

DEC 24 1975

Docket No. 50-286

Mr. William J. Cahill, Jr.
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of New York, Inc.
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Dear Mr. Cahill:

We would like to clarify a portion of the language of Operating License No. DPR-46 which Consolidated Edison recently received for the Indian Point Unit No. 3.

On p. 7 under (2) of the license there appears a requirement which reads "... plan shall be submitted to the Nuclear Regulatory Commission one month after receipt of the operating license for Unit No. 3, ..." It should be understood that this refers to the receipt of the full-term, full-power operating license rather than fuel loading and sub-critical testing license.

Sincerely,

Gordon K. Dicker
for Daniel R. Muller, Assistant Director
for Environmental Projects
Division of Reactor Licensing

cc: (see attached list)

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PDR

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DATE	12/22/75	12/22/75	12/24/75		

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Docket Nos. 50-3

50-267

50-286

Consolidated Edison Company
of New York, Inc.
ATTN: Mr. William J. Cahill, Jr.
4 Irving Place
New York, New York 10003

Gentlemen:

We have reviewed your request of July 25, 1975, pertaining to additional changes to Section 4.1.2.a on the aquatic environmental surveillance program in the proposed Environmental Technical Specifications for Indian Point Units Nos. 1, 2 and 3 and have reached the following conclusions:

- (1) Those changes which have been accepted are presented in Enclosure 1. This list includes those changes which you have requested but involve some modifications which we believe meet your intentions.
- (2) Those changes which are still under review pending receipt of additional information from you include the following:
 - (a) Replace "each species" with "key species", Paragraph 2, Line 1 on page 4.1-11.
 - (b) Delete "by species" in Spec. 4.1.2.a(3), A (i), Line 5 on page 4.1-15.
 - (c) Substitute Spec. (ii) on page 4.1-16.

As indicated in Enclosure 2, we will need supportive information from you to justify these changes. Your response should include three signed originals and thirty-seven copies within three weeks of receipt of this request.

ER - 2

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SURNAME ➤						
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- (3) Those changes which cannot be accepted are listed in Enclosure 3. In particular, where you have completed certain facets of your program but have not submitted the results to us for our review, those parts of the program have been left in the ETS. In addition your request on administrative changes on page 4.1-11, 4.1-14, 4.1-17 and 4.1-22 have been denied because of the wide variety of sampling gear and techniques used in the past. As pointed out on pp. V-185 through V-213 in the FES for Unit No. 3, the staff reported about the serious flaws in the striped bass data obtained to date because of sampling variability and difficulty in obtaining data of the quality required for sound impact assessment. Some of these difficulties of your ecology program have been discussed in Enclosure 4. The purpose of requiring prior review and approval of any changes in sampling and analytical techniques is to promote consistency and uniformity in the program and to provide a sound basis for assessing impacts of once-through cooling.

As you have requested, we are enclosing the most recent draft of the proposed ETS for the three units. This draft includes changes to Section 2.4 Radioactive Discharges which you received on August 11, 1975. Those changes on your ecology program which have been accepted are now incorporated in Section 4.1.2a(1), (2), (3) and (4). Otherwise the rest of the document is the same as you received the end of May. After we have reviewed your responses to questions in Enclosure 2, we will send you a revised version of Section 4.1.2a prior to having a meeting to discuss any questions you have pertaining to your request.

Sincerely,

Original signed by
George W. Knighton

George W. Knighton, Chief
Environmental Projects Branch No. 1
Division of Reactor Licensing

Enclosures:

1. Changes accepted
2. RAI
3. Changes denied
4. Sampling problems
5. Draft of ETS for IF-1,2 and 3

cc: See next page

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DATE➤	10/3/75	10/7/75				

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ENCLOSURE 1

REQUESTED CHANGES IN THE ETS FOR INDIAN POINT
UNITS NOS. 1, 2 AND 3 WHICH HAVE BEEN
ACCEPTED OR RESULTED IN REWRITTEN LINES

PAGE	SECTION	SPECIFICATION	LOCATION OF CHANGE
4.1-10	4.1.2a(1)	A (iii) Adult Fish	Lines 1&2
4.1-13	4.1.2a(3)	A Entrainment Measurements	Paragraph 2, Line 8
4.1-17	4.1.2a(3)	A Impingement (iv)	Paragraph 1, Line 5
4.1-18	4.1.2a(3)	Reporting Requirements (d) and (d)(1)	Line 1 and 5
4.1-21	4.1.2a(4)	Special Studies	Paragraph A(1)(d), Line 1
4.1-24	4.1.2a(4)	Special Studies	Item A(3), Line 1, 8 Item A(4), Line 2
4.1-25	4.1.2a(4)	Special Studies	Item I B (1), (3), (4) & (5)
4.1-26	4.1.2a(4)	Special Studies	Item II, Para. 2, Line 5
4.1-27	4.1.2a(4)	Special Studies	Item II.A(5), A(7)
4.1-29	4.1.2a(4)	Special Studies	Item III, Para. 3, Line 2 & 3
4.1-30	4.1.2a(4)	Special Studies	Item III, Para. 1, Line 10-11 Item IV, Para. 3, Line 1
4.1-31	4.1.2a(4)	Special Studies	Item IV, Para. 1, Line 4, 5-8

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ENCLOSURE 2

REQUEST FOR ADDITIONAL INFORMATION FOR

ENVIRONMENTAL TECHNICAL SPECIFICATIONS

INDIAN POINT UNITS NOS. 1, 2 AND 3

DOCKET NOS. 50-3, 50-246, 50-286

1. On July 25, 1975, you requested to replace the words "each species" with "key species" in Paragraph 2, Line 1 on page 4.1-11. We agree that the analysis of "each species" is unnecessary. You have identified blueback herring, striped bass, white perch, Atlantic tomcod, American shad, bay anchovy, alewife, rainbow smelt, American eel, spottail shiner, hogchoker as the "major fish species" in the Hudson River (II, "Fisheries Survey of the Hudson River," Vol IV, p II-1). Which species listed above would you include as "key species"?
2. In reference to your request to delete the words "by species" in Spec. A Impingement (i) on page 4.1-15, we were informed in our previous meetings with you that you have a study underway to quantitate the impingement losses from the fixed screens at Units Nos. 1 and 2 in which impinged fish have not been picked up by the traveling screens to be counted. Provide available results which could be used to develop correction factors to be applied by species for adjusting the daily impingement counts.
3. On p. 4.1-16, in Section 4.1.2a(3) on impingement, you proposed an alternate specification for (ii) based on a justification that the revised specification describes the procedures presently being utilized. Provide a description of these procedures and documentation supporting your proposed change to item (ii) on page 4.1-16. In addition, you have performed a statistical analysis of data collected in 1972 through 1974 which you say demonstrates that the present procedure is responsive to study results and is more efficient. Provide 12 copies of your report on statistical analysis of the 1972 - 1974 impingement data.

ENCLOSURE 3

REQUESTED CHANGES WHICH HAVE BEEN DENIED

Page	Section	Specification	Location of Change
4.1-11	4.1.2a(1)	B. Administrative Controls	Para. 2, Lines 2,3,4 & 5
4.1-13	4.1.2a(2)	A Entrainment Measurements	Para. 1, Lines 2-4,5,6 & 7
4.1-14	4.1.2a(2)	B. Administrative Controls	Para. 2, Line 1,3,4 & 5
4.1-17	4.1.2a(3)	B. Administrative Controls	Para. 2
4.1-18	4.1.2a(3)	Reporting Requirements	Line 4
4.1-20	4.1.2a(4)	Special Studies	Para. A, Line 1
4.1-21	4.1.2a(4)	Special Studies	Para. A (1)(d), Line 2 Para. A (3), Line 2 Para. A (5), A (7)
4.1-22	4.1.2a(4)	Special Studies	Para. B (1), Line 2 Para. B (2), Line 2
4.1-22	4.1.2a(4)	Administrative Controls	Para. D
4.1-24	4.1.2a(4)	I.A. (2)	Para. 2, Lines 3-5

Specification: Administrative Controls

Change Requested: Paragraph 2, line 2, replace "review and approval by" with "notice to"; Paragraph 2, line 3, replace "shall not" with "may"; Paragraph 2, line 4, replace "prior review and approval by" with "notice to", Paragraph 2, line 5, add "These changes shall be documented in the semi-annual stations operations report."

Similar requests were made for three sections: General Ecology Program, Impingement and Entrainment.

Response: The staff noted in the FES (p. V-209) that obtaining data of the quality required for sound impact assessment has proven to be more difficult than anticipated. A large part of this difficulty was attributed to (1) the inability of previous research programs to provide answers to several important questions, and (2) extreme temporal and spatial variability of biological data owing to repeated changes in sampling locations, frequency and methods. Some of the past changes to the licensee's General Ecology Program for IP-1&2 are summarized in this attachment.

The EIS requires that changes to the Environmental Surveillance and Special Studies programs involving sampling locations, frequency and methods, laboratory techniques and data analyses must be reviewed and approved by NRC prior to implementation by the licensee. This requirement is intended to promote consistency and uniformity in the licensee's aquatic monitoring programs and analyses of resultant data, and to provide a sound basis for assessing impacts resulting from operation of Unit 3.

Summary of Changes to Indian Point 1 & 2 General Ecology Program: Within the General Ecology Program there are two areas of interest; (1) adults and immature fish and (2) ichthyoplankton. For both of these study areas fishing gear trials were conducted. The gear analyzed were beach seines, semiballoon trawls (bottom trawls), Tucker trawls (surface trawls), traps, gill nets, and purse seines.

For young-of-the-year sampling prior to 1973 primarily three types of gear were employed, i.e. haul seine, semi-balloon trawl and mid-water trawl (Tucker trawl). In 1973, primarily beach seines (50 ft and 100 ft), axial bottom trawls, and trap nets were used for young-of-the-year and adult fish. (See the table: Adult and Immature Fish Sampling Methods, and the young-of-the-year row in the Ichthyoplankton Sampling Methods table.) Much of the discussion on data analysis provides little information on the sampling periods for some of the gear, specifically the gill and trap nets and axial bottom trawl. Data are not presented in such a way as to include gear type.

Ichthyoplankton sampling was done with a nylon plankton net prior to 1973. For each sampling year, 1965-1968, there were alterations in the mesh size. The reasons given were to reduce artifact accumulation and to increase the catch size.

In 1973 the sampling program for ichthyoplankton was expanded, encompassing three sampling areas: river survey, shoal survey, and beach survey.

The river survey used epibenthic sleds and Tucker trawls for sampling. For the months of May through August 1973 the sled changed, and/or added, mesh sizes seven times. One change in mesh size for the 1m Tucker trawl was made, and a second type of Tucker trawl (with a 2m mouth) was introduced in July.

The shoal survey used one sampling gear for October (i.e. the epibenthic sled) and a second for November (i.e. the 2m Tucker trawl).

The beach survey initially (May) used a 100-ft beach seine with 0.375 in mesh. No subsequent changes in mesh size were noted. For the months of June and July, a 50 ft beach seine with 0.125 in mesh was also used.

There does not appear to be a consistent sampling methodology for ichthyoplankton from 1965 to 1973. Comparisons between sampling methods (relative efficiencies) were not reported and results were not presented in a constant (standardized) fashion. (See the tables: Ichthyoplankton Sampling Methods).

Adult and Immature Fish Sampling Methods

1973

April	May	June	July	August	September	October	November
trap nets at less than 3 ft. depths, .375 in. and 2 in. mesh ¹							
100 ft. beach seine used for y-o-y at weekly intervals within a 10 mile sampling section wings-.375 in. mesh ² bag-.25 in. mesh ²				sampling during day and night time ³ and intermittent use of a 200 ft. beach seine, .375 in. mesh			
		50 ft. beach seine for y-o-y weekly samples within 10-mile sample section .125 in. mesh ²					
axial bottom trawl bi-weekly sampling ¹							
gill nets with 3 and 4 in. bar mesh							

¹Hudson River Ecological Study, 1973 Annual Report, July 1974.

²1973 Hudson River Program Fisheries Data Summary, May - July, Vol. I.

³1973 Hudson River Program Fisheries Data Summary, July - November, Vol. II.

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Ichthyoplankton Sampling Methods

	1965	1966	1967	1968
fish eggs & larvae ¹	multi-filament nylon plankton net, 1.5 ft diameter, impeller-type fluorometer center mounted	net mesh change from .020 x .031 to .012 x .020	mesh size changed to larger size in July	mesh size used was .020 x .031
young-of-the-year ¹	haul seine, 75 ft long, .25 in. ² mesh, used for species composition determination			
	semi-balloon trawl .75 in. ² nylon mesh lined with .25 in. ² knotless nylon			
	mid-water trawl used on the surface			
				semi-balloon trawl lining changed to .125 in. ²

¹Data from Hudson River Fisheries Investigations, 1965-1968, Hudson River Policy Committee,

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1973 Ichthyoplankton Sampling MethodsMay¹June²July³August³River Survey
(Striped Bass)Epibenthic sled
with mesh 500 μ
(May 7)partial mesh change
1000 μ (June 18)mesh change to
1000 μ x 1000 μ ,
500 μ x 500 μ , and
505 μ x 505 μ
(July 2)mesh change from 1000 μ
x 1000 μ to 1800 μ x
1800 μ (July 23) and
addition of 3000 μ x
3000 μ (August 6)1m Tucker Trawl
with 500 μ mesh
(May 7)mesh change to
505 μ x 505 μ
(July 2)2m Tucker trawl
with 1800 μ x
1800 μ mesh (July
9) with partial
mesh change to
3000 μ x 3000 μ
(July 23)²1973 Hudson River Program, Fisheries Data Summary, May - July, Vol. I.³1973 Hudson River Program, Fisheries Data Summary, July - November, Vol. II.

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October³

November³

Shoal Survey
(Striped Bass)

Epibenthic sled
mesh size of
3000µ x 3000µ
(Oct. 9)

2m Tucker trawl with
very small mesh, un-
specified dimensions
(Nov. 26)

May

June

July

August

September

Beach Survey

50 ft beach seine
50 x 4 ft with →
.125 in. mesh

100 ft beach seine
.375 in. mesh →

⁴Fisheries Survey of the Hudson River, March - July 1973 Vol. III.

Docket Nos. 50-3

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Mr. William J. Cahill, Jr.
Vice President
Consolidated Edison Company
of New York
4 Irving Place
New York, New York 10003

JUL 29 1975

Dear Mr. Cahill:

The NRC staff is in the process of reviewing your application for amendment to the facility operating license for two year extension of once-through cooling operation. On July 18, 1974, Mr. E. R. Fidell, attorney for your company at LeBoeuf, Lamb, Leiby, and MacRae, wrote Mr. J. Sciuto, counsel for the NRC staff, transmitting a document entitled "Documentation for Mathematical Models of the Hudson River Striped Bass Population," dated July 1974. However, we did not receive a deck of punched computer cards for the models. We would like to receive one deck of punched computer cards for each of the two Hudson River striped bass life-cycle models (transport and completely mixed models). Please forward the decks, by August 8, 1975, directly to Dr. Richard Rush, Team Leader, Holifield National Laboratory, P. O. Box X, Oak Ridge, Tennessee 37830 with a copy of the transmittal letter to me.

Sincerely,

Original signed by
George W. Knighton

George W. Knighton, Chief
Environmental Projects Branch No. 1
Division of Reactor Licensing

cc: See next page.

Environ
2

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