hudson River fisheries. Furthermore, as set forth on page XI-50 of the DES, the use of a mechanical condensor - tube cleaning system is urged so as to greatly reduce the need for biocides. Given the coterminous nature of the discharge canal at Indian Point, all three units should be compelled to switch to mechanical cleaning of condensors.

In the matter of Nine Mile Point Nuclear Station Unit No. 2 (Docket No. 50-410), the full Commission has ordered the Staff to consider a redesign of rate structure as a possible alternative to the need for construction of new capacity. EDF believes that this is applicable in Docket 50-286. The utility in question, Consolidated Edison Company of New York, has a formidable array of problems centered about the ability to obtain new generation capacity, a markedly unfavorable system load factor, extremely high capacity costs, and a severe attrition of earnings situation. All of these problems could be minimized by moving to a rate design based on marginal cost pricing. Such a pricing structure would impose premium charges for on-peak consumption of electric power and thus far more closely approach a truly efficient rate design in which each consumer of electric power pays a price that is truly representative of the costs of service. Such a rate design depends on the availability of moderately priced time-of-day demand meters that can be easily installed. EDF is satisfied that the requisite technology is at hand and that peak demand pricing can become a reality in less time than is required for completion of a modern nuclear generating station. In view of this utilities' announced plans for further nuclear capacity additions, it is important to scrutinize this alternative as soon as possible.

It is entirely erroneous to assume in the cost description of base design in the proposed alternative cooling systems (Table XI-15, page XI-63ff) that the base design occasions no evaporative loss. In point of fact, the once-through cooling systems of these three power plants will occasion consumptive use of water approaching that required by alternatives B or C. Staff is referred to "Economics of Thermal Pollution Control" by George O.G. Löf and John C. Ward, Resources for the Future Reprint No. 91, January 1971. These authors state: Under conditions which obtain at Indian Point "... the principle mechanism for restoring the river temperature to its natural level is by evaporation with resultant cooling. This is effectively the same process that occurs in a cooling tower in a recirculation cooling system, so from the overall water evaporation standpoint, there is not a large difference in the extent of evaporation on-site with cooling tower use or off-site where once-through cooling is practiced. The off-site evaporation loss is slightly less as a result of the fact that some of the heat transfer is by radiation, particularly if large river surfaces are exposed and flow is relatively slow."

It is not at all clear that the staff examined recent de-

velopments in cooling tower design which have led to the availability of "wet-dry" tower. These devices occasion substantially less consumptive use of water during periods of cold weather when they may be operated in an essentially "dry" mode.

In closing, EDF congratulates the staff for the environmentally sound position taken in Docket No. 50-247. EDF believes this is an excellent precedent for the licensing of Indian Point Unit No. 3 in Docket No. 50-286. EDF urges that the operation of Indian Point Unit No. 1, 2 and 3 be considered synchronously in any orders pertaining to interim or long term operations at Indian Point. EDF also recommends that at the earliest possible date the experiences gleaned by the staff in consideration of operations at Indian Point be applied to analogous situations throughout the United States.

Respectfully submitted,

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ERH:vp