

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the Matter of)	
)	
CONSOLIDATED EDISON COMPANY)	Docket No. 50-286
OF NEW YORK, INC. and)	(Selection of Preferred
POWER AUTHORITY OF THE)	Alternative Closed-Cycle
STATE OF NEW YORK)	Cooling System)
(Indian Point Station,)	
Unit No. 3))	

COMMENTS OF POWER AUTHORITY OF THE
STATE OF NEW YORK IN RESPONSE TO
COMMENTS OF OTHERS WITH RESPECT TO
DRAFT ENVIRONMENTAL STATEMENT

Power Authority of the State of New York ("the Power Authority"), as owner of the Indian Point Station, Unit No. 3 ("Indian Point 3") facility and co-holder of Facility Operating License No. DPR-64 ("the License"), submits the following comments in response to other comments that have been received by the Regulatory Staff ("the Staff") concerning the Draft Environmental Statement ("the DES") in the above-captioned proceeding. These comments are in addition to the Power Authority's own comments on the DES, which were filed on October 3 and 24, 1977.

1. Comments of the Environmental Protection Agency ("EPA"). No change is intended to be made in the radioactive waste system as the result of a changeover to closed-cycle cooling at Indian Point 3. The radwaste

effluent will continue to be released in the discharge canal, which is shown in Figure 1-3 of the DES. There is no relationship between the radwaste system and the closed-cycle cooling system, and to this extent the first paragraph on page two of EPA's letter is misconceived. See also Power Authority October 3 comment on § 5.5.1.

2. Comments of the Federal Power Commission ("FPC"). Two sets of comments were received from the Bureau of Power of the FPC. With respect to the comments dated September 1, 1977, the Power Authority notes that the question of the schedule for the cutover outage will be further addressed by the Staff in the FES. In any event, however, it is clear that the shutdown date of September 15, 1981 referred to in these FPC comments is not correct, since the interim operation period for Indian Point 3 has already been extended to September 15, 1982 pursuant to the terms of the License. The Power Authority does not agree that "[t]he possible [sic] reduced reliability of the more complex cooling system will be eliminated due to the fact that Indian Point No. 3 can also use the existing once-through cooling system." Page 2, ¶ 2. It is inconsistent for the Commission to require installation of a closed-cycle cooling system and at the same time calculate reliability losses as if such a system would not be put to use.

Furthermore, the statement "... that there will be no loss of reliability to NYPP due to the installation of a closed-cycle cooling system at Indian Point No. 3", is incorrect. The fact that a reserve margin is high does not mean that capacity above a reserve criterion has no value. Any additional capacity will reduce the probability of loss of load. In a Cost/Benefit analysis, effects of different types are quantified in economic terms for comparison purposes. A cooling tower has direct economic effects reflecting construction and operation, as well as environmental effects. It also has a reliability impact (derating), which must be included in the Cost/Benefit analysis.

The FPC's other comments were filed on September 30, 1977, and were also sent by the Bureau of Power. Inquiries to the FPC in 1976 indicated that relocation of the Algonquin Gas Transmission Company pipeline would not require approval of that agency. The present placement of the pipeline appears on Figure 3-1 of the DES, and dotted lines on that figure indicate where the pipeline would be located in the event a natural draft wet cooling tower were installed at Indian Point 3. See also 1 Consolidated Edison Company of New York, Inc., Economic and Environmental Impacts of Alternative Closed-Cycle Cooling Systems for Indian Point Unit No. 3, Fig. 3-15 (1976) ("Environmental Report"). Since no permit is necessary, relocation of the

pipeline could not itself represent a major federal action significantly affecting the quality of the human environment for purposes of the National Environmental Policy Act of 1969 ("NEPA").

The specific natural draft cooling tower size will depend upon the final proposals submitted by the cooling tower vendors. The proposals will be evaluated on the basis of costs, environmental impacts, and other important factors. The 565-foot-high tower shown on Figure 3-1 was selected on the basis of preliminary evaluations. In general, a shorter tower, with a larger base area, requires additional rock excavation during construction; a taller tower has certain benefits regarding dispersion characteristics. See U.S. Nuclear Regulatory Comm'n, Office of Nuclear Reactor Regulation, Final Environmental Statement Related to Selection of the Preferred Alternative Closed-Cycle Cooling System at Indian Point Unit No. 2, at 8-3, B-7 (1976) (NUREG-0042).

3. Comments of Hudson River Fishermen's Association ("HRFA") and Save Our Stripers ("SOS"). HRFA and SOS, in paragraph 2 on the first page of their comments, assert that the "significant harm posed to the Hudson River fishery . . . was thoroughly documented in the Final Environmental Statement related to operation: of Indian Point 3, and add that "[n]o evidence presented to date and exposed to

the tests of independent expert analysis and cross-examination in a hearing indicates . . . that the harm to the fishery is anything but extremely serious." These comments relate to the question whether any type of closed-cycle cooling system should be installed, not which type of closed-cycle system is preferable. As pointed out in our comments with respect to the DES, this misconceives the issue before the Commission and the nature of the present "proposed action."

Moreover, the record should be clear that the Indian Point 3 operating-license-phase Final Environmental Statement--contrary to the implication of the language just quoted--was never subjected to cross-examination in any Commission proceeding. HRFA has also conveniently overlooked the record of the proceeding which recently led to an extension of the interim operation period for Indian Point 2 from May 1, 1979 to May 1, 1982, where there was evidence that previous estimates of impact of the fishery resources of the Hudson River were probably excessive in a number of important respects. HRFA was a party to that case. We repeat that this issue is not germane to the present proceeding, but we feel an obligation not to permit such misleading and incomplete allegations by these parties to stand unchallenged.

The spray pond alternative referred to on page three of the HRFA-SOS comments was explored in the proceeding to designate a preferred alternative closed-cycle

cooling system for Indian Point 2, which is now before the Commissioners on an unrelated issue. See Indian Point 2 Tr. 184, 253-55 (Oct. 5, 1976); Consolidated Edison Co. of New York, Inc. (Indian Point Station, Unit No. 2), LBP-76-43, 4 NRC 1156 (1977). The Power Authority can confirm that land is not available for spray ponds either on the site or in the immediate environs, and placement of such ponds at a distance from the facility itself would impose very large additional expenses, not only for land acquisition, but for the construction of necessary tunnels or canals.

On page five, HRFA and SOS make reference to the pending litigation between Consolidated Edison Company of New York, Inc. ("Con Edison") and the Zoning Board of Appeals of the Village of Buchanan ("the Zoning Board"). At this writing, the New York Court of Appeals has granted a motion for leave to appeal filed by the Zoning Board. The parties have filed briefs, and oral argument has been scheduled for January 5, 1978.

On the same page, in the second full paragraph, HRFA and SOS refer to a "May 1, 1982 date." The only May 1, 1982 date is that currently stated in the Indian Point 2 license for the termination of operation with the installed once-through cooling system.

4. Comments of the Department of the Interior.

On page 1 of its September 23, 1977 comments, the Department of the Interior notes its concern "that the ultimate decision of the selection of closed-cycle cooling systems at Indian Point Unit No. 3 will only be prolonged by the differences in the evaluations made by the NRC staff and the applicant." The Power Authority believes that the sentiment expressed in this comment is fundamentally at odds with the process of environmental analysis that lies at the heart of NEPA. The Department of the Interior seems to be suggesting that the NEPA process, and, by implication, the Commission's hearing process, may be truncated in the interest of achieving some particular policy objective. The Department suggests that "[p]ositive steps should be taken as quickly as possible to reach an agreement on the use of closed-cycle cooling systems at Indian Point." In fact, the license condition relating to the cooling system at Indian Point 3 was the result of a 1975 stipulation among the then parties to the operating license proceeding, which had the effect of rendering unnecessary a contested hearing at that time. Studies have been conducted before and after that time for the purpose of determining the impact of plant operation and the need (or lack of need) to transfer to a closed-cycle system. The license condition expressly permits requests for relief from its terms, and if the ecological study program data continue to indicate that

plant impact is such that the benefits of a cooling system change would not exceed the costs, the Power Authority will avail itself of the opportunity to obtain relief. This question, however, is not now before the Commission, as no request for relief from the license condition has been made in the Indian Point 3 docket.

5. Comments of the City of Peekskill Planning Commission. The effectiveness of hatcheries in rearing striped bass and the survivability of hatchery-reared striped bass have been part of the ecological study program for Indian Point, and should be considered at the proper time in connection with the ultimate decision on whether closed-cycle cooling is necessary at Indian Point 3. In connection with the question of aesthetic impact, it may also be proper to note here that the Indian Point Station was recently the subject of an American Association of Nurserymen award for beautification, presented to Con Edison last month at the White House by Mrs. Carter. Receipt of this award shows that it is improper merely to "write off" the Indian Point site aesthetically. A copy of the citation is attached.

6. Comments of the New York State Department of Environmental Conservation ("the DEC"). The comments submitted by the DEC begin with a general question concerning the power rating upon which the analyses were based.

In the Indian Point 2 case, the Staff commented that any "uprating . . . will be subject to NRC review and approval and will constitute separate licensing action. Thus annual average and peak deratings of IP-2 resulting from closed-cycle cooling system operation should be and were based on the present license to operate at 2,758 MW(t). Deratings based on future capacity upratings of IP-2 are considered in any licensing action related to such upratings at that time." See NUREG-0042, at 8-15. In addition, the matter was explored to a degree at the public hearings in that proceeding. See Indian Point 2 Tr. 234 (Oct. 5, 1976). Further, Con Edison's current plans are based on an assumption of Indian Point 2 generating capacity of 873 MW(e), at least until 1987. The analysis of an Indian Point 2 closed-cycle cooling system based on 873MW(e) is therefore valid. No application has been filed to uprate Indian Point 2.

For the present case, Indian Point 3 is licensed to operate at 91% of the designed power level of 3,025 MW(t) or 873 MW(e). The "stretch" rating for the facility is 3217 MW(t) or 1033 MW(e), as reflected in Table 1-1 of the Environmental Report. Table 3-3 of the FES shows that the analysis of plant deratings for Indian Point 3 closed-cycle cooling systems was conducted at the 3,217 MW(t) level. See also 1 Environmental Report Tables 3-2, 3-3.

The Power Authority is somewhat puzzled by the DEC's suggestion that Lent's Cove might be "a feasible location for a controlled impoundment section to be used in addition to cooling towers." If this is intended to suggest that there should be cooling towers and a controlled impoundment and the capability to operate in the once-through mode, then the DEC is basically urging that the plant be provided not only with two belts, but with suspenders as well. If the comment is intended to raise the general issue of spray modules, this matter has already been addressed, not only in the DES at page 2-3, but in the Indian Point 2 hearing conducted a year ago. See Indian Point 2 Tr. 183-84, 234-38, 253-55 (Oct. 5, 1976).

In connection with DEC's single comment on § 2.3 of the DES, the Power Authority can advise that chemicals are not added to the circulating water to prevent freezing. Hence, the problem suspected by DEC does not arise. Chemical treatment of the water in the cooling system is summarized in 1 Environmental Report § 3.7. See also DES § 3.4.2.

The DEC's estimate of volume excavated ("three to thirteen acre-feet") appears to be incorrect. The actual total volume is expected to be approximately 280,000 cubic yards (173 acre-feet), depending upon details of the final

design. 1 Environmental Report at 3-30. Plans have not yet been finalized for the disposal of spoil from the necessary excavation for a cooling tower at Indian Point 3. Any impacts in this regard from the choice of one closed-cycle cooling system or another would be minor in comparison with the overall impact of construction of a natural draft wet cooling tower. Due to the rocky nature of the site, dewatering of the excavation is not expected to be a problem. Moreover, § 3.4.5 of the DES notes that "[e]xcavation activities for the new cooling tower will not result in any damage to safety-related structures due to dewatering. The safety-related structures are founded on rock and, therefore, will not settle because of any temporary lowering of the water table."

Page 6 of the DEC's comments makes predictions concerning evaporative impacts of plants other than Indian Point 3. Because this comment goes beyond the proposed action in issue in the DES in this case, it exceeds the scope of the present inquiry. The DEC suggests that the environmental impacts of all proposed cooling towers, rather than merely the impacts of a cooling tower at Indian Point 3, should be addressed in the DES. This suggestion should not be adopted by the staff. The limited purpose of this DES is to evaluate alternative closed-cycle cooling systems for Indian Point 3 and to determine which system would be installed

at that unit if any system is necessary. In this analysis, the staff should not review the impacts of cooling towers for other power plants all of which will be subjected to intensive environmental analysis prior to obtaining the necessary licenses and permits for construction. As the staff and DEC are aware, an analysis of the combined environmental impacts of six cooling towers which might be required at the Indian Point, Bowline Point and Roseton Generating Stations is being conducted by the Environmental Protection Agency. DEC is a party to that proceeding and can raise questions concerning any potential environmental impacts from the combined effects of the six cooling towers at that proceeding. DEC incorrectly refers to cooling towers as "scheduled" for existing plants. The Power Authority and the other concerned utilities are vigorously contesting the necessity for these cooling towers before EPA. The other power plants listed on page 6 of DEC's comments have not yet been approved for construction and their potential impacts are too speculative for consideration at this time.

On page 7 of its comments, the DEC recommends that consideration be given to the addition of fans to a natural draft cooling tower that is already several hundred feet above grade. In addition to the capital cost, additional derating and noise that such fans would entail, they would

only serve to aggravate the visible impact of a cooling tower. The benefit of such fans would, in DEC's proposal, be gained only four months per year, but the visible effect would be present throughout the year. It should also be noted that the period DEC describes as "the most environmentally critical" is also the period in which the greatest demand exists for power in the metropolitan New York area.

In response to the DEC's comment on § 5.2.1, it may be observed that the flowering dogwood has been designated under New York law as a protected plant. N.Y. Environmental Conservation Law § 9-1503; 6 N.Y.C.R.R. § 193.3; 1 Environmental Report at 6-36.

On page 11 of its comments, the DEC urges that consideration be given to the scheduling of tower construction phases such as excavation and blasting over a two-year period utilizing refueling outages for this purpose. This suggestion fails to reflect the realities of construction engineering. Each event in the construction process must follow those that are required to precede it as a practical matter, and these cannot be held up or accelerated to coincide with refueling outages. Moreover, certain phases cannot be done at an arbitrarily selected time and then permitted to lie fallow until the next outage opportunity occurs.

The proposed outage is scheduled to last seven months, of which two months will run concurrently with a refueling outage, if possible. Only the additional five-month period has been charged to the cooling tower project cost.

Construction of the cooling tower, including excavation and blasting, will be accomplished on an essentially continuous basis once started, except that certain work cannot be done during the winter. Since the major activities do not require an outage, they will not affect the shutdown period.

On the final page of its comments, the DEC has raised the question of decommissioning as an element in selection of a preferred alternative closed-cycle cooling system. Detailed cost estimates for total cooling system dismantlement have not been prepared for the Indian Point 3 facility, nor has it been determined that a closed-cycle system would be dismantled following the end of facility power operation.

Respectfully submitted,

LeBOEUF, LAMB, LEIBY & MacRAE

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CERTIFICATE OF 1977 LANDSCAPE AWARD MERIT

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Consolidated Edison Company of New York, Inc.
for Indian Point Nuclear Power Generating Station



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QUALITY OF OUR NATION'S ENVIRONMENT

Alvaro Lenaka

President