



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION II
26 FEDERAL PLAZA
NEW YORK, NEW YORK 10007

APR 14 1976



Regulatory Docket File

Mr. Voss Moore
Assistant Director for
Environmental Projects
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

50-247

Dear Mr. Moore:

The Environmental Protection Agency has reviewed the draft environmental impact statement issued by the Nuclear Regulatory Commission on the Selection of the Preferred Closed Cycle Cooling System at Indian Point Unit No. 2 located in Westchester County, New York. Specific comments are attached.

The EPA believes that the proposed replacement of the once-through cooling system with a closed-cycle cooling system will have benefits which far outweigh potential adverse impacts. The large volume flows required by once-through cooling would be substantially reduced by a closed-cycle cooling system, and in turn, biotic effects due to entrainment, impingement, thermal shock, gas bubble disease, etc. would be proportionally reduced.

The major environmental effects of cooling towers considered in the draft statement are deposition of salt, fogging and icing conditions, and increased noise levels. We agree that none of these factors is likely to be of sufficient magnitude to cause rejection of any of the cooling tower alternatives.

In light of our review and in accordance with EPA procedure, we have designated this draft statement as category LO-2, indicating that EPA lacks objection to the project as proposed (LO) and has requested additional information in order to complete its evaluation (2).

Thank you for the opportunity to review this impact statement. If you have any questions concerning our comments, please feel free to contact this office at (212) 264-8556.

Sincerely yours,

Barbara M Metzger

Barbara M. Metzger
Chief

Environmental Impacts Branch



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SPECIFIC COMMENTS

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RADIOLOGICAL DOSE ESTIMATES

The draft statement presents both the applicant's and the NRC's estimates of radioactive liquids released by Indian Point's Units 2 and 3 with Unit 1 not in operation. Based on these estimates, the NRC has stated that such releases will be below the limits set in 10 CFR Part 20, "Standards for Protection Against Radiation." Radiological dose estimates for fish consumption and swimming have also been made by the NRC. The NRC has concluded that these doses are "negligible in comparison with the background levels of radioactivity." Since the design base objectives of 10 CFR 50 (Appendix I) have been promulgated for light water reactor operations, EPA suggests that all estimated doses resulting from such operations be compared to these limits.

NOISE IMPACTS

EPA believes that noise impacts should not be of significant magnitude to cause rejection of any of the cooling tower alternatives. However, before a final determination can be made of the noise impact that closed-cycle cooling towers can have on the surrounding community the following information should be provided in the final statement:

1. The discussion of ambient noise levels should include descriptions of the equipment and methodology used to perform the survey. Sampling sites should also be described and the distances to dominant noise sources indicated. Any sampling location influenced by construction related noise should be clearly identified.

2. The environmental statement compares the ambient acoustic environment to the limits established by the Buchanan zoning ordinance which is directed at limiting noise from point sources in industrial and commercial zones to residential zones. Since many of the sites surrounding Indian Point are identified in the draft statement to be in violation of this ordinance, the conditions under which the Buchanan zoning ordinance is applicable should be identified. Also since such ordinances are directed at controlling noise from point sources, relevant noise measurements should be made in the absence of non-point sources such as traffic.

3. The methods used to estimate construction noise impacts should be included in the final statement. If it has been determined that noise from the construction site will have no significant impact, it would be appropriate to give a worst-case projection for the nearest noise sensitive location. Noise levels expected from blasting, and the duration of exposure to these noise levels should be discussed.

4. The draft statement gives a good description of the projected operational noise levels. However, a map which shows clearly the surrounding land uses would be helpful if included in the final statement.

IMPACT ON BIRDS

Tall structures, such as natural draft cooling towers, are potential obstructions to night-flying and migratory birds. The literature contains a number of references to bird mortalities from television towers and ceilometers,^{1,2} and preliminary evaluations of hazards of cooling towers are underway.³ These evaluations indicate that cooling towers do not present as great a hazard to birds as do guy wires of television towers. However, more studies are needed to establish precise bird mortality rates at cooling towers. We believe that the final statement should discuss the potential for bird mortalities at Indian Point, and correlate migratory bird patterns and weather conditions to potential bird mortality rates.

ECONOMIC IMPACTS

EPA believes that the following factors should be considered in the final statement in order to better define the economic impact of alternative closed-cycle cooling systems:

1. Projected incremental plant and system costs should be determined in mills per kilowatt-hour and compared to total plant and system generating costs. This comparison would allow the economic impact to Con Edison rate payers to be determined.

2. The capital cost of gas turbines appears to be greatly overestimated. For example, NRC's final impact statement on Indian Point Unit No. 3, dated February 1975, estimates a cost of \$215/Kw in 1981 dollars while this draft statement uses a 1979 cost of \$315/Kw. The reason for this difference should be explained.

3. The draft impact statement states that Con Edison anticipates that Unit 2 would not operate during the seven-month downtime period (5/1/79 - 12/1/79) required for the tie-in of closed-cycle cooling system. According to EPA sources, plant downtime for the cooling system tie-in should not exceed 2-3 months, including the 2 month refueling outage. The need for a seven-month downtime should be explained.

4. The draft statement includes property and gross revenue taxes in its estimates of annual carrying charges. However, the Atomic Safety and Licensing Board, in its Initial Decision for Indian Point Unit 2, dated September 9, 1973, determined that taxes should not be used in determining carrying charges on capital, since such taxes represent transfers within the economy. This situation should be corrected and explained.

5. Annual average and peak unit deratings are based upon the unit's present capacity of 873 MWe net, whereas cooling tower design parameters are based on a future capacity uprating to 1033 MWe net (using a once-through cooling system). We recommend that all pertinent cooling system parameters be based on the same capacity.

References

1. Kemper, C. A. A Tower for TV-30,000 Dead Birds. Audubon. March-April 1964.
2. Howell, J. C., et al. Bird Mortality at Airport Ceilometers. Wilson Bulletin. Vol. 66:207. 1954-55.
3. Bird Mortality, Fall 1973, Davis-Besse Site. Environmental Studies Center, Bowling Green University. Internal Report. 1973.