

Indian Point Unit No. 2  
AEC Docket No. 50-247

APPENDIX TO APPLICANT'S PROPOSED CORRECTIONS  
TO THE TRANSCRIPT

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Testimony of Dr. James T. McFadden on Impact of Entrainment and Impingement at Indian Point Units #1 and #2 Upon Fish Populations, Oct. 30, 1972 ("McFadden on Entrainment and Impingement, Oct. 30") (follows Tr. 6254) at 14; Rebuttal Testimony of Dr. James T. McFadden on Effects of Indian Point Units #1 and #2 on Hudson River Fish Populations, Feb. 5, 1973 ("McFadden on Effects of IP, Feb. 5") (follows Tr. 9405) at 16-19.

2/

McFadden on Entrainment and Impingement, Oct. 30 (follows Tr. 6254), supra note 1, at 3, 13-14, 16; Testimony of Dr. James T. McFadden on Effects on Hudson River Fish Populations of the Simultaneous Operation of Indian Point Units #1 and #2, Plus the Bowline and Roseton Power Plants, March 30, 1973 ("McFadden on Effects of Simultaneous Operation, March 30") (follows Tr. 10608) at 9; Testimony of Edward C. Raney, Ph. D. on The Striped Bass, Morone saxatilis, of the Atlantic Coast of the United States with Particular Reference to the Population Found in the Hudson River, Oct. 30, 1972 ("Raney on Striped Bass Population, Oct. 30") (follows Tr. 6254) at 18.

3/

McFadden on Entrainment and Impingement, Oct. 30 (follows Tr. 6254), supra note 1, at 10, 12; McFadden on Effects of Simultaneous Operation, March 30 (follows Tr. 10608), supra note 2, at 9.

4/

McFadden on Entrainment and Impingement, Oct. 30 (follows Tr. 6254), supra note 1, at 12, 16.

5/  
Id. at 10.

6/  
The references cited in notes 3-5 supra support the response given to the Chairman's question. In further response to the Chairman's question about the quoted excerpt from page 4-24 of the Environmental Technical Specifications that statement addresses the same point Applicant's counsel referred to at Tr. 36, line 23, namely, that the research program's mechanism for determining the percentage reduction in year class strength caused by the plants will not be affected by the natural variation in the size of the egg population or successive life stages.

7/  
McFadden on Entrainment and Impingement, Oct. 30 (follows Tr. 6254), supra note 1, at 15.

8/  
McFadden on Entrainment and Impingement, Oct. 30 (follows Tr. 6254), supra note 1, at 13-14; McFadden on Effects of Simultaneous Operation, March 30 (follows Tr. 10608), supra note 2, at 9; Raney on Striped Bass Population, Oct. 30 (follows Tr. 6254), supra note 2, at 18.

9/  
Indian Point Unit 2, Benefit-Cost Analysis of Alternative Operating Modes for the Period 1973 through 1977, C. M. Carter, Feb. 9, 1973 (follows Tr. 9892) at 11; Brief of Regulatory Staff in Opposition to Exceptions of the Applicant, the State of New York and Hudson River Fishermen's Association, Dec. 10, 1973 at 10.

10/  
Consolidated Edison Co. (Indian Point Station, Unit No. 2), Initial Decision, ASLB (LBP-73-33), RAI-73-9 at 751, 778 (Sept. 25, 1973) ("Sept. 25 Initial Decision").

11/  
Id. at 780; see also id. at 783-86 (items D35, H10, 028-029).

12/

Maine Yankee Atomic Power Co. (Maine Yankee Atomic Power Station), ALAB-161, RAI-73-11 at 1003, 1007 (Nov. 30, 1973).

13/

"Response to Chairman Jensch's Request for Criteria on Environmental Impact," May 24, 1973 (transmitted by letter from Leonard M. Trosten to the Licensing Board, May 24, 1973).

14/

Applicant's Proposed Findings of Fact and Conclusions of Law in the Form of a Proposed Initial Decision for a Full-Term, Full-Power Operating License, May 17, 1973 ("Applicant's Proposed Findings, May 17") at 233 n.023.

15/

Id. at 227 nn.015 & 016, 229 n.018, 238 n.028.

16/

Redirect-Rebuttal Testimony of John P. Lawler, Ph. D. on the Contribution of the Hudson River to the Middle Atlantic Striped Bass Fishery, Feb. 5, 1973 (follows Tr. 9405) at 9-10.

17/

Testimony of Dr. Robert E. Stevens on Feasibility of Stocking the Hudson River with Striped Bass, April 5, 1973 (follows Tr. 10339); Feasibility of Mitigating Power Plant Losses With Artificial Propagation of Striped Bass, April 20, 1973 (follows Tr. 11044); Comparison Between Number of Mature Females Required for Hatchery Replenishment Computed Using the Applicant's and Staff's Models (follows Tr. 11115); "Response of Dr. Robert E. Stevens to Request by Atomic Safety and Licensing Board and AEC Staff for Additional Data on Striped Bass Culture," May 24, 1973 (transmitted by letter from Leonard M. Trosten to Licensing Board, May 24, 1973; Tr. 10375-79, 11117-38, 11315-17, 11323-34; references cited notes 1-2, 4-5, 7-9, 16.

18/

Applicant's Proposed Findings, May 17, supra note 14, at 196 nn.N3 & N4, 197 nn.N5-N9; Regulatory Staff's Proposed Findings of Fact and Conclusions of Law in the Form of a Proposed Initial Decision, June 11, 1973 ("Staff's Proposed Findings") at 66 nn.N3-N5, 67 nn.N6-N9; Sept. 25 Initial Decision, supra note 10, at 783 (the Licensing Board accepted Applicant's Proposed Findings N2-N4).

19/

Testimony of Dr. James T. McFadden and Harry G. Woodbury on Indian Point Studies to Determine the Environmental Effects of Once-Through vs. Closed-Cycle Cooling at Indian Point Unit No. 2, Feb. 5, 1973 (follows Tr. 9405) ("McFadden and Woodbury on Indian Point Studies, Feb. 5") at 33-34.

20/

Response to Position of HRFA on Research Program Proposed by Con Edison, March 2, 1973 at 2; Tr. 8886-88.

21/

FES, I (follows Tr. 6271) at vii-viii, V-71 through V-73; Tr. 134-36 (July 2, 1973 oral argument - IP #2).

22/

Response to Staff Comments on Applicant's Research Program by James T. McFadden, April 24, 1973 (follows Tr. 11044) (the statement referenced at Tr. 30, lines 10-14 and contained in the document entitled Redirect-Rebuttal Testimony of Dr. C. P. Goodyear, Modifications of April 10, 1973, Testimony on Staff Comments on Applicant's Research Program, April 24, 1973 (follows Tr. 11220) at 1 was also contained in the document entitled Redirect-Rebuttal Testimony of Dr. C. P. Goodyear, Staff Comments on Applicant's Research Program, April 10, 1973 (follows Tr. 10826) at 1; see generally Applicant's Proposed Findings, May 17, supra note 14, at 218-242 (Section O).

23/

Regulatory Staff's Proposed Findings, June 11, supra note 18, at 29 (Finding 010); Applicant's Proposed Findings, May 17, supra note 14, at 233 (Finding 019).

24/

Applicant's Proposed Findings, May 17, supra note 14, at 224 nn.09-010, 226 n.013, 227 nn.014-016, 228 n.017, 229 nn.018-019, 230 n.020, 231 n.021.

25/

Id. at 227 n.014, 232 n.022, 233 n.023.

26/

Id. at 226 n.013.

27/

McFadden and Woodbury on Indian Point Studies, Feb. 5 (follows Tr. 9405), supra note 19, at 28.

28/

Id. at 238 n.029.

29/

Id. at 238 nn.028 & 030.

30/

Id. at 239 n.031.

31/

Tr. 9812-15.

32/

Id. at 225 n.011.

33/

McFadden and Woodbury on Indian Point Studies, Feb. 5 (follows Tr. 9405), supra note 19, at 39-40 and App. B.

34/

Testimony of Carl L. Newman on Alternative Closed-Cycle Cooling Systems at Indian Point 2, Oct. 30, 1972 (follows Tr. 6254) at 4-5; FES, I (follows Tr. 6271) at XII-42; Tr. 6966-69, 6981-82, 7573-75, 9542, 9709-10, 9729, 10464-70, 10528-29, App. B to Facility Operating License DPR-26 at 4-8.

35/

FES, I at XI-12, XI-73; Tr. 10464-65.

36/

Tr. 7570.

37/

Id.

38/

Redirect-Rebuttal Testimony of Carl L. Newman on Alternative Cooling Systems At Indian Point 2, April 9, 1973 (follows Tr. 10339) at 28.

39/

The salt drift research program, in which the Atomic Energy Commission is participating, was initiated in July, 1972 and will continue through December, 1975. Consolidated Edison understands that at the present time the field program is being coordinated and instrumentation is being installed. Actual data collection, however, is scheduled to begin in the latter part of 1974 and, therefore, results of the program are not expected to be available until 1975. This program is described at pages G-12 through G-15 of the Draft Environmental Statement for Indian Point Nuclear Generating Plant, Unit No. 3 issued Oct., 1973.

40/

Applicant's Proposed Findings, May 17, supra note 14, at 50 nn.D4-D5, 52 nn.D11-D12, 53 nn.D14-D15, 54 n.D16, 55 nn.D17-D18, 88 nn.D116-D117, 90 n.D120.

41/

Tr. 7598-7618.

42/

Testimony of John P. Lawler on Effect of Entrainment and Impingement at Indian Point on the Population of the Hudson River Striped Bass, Oct. 30, 1972 (follows Tr. 6256) ("Lawler on Entrainment and Impingement, Oct. 30") at Fig. 15; Tr. 7477-78, 7593-7619, 8623, 8840-46.

43/

Applicant's Brief in Support of Applicant's Exceptions to the Initial Decision Authorizing Full-Term, Full-Power Operation, Oct. 29, 1973 at 17 n.45.

44/

Tr. 7121-30, 7153.

45/

Testimony of Gerald J. Lauer on Effects of Operations of Indian Point Units 1 and 2 on Hudson River Biota, Oct. 30, 1972 (follows Tr. 6256) at 42 and 48; Lawler on Entrainment and Impingement, Oct. 30 (follows Tr. 6256), supra note 42, at 48-59; Tr. 6587-90, 7169-72.

46/

Raney on Striped Bass Population, Oct. 30 (follows Tr. 6254), supra note 2, at 18-20; Testimony of Edward C. Raney, Ph. D. on Striped Bass, Feb. 5, 1973 (follows Tr. 9405) ("Raney on Striped Bass, Feb. 5") at 2; Tr. 6577-89.

47/

Rebuttal Testimony of Gerald J. Lauer, Ph. D. on Effects of Entrainment on Morone sp. (striped bass and white perch) Eggs and Larvae at Indian Point, Feb. 5, 1973 (follows Tr. 9405) at 5.

48/

Raney on Striped Bass, Feb. 5 (follows Tr. 9405), supra note 46, at 2.

49/

Responses to Questions by John P. Lawler on the Sensitivity of the Model Presented in the Testimony of October 30, 1972, Feb. 5, 1973 (follows Tr. 9405) at 30-33, 48-61; Answers by John P. Lawler, Ph. D. to Questions on the Statistical Analysis of Table 19 of the October 30, 1972 Testimony, Feb. 5, 1973 (follows Tr. 9405) at 8; Tr. 7312-46, 7358-75.

50/

McFadden and Woodbury on Indian Point Studies, Feb. 5 (follows Tr. 9405), supra note 19, at 28.

51/

Sept. 25 Initial Decision, supra note 10, at 765, 784 (item D27).

52/

McFadden and Woodbury on Indian Point Studies, Feb. 5 (follows Tr. 9405), supra note 19, at Table 5.

53/

Professional Qualifications, Dr. James T. McFadden (received into evidence Tr. 4831).

54/

Professional Qualifications, Dr. Edward C. Raney (received into evidence Tr. 4831).

55/

Lawler on Entrainment and Impingement, Oct. 30 (follows Tr. 6256), supra note 45, at 20-29.

56/

Id.; Tr. 4487-88, 7292-94, 7501-04.

57/

McFadden on Entrainment and Impingement, Oct. 30 (follows Tr. 6254), supra note 1, at 10.

58/

Id.

59/

References set forth in Applicant's Reply to the Proposed Findings of Fact and Conclusions of Law Filed by the Regulatory Staff, HRFA-EDF and the Attorney General of the State of New York; June 25, 1973 at 56.

60/

Sept. 25 Initial Decision, supra note 10, at 766.

61/

Compare with Brief of Regulatory Staff in Opposition to Exceptions of the Applicant, the State of New York and Hudson River Fishermen's Association, Dec. 10, 1973 at 59 with FES, 1 at XI-74 (follows Tr. 6271) as corrected in Errata to Final Environmental Statement for Indian Point Unit No. 2 at 3 (see Tr. 6263, 6267, 6271).

62/

But see Errata for Initial Decision of September 25, 1973, issued by the Atomic Safety and Licensing Board, Oct. 24, 1973.

63/

Lawler on Entrainment and Impingement, Oct. 30 (follows Tr. 6256), supra note 42, at 15-21.

64/

Redirect-Rebuttal Testimony of John P. Lawler, Ph. D. on the Contribution of the Hudson River to the Middle Atlantic Striped Bass Fishery, Feb. 5, 1973 (follows Tr. 9405) at 9-10.

65/

McFadden on Entrainment and Impingement, Oct. 30 (follows Tr. 6254), supra note 1, at 10; Lawler on Entrainment and Impingement, Oct. 30 (follows Tr. 6256), supra note 42, at 2.

66/

Lawler on Entrainment and Impingement, Oct. 30 (follows Tr. 6256), supra note 42, at 20.

67/

Applicant's Brief in Opposition to the Exceptions to the Initial Decision Filed by the Attorney General of the State of New York, Nov. 26, 1973 at 3-5.

68/

Tr. 7575-77, 10465-66.

69/

Tr. 10466-70.

70/

Redirect-Rebuttal Testimony of Carl L. Newman on Alternative Closed-Cycle Cooling Systems at Indian Point 2, Feb. 5, 1973 (follows Tr. 9405) at 9-11.

71/

Applicant's Brief in Support of Applicant's Exceptions to the Initial Decision Authorizing Full-Term, Full-Power Operation, Oct. 29, 1973 at 26-27.

72/

Tr. 9710-11, 10528-32.

73/

For clarification of the discussions set forth at page 111, lines 1-3, page 170, lines 17-20 and page 174, lines 4-6, 15-19 it should be noted that the following documents were received in evidence on December 14, 1971 (Tr. 4329); Environmental Report Supplement, Indian Point Unit No. 2, including Supplement No. 2 designated as Applicant's Exhibit 3-A; Environmental Report Supplement, Appendices, Volume No. 1 designated as Applicant's Exhibit 3-B; and Environmental Report Supplement, Appendices, Volume No. 2 designated as Applicant's Exhibit 3-C. Supplement No. 3 to Applicant's Environmental Report - Indian Point Unit No. 2 was submitted to the Atomic Energy Commission on February 15, 1972 and is not in evidence in this proceeding.

74/

Tr. 6966-67, 6969, 6981-82.

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For clarification of the discussions set forth at page 171, lines 9-13 and page 174, lines 1-6, 12-14 it should be noted that Volume 2 to the Final Environmental Statement, Indian Point Generating Station Unit No. 2 issued in September, 1972 was incorporated into the transcript on December 4, 1972 (Tr. 6272) for the limited purpose of demonstrating compliance by the Regulatory Staff with applicable requirements.

76/

McFadden on Entrainment and Impingement, Oct. 30 (follows Tr. 6254), supra note 1, at 11-12.