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April 14, 1977

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U. S. Nuclear Regulatory  
Commission  
Washington, D. C. 20555

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Dr. Franklin C. Daiber  
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Re: Consolidated Edison Co. of New York, Inc.  
(Indian Point Station, Unit No. 2), Dkt.  
No. 50-247 (Extension of Interim Operation  
Period)

Gentlemen:

Enclosed please find the Proposed Findings of Fact and  
Conclusions of Law submitted on behalf of the New York State Energy  
Office.

Very truly yours,

*Richard C. King*

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Encs.

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the company seeks, in effect, authority to continue once-through cooling for one additional year, to May 1, 1981.

The State supports the company's application for the following reasons:

- a. The company has presented new information and empirical data which, by the admission of the NRC staff, warrants a reanalysis of the underlying issue of whether the license condition requiring closed-cycle cooling should be maintained.
- b. Uncontroverted evidence demonstrates that the adverse environmental impact related to an extension of once-through cooling operation to May 1, 1981 would be both negligible and reversible.
- c. There is no credible indication that costs associated with such an extension would outweigh its associated benefits. By any reasonable measure, the benefits associated with such an extension appear to outweigh the related costs.
- d. Such an extension would in no way prejudice the United States Environmental Protection Agency's ("U.S. EPA's") consideration of Con Edison's request for an exemption from EPA thermal standards and for a determination that once-through cooling is the best technology available within the meaning of the Federal Water Pollution Control Act Amendments of 1972.
- e. The extension would enable the NRC staff and others to more fully consider the data submitted in support of the company's March 15, 1977 application for reconsideration of the closed-cycle license requirement. The extension would at least reduce the magnitude of the financial commitment that the company would be forced to make for cooling tower construction pending such reconsideration.

#### Proceedings to Date

In its application, the company seeks an amendment to Paragraph 2.E(1)(c) of its operating license. Paragraph 2.E, issued as a license amendment April 14, 1974, pursuant to a Decision of the

Atomic Safety and Licensing Appeal Board on April 4, 1974,

provides in pertinent part:

Operation of the Indian Point Unit No. 2 with the once-through cooling system will be permitted during an interim period, the reasonable termination date for which now appears to be May 1, 1979. Such interim operation is subject to the following conditions, ..."

(b) The finality of the May 1, 1979 date also is grounded on a schedule which the applicant, acting with due diligence, obtains all governmental approvals required to proceed with the construction of the closed-cycle cooling system by December 1, 1975. ...In the event the applicant has acted with due diligence in seeking all such approval by December 1, 1975, then the May 1, 1979 date shall be postponed accordingly.

(c) If the applicant believes that the empirical data collected during this interim operation justifies an extension of an interim operation period or such other relief as may be appropriate it may make timely application to the Atomic Energy Commission (Nuclear Regulatory Commission). The filing of such application in and of itself shall not warrant an extension of the interim operation.<sup>3</sup>

In support of its new application, Con Edison submitted an Environmental Report, later supplemented to include, among other things, empirical results of the company's first full year of operation of Indian Point Unit No. 2 with once-through cooling.

On October 3, 1975, notice of the company's application was published in the Federal Register.<sup>4</sup> In July 1976, the NRC staff issued its Draft Environmental Statement ("DES")<sup>5</sup> and in November

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<sup>3</sup> Consolidated Edison Company of New York, Inc. (Indian Point Unit No. 2), ALAB-188, 7 AEC 323, 407-08 (1974).

<sup>4</sup> Fed. Reg. 45, 874 (1975).

<sup>5</sup> Draft Environmental Statement for Facility License Amendment for Extension of Operation with Once-Through Cooling for Indian Point Unit No. 2, Docket No. 50-247, published July 1976, NUREG-0080.

1976, its Final Environmental Statement ("FES").<sup>6</sup>

Pursuant to a Partial Initial Decision rendered by the Board in the related proceeding concerned with the Preferred System of Closed-Cycle Cooling, Amendment No. 27 to the license, issued January 12, 1977, extended the period of interim operation of once-through cooling to May 1, 1980.

Evidentiary hearings in this proceeding were held on December 7-10, 1976 and February 23-25, 1977. Witnesses appeared on behalf of the company and NRC staff.

EVIDENCE ON THE ISSUES IN CONTROVERSY

A. Availability of New Data

1. Con Edison has submitted evidence on issues underlying the closed-cycle cooling requirement. This information falls into the following categories:

- a. the effects of entrainment on striped bass populations, with particular emphasis on the various factors;
- b. the effect of impingement, given as a reduction of equilibrium stock size of various 1974 fish populations;
- c. the compensation response of the striped bass population to offset power plant losses;
- d. the contribution of the Hudson River to the middle-Atlantic striped bass fishery;

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<sup>6</sup> Final Environmental Statement for Facility License Amendment for Extension of Operation With Once-Through Cooling, Indian Point Unit No. 2, Consolidated Edison Company of New York, Inc., NUREG-0130.

e. the development of new mathematical models, particularly the equilibrium reduction equation method for impact assessment; and

f. the rearing and stocking of striped bass in fish hatcheries.<sup>7</sup>

2. The NRC staff has acknowledged that at least in five areas of concern, the company has submitted new data and information warranting an independent assessment or reanalysis of the subject area.<sup>8</sup> These five areas are: the relative contribution of Hudson River striped bass to the Atlantic Coastal Fishery; estimates of entrainment mortality, including correction for differential net mortality and larval-table data; compensation in the Hudson River striped bass population; the method of equilibrium reduction for impact assessment; and assessment of the impact of power plant operation on the Hudson River white perch and tomcod populations.<sup>9</sup>

3. NRC staff witness Van Winkle also testified that three additional subject areas, namely, the intake f factor, the question of impingement generally, and the sensitivity analyses of the various models, should also be subjected to similar reassessment prior to a further consideration of the closed-cycle cooling requirement.<sup>10</sup>

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<sup>7</sup> Campell, Lawler, Marcelles, May and McFadden, after Tr.255 at 28-45, 64-65, 46-51, 52-63, 17-27, 75-81.

<sup>8</sup> Van Winkle after Tr.1069 at 5, Spore and Van Winkle after Tr.1076 at 15.

<sup>9</sup> Van Winkle after Tr.1069 at 4-5.

<sup>10</sup> Tr.1275-76

4. Although the staff disagreed with the company that the principal benefit of completing the program of study is the possibility that the results would demonstrate that a closed-cycle cooling system is not required, the staff admitted that "the possibility exists that the present requirements of a closed-cycle cooling system could be reversed."<sup>11</sup>

5. For the limited purposes of this proceeding, based on Con Edison's submission and the staff's evaluation, Con Edison has made a sufficient showing of new and relevant information to justify an extension of once-through cooling operation through May 1, 1981, so long as the adverse environmental impact of such an extension is insignificant and so long as quantifiable benefits related to an extension outweigh its costs.

B. Probable Biological Impact

1. Uncontroverted evidence introduced by Con Edison and the NRC staff fully supports the finding that the biological impact of the proposed extension of once-through cooling would be negligible and poses essentially no risk of being irreversible.<sup>12/13</sup>

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<sup>11</sup> Final Environmental Statement at 7.2.1.

<sup>12</sup> Consolidated Edison Company of New York, Inc. "Environmental Report to Accompany Application For Facility License Amendment for Extension of Operation with Once-Through Cooling for Indian Point Unit No. 2, June 1975, Chapt. 2 at 2-1 & 2-2.

<sup>13</sup> Final Environmental Statement at 3.2.6.

C. Cost and Benefits

1. Con Edison's revised cost benefit-analysis indicates that an extension to May 1, 1981 would result in benefits calculated at \$6.8 million.<sup>14</sup> The NRC staff benefit estimate is \$10.6 million.<sup>15</sup> These estimates indicate the likely range of quantifiable benefits. An additional possible benefit of the requested extension would be a savings equivalent to monies the company would have otherwise been required to commit to cooling tower construction, in the event that the closed-cycle cooling requirement is finally lifted.<sup>16</sup> However, the present worth of such a benefit cannot be estimated with any reasonable degree of certainty.

2. Con Edison estimated that there would be related costs valued at \$112,000.<sup>17</sup> The company calculated these costs by estimating the loss to the Mid-Atlantic sports fishery and evaluated the relationship between demand for striped bass fishing days and the stock of striped bass.<sup>18</sup> The NRC staff calculated related costs to be valued at \$11.1 million, concluding that the cost-benefit ratio of the requested

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<sup>14</sup> Gueron, Szeligowski and Englert, after Tr.1468 at 11.

<sup>15</sup> Spore and Van Winkle, after Tr.1076 at 28.

<sup>16</sup> Gueron, Szeligowski and Englert after Tr.1468 at 12-13.

<sup>17</sup> Ibid at 2-4.

<sup>18</sup> Ibid at 2-4.

extension is essentially one.<sup>19</sup> The company's estimate likely falls at the lowest end of a reasonable cost range. However, the NRC staff estimate is unreasonably high and flies in the face of its admission that the environmental impact of the extension would be negligible.

3. The staff bases its cost calculation on two ungrounded assumptions. First, the staff equates the monetary value of cooling tower construction with the cost that would otherwise be imposed on society absent such construction.<sup>20</sup> The staff cites no factual basis for this assumption, and indeed no such basis appears in the instant record (nor in the record of any related proceeding). Indeed, the staff failed to establish any necessary relationship between the quantified public welfare benefits associated with tower construction and the cost of such construction.

4. The staff's second assumption is that its hypothetical social cost can be broken down into annualized increments for purposes of its cost benefit analysis.<sup>21</sup> The staff attempts to break out a value associated with risk of species extinction for the extension period by assuming a linear relationship between such risk and time. This effort produces a result that cannot be credited, particularly in light of staff's admission that the environmental impact associated with the extension

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<sup>19</sup> Spore and Van Winkle, after Tr.1076 at 28-29.

<sup>20</sup> Ibid at 19-20.

<sup>21</sup> Ibid at 20-25.



would be both negligible and reversible.

D. The Related U.S. EPA Proceeding

1. The change in the NRC staff's position from support for an extension to May 1, 1981 in the DES<sup>22</sup> to support of an extension to May 1, 1980 in the FES<sup>23</sup> is attributable to intervening comments by U.S. EPA to the effect that an extension of time to May 1, 1981 would, for some unstated reason, "interfere" with the related U.S. EPA proceeding.<sup>24</sup>
  
2. However, Con Edison's requests for adjudicatory hearings before U.S. EPA automatically stayed the May 1, 1979 termination date for operation of once-through cooling under Con Edison's NPDES permit.<sup>25</sup> It is beyond dispute that U.S. EPA's decisions on these requests will constitute the final agency determination under the Federal Water Pollution Control Act Amendments of 1972 (FWPCA). The NRC, however, has an independent responsibility to consider this issue under the National Environmental Policy Act of 1969 (NEPA) and its own regulations. Furthermore, §511(c)(2) of the FWPCA does not preclude the NRC from setting a new termination date in this proceeding. Section 511(c)(2) would only limit the NRC's authority if effluent limitations were now in effect; however, the staying of the relevant portions of the §402 permit results in the

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<sup>22</sup> Draft Environmental Statement at 4.1.4.

<sup>23</sup> Final Environmental Statement at 4.1.5.

<sup>24</sup> Final Environmental Statement at A-11.

<sup>25</sup> 40 C.F.R. §125.35(d)(2).

deferment of U.S. EPA limitations. On the other hand, the NRC's NEPA determinations do not legally bind or otherwise contradict U.S. EPA's final decision-making authority in the 316(a) and 316(b) proceedings.

3. Con Edison, NRC staff, and the Hudson River Fishermen's Association agree that the NRC may review and modify license conditions during the pendency of the U.S. EPA proceedings prior to final U.S. EPA determinations.<sup>26</sup>

4. Under such circumstances, there is no reason to deny an extension to May 1, 1981 on the ground of alleged interference with U.S. EPA's statutory responsibilities under FWPCA.

E. An Extension to May 1, 1981 Will Reduce the Company's Potentially Wasteful Commitment of Resources Pending Reconsideration of the Closed-Cycle Cooling Requirement

1. NRC's staff and U.S. EPA, among others, are proceeding with reconsideration of the information and analysis supporting the present closed-cycle cooling requirements contained in the NRC's operating license and U.S. EPA's NPDES permit for Indian Point Unit No. 2. It is unlikely that this review effort will conclude before Con Edison is required to commit financial resources to cooling tower construction to meet a May 1, 1981 closed-cycle requirement.

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<sup>26</sup> Docket No. 50-247 Selection of Preferred Alternative Closed-Cycle Cooling System; see Applicant's Memorandum In Response to Board's Request, dated March 4, 1977; Response of NRC Staff to Appeal Board Questions, dated March 4, 1977; and Hudson River Fishermen's Association Supplemental Brief in Opposition to Applicant's Exceptions, dated March 4, 1977.

2. In its cost-benefit analysis, the NRC assumes that there is a zero probability that a closed-cycle cooling system will not be required. Since other NRC testimony states that the possibility exists that the present requirements of a closed-cycle cooling system could be reversed,<sup>27</sup> recognition should be given to the potential savings that would be realized if the extension is granted and the license condition is subsequently removed.

3. Reasons set forth by the NRC staff that an extension to May 1, 1980 would permit a conclusion of appropriate governmental studies<sup>28</sup> has already been shown to be incorrect. Further, without judging whether on reconsideration the closed-cycle requirement will be reaffirmed, the NRC staff's conclusory claim that "there is little risk that the expenditures of funds for the construction of the tower will be unnecessary,"<sup>29</sup> stands in marked contrast to other NRC staff claims that new information warrants reconsideration of the issue and that there is no way to predict the outcome of such reconsideration.<sup>30</sup>

4. NRC staff testified that it no longer supports an extension to May 1, 1981 because "two of the major benefits" anticipated in the DES have already been realized.<sup>31</sup> These "major"

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<sup>27</sup> Final Environmental Statement at 7.2.1.

<sup>28</sup> Final Environmental Statement at 3.2.5.1, 6.4.1; Tr.806-811, 813-818, 828, 1273-1277.

<sup>29</sup> Final Environmental Statement at 7.3; Tr.848.

<sup>30</sup> Tr.894, 896; Final Environmental Statement at 7.2.1.

<sup>31</sup> Tr.731, 733.

benefits were selection of the preferred closed-cycle cooling system and affording the Village of Buchanan an opportunity to be heard. It is misleading at best to construe these benefits as material reasons for the NRC staff's initial position. To the contrary, the cursory discussion of these factors in the DES suggest that these factors were incidental to the staff's primary considerations.<sup>32</sup> In fact, the DES states that "staff considers a one year delay justified in order to preserve the choice of closed-cycle cooling system..." and "The justification for a second year extension is to provide time for the U.S. EPA proceedings and final decision to be completed."<sup>33</sup>

CONCLUSION

The application of Consolidated Edison Company of New York, Inc. should be granted, and an amendment should be issued extending the period of interim operation with once-through cooling for Indian Point Unit No. 2 from May 1, 1980 to May 1, 1981.

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<sup>32</sup> Draft Environmental Statement at 4-1.

<sup>33</sup> Ibid at 4.1.5.

Respectfully submitted,

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April 14, 1977

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BEFORE THE UNITED STATES  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
 )  
CONSOLIDATED EDISON COMPANY ) Docket No. 50-247  
OF NEW YORK, INC. ) (Extension of Interim  
(Indian Point Station, ) Operation Period)  
Unit No. 2) )

CERTIFICATE OF SERVICE

I certify that I have this 14th day of April, 1977, served the foregoing document entitled "Proposed Findings of Fact and Conclusions of Law of the New York State Energy Office," dated April 14, 1977, by mailing copies thereof, first class postage prepaid and properly addressed, to the following persons:

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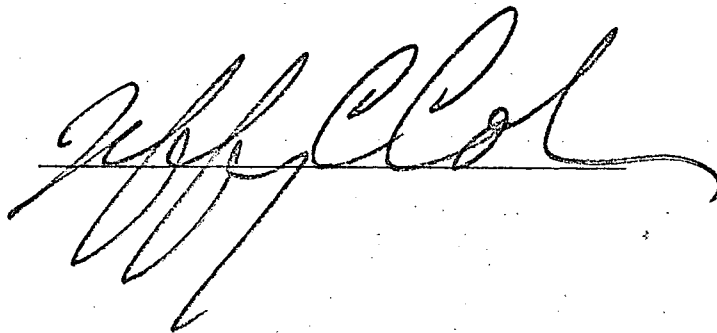
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A handwritten signature in black ink, appearing to read "S. J. Chilk", written over a horizontal line. The signature is stylized and cursive.