INSERTED 9-15-78
ccp.

INSTRUCTIONS FOR
Errata for

"Supplement I to Influence of Indian Point Unit 2 and Other Steam Electric Generating Plants on the Hudson River Estuary, with Emphasis on Striped Bass and Other Fish Populations"

ERRATA TO EXHIBIT 3

SUPPLEMENT I TO THE FRR

Page	Para.	Line(s)	Change From	Change To
TABLE OF CONTENTS, P.2			Appendix B: a. plant...	Appendix B: 1. Calculation Procedures for Means and Variances
TABLE OF CONTENTS, App.B:			a. Plant and....	2. Plant and...
TABLE OF CONTENTS, App.B:			b. Predicted Composite f-factors Used in Model Runs	3. Random w Ratio Sequences Used in Model Runs
TABLE OF CONTENTS, App.C:			a. Parameters Used in...	~~1.~~ Parameters Used in ...
TABLE OF CONTENTS, App.C:			b. Predicted Entrainment...	2. Predicted Entrainment...
TABLE OF CONTENTS, App.C:				3. Predicted Yearly Average Composite -f factors

Page	Para.	Line(s)	Change From	Change To
2-II-1		8	themselves	their own
		9	generation size;	generation size,
		10	maximum size;	maximum size,
		19	measuring against a baseline	the reduction
		20	which existed	relative to that existing
2-IV-1		11	parameter,	parameter
2-IV-2		5	Section 2.VIII below.	Section 2.VIII.
2-IV-3		12	techniques	regression
2-IV-14	3	1	...an anlysis....	...an analysis...
2-IV-20	4	1-4	delete: "Since this...year) survival"	
2-IV-21		1-20	delete: "and reproductive.... spawning 1961 (63, 768)."	
2-IV-22			delete entire page	
2-IV-23		1-4	delete: "consecutive.... (Page 10.45, FRR)."	
2-IV-23	4	1-5	delete: "The models...that excluding"	
2-IV-24		1-2	delete: "it ought...below."	
2-IV-24		8-10	delete: "Table 2-IV-3...for these fits."	
2-IV-24		13-14	delete: "These relative...previously."	
2-IV-27		2-9	delete: "Summarizing all...population levels."	
2-IV-28	2	5-9	delete: "That treatment...from zero."	
2-IV-28	footnote	4-7	delete: "A rather.. is 'better:"	
2-IV-29	1	10	the 20-year...	the 21-year...
2-IV-30	1	2	the 20 years of...	the 21 years of...
2-IV-31	eq.2-IV-16		insert a minus sign in front of the k quantity that appears in the exponential	

Page	Para.	Line(s)	Change From	Change To
2-IV-31	2	4	"year-to-year mortality"	"~~year~~-to-year survival"
2-IV-31	eq.2-IV-17		insert a closing parenthesis after the "$-k_{1_i}$" in the exponential	
2-IV-32	4	3	the value of is:	~~the~~ value of E' is:
2-IV-37	3	2	"Table 2-IV-2"	~~Exhibit~~ 58
2-IV-38	4	2	depend on some 21 years	~~depend~~ on 21 years
2-IV-41	4	7	is approaching unity	exceeds 0.5
2-IV-42	eq.2-IV-22		insert a minus sign before the "a" in the exponential term appearing in the denominator	
			exp(a	exp(-a
2-IV-42	eq.2-IV-24		$\exp(\beta_o P^2 - \beta_1 P]$	$[\exp(\beta_o P^2 - \beta_1 P)]$
2-IV-43		16-18	delete: "β_o is found...these cases."	
2-IV-43		19	"For the cases..."	"For the case..."
2-IV-43		19	delete: "equations 8 and 14 with 1969 data excluded and"	
2-IV-43		23	Last sentence should read "In this case, R^2 plus P_{E_r} value is virtually..."	
2-IV-44		1	delete "equation 15 and"	
2-IV-44		6	"three"	"two"
2-IV-44		10	"a clear"	"an"
2-IV-44	2		delete entire 2nd paragraph	
2-IV-44	3		delete entire last (3rd) paragraph	
2-IV-45		1	The finding for most of the linear models	A finding in the linear models

Page	Para.	Line(s)	Change From	Change To
2-IV-45	4		Delete entire 4th paragraph beginning with "Note that the..."	
2-IV-46		6	5% should read 16%	
2-IV-46		6-7	delete: "with the... the fits."	
2-IV-46		9	delete: "and is... fit cases."	
2-IV-47	2	2	rather than "μ" is	rather than "u" is
2-IV-48			Immediately below equation 2-IV-28, change the "sigma" in the expression to "pi"	
2-IV-49	2	Table	$\alpha 1$	α_1
2-IV-52	2	2	"inversely"	"directly"
2-IV-52	2	6	delete: "or the spawning stock(P)"	
2-IV-53	3	1-2	"Consider the... controlling t_c."	"Consider the time to reach the 12 mm breakpoint as one possible measure, not necessarily of t_c itself, but of a quantity proportional to or controlling t_c."
2-IV-56		10	$C_2 P_{E_1}$	$C_2 P_E$
		11	$C_2 P_{E_1}$	$C_2 P_E$
		16	P_{E_1}/P_{M_2}	P_{E_1}/P_{M_1}
2-IV-56	3	9	$(\alpha/\beta)e'$	$(\alpha/\beta)\exp(-1)$
2-IV-57			Following equation 2-IV-32, the fourth equation on the page, in the numerator, $\ln\alpha_1$	$\ln\alpha_2$
2-IV-58		12	95%	94%

Page	Para.	Line(s)	Change From	Change To
2-IV-58		18	In the line beginning with "of 2.30..." for P_{E_1}	for γP_{E_1}
2-IV-60			In table at bottom of page, place a "/" between "tm" and "(1+...)" tm(1+...)	tm/(1+...)
2-IV-69	eq. 2-IV-40		In numerator: P	P_o
2-IV-71	eq. 2-IV-42		Move 2nd bracket following exponential term in front of term:	$(1/P_o\bar{E})\ \exp(K_1 t)-1$
2-IV-73	eq. 2-IV-45		In the exponential, insert a minus sign before the "kj"	
2-IV-73	eq. 2-IV-47		In the numerator, the parenthesis following the t_c should be deleted and placed before the t_c $\ldots t_c)$	$\ldots)t_c$
			Place an "E" following the "α'" at the beginning of the numerator	
2-IV-73	eq. 2-IV-47		In the exponential in the denominator $\bar{k}$	$\bar{k}_1$
2-IV-74			At bottom of page, value for k_o 1.58×10^{9}	1.58×10^{-9}
2-IV-74			At bottom of page α'	$\alpha'\bar{E}$
2-IV-76	eq. 2-IV-49		In numerator and denominator α'	$\alpha'\bar{E}$
2-IV-80		15	0.95	0.84
		19-20	Place a period after "above" and delete "the lower-end...,than 3%."	
2-VI-7			In the paragraph beginning with, "The total mortality rate (q_t)..." "approximately 90 percent"	"approximately 80 percent"

Page	Para.	Line(s)	Change From	Change To
2-VII-1		7	procedure.	procedure (see Section 2-VII-B)
2-VII-2		7	to 55 million	~~to~~ 45 million
2-VII-2		11	13 million to 36 million	~~12~~ million to 39 million
2-VII-4		2	Yolk-sac	Some yolk-sac
2-VII-4		3	may be subjected somewhat	~~are~~ subjected
2-VII-4		21	96.7	~~99.66~~
2-VII-4		22	99.66	~~96.7~~
2-VIII-1		2	before, in	before in
2-VIII-3		3	generations, as a basis	generations as a basis
2-VIII-3		3	Section 2-IV above	Section 2-IV
2-VIII-4		12	of the fish	~~of~~ the 493 fish
2-VIII-5		25	89%	~~71%~~
2-VIII-6		2	(86%)	(92%)
2-VIII-8		3 7	is no significant Age IV, V and VII males and Age IV, V and VII females	is a significant ~~Age~~ IV and V males and Age IV and V females
2-VIII-8		9	x^2_r	~~x^2~~ $_r$
		10	x^2_r	~~x^2~~ $_r$
		23	large	~~larger~~
2-VIII-10		13	18	~~23~~
			124	~~121~~
		15	one	~~five~~
		15	was	~~were~~

Page	Para.	Line(s)	Change From	Change To
2-VIII-10		17	5.2%	5.0%
			0.7%	1.0%
		23	8.3%	8.1%
			1.2%	1.6%
2-VIII-11		6	(Figures 2-VII-2 and	(Figures 2-VIII-2 and
2-VIII-14		11	fisherman	fishermen
2-VIII-14		7	1220	1223
2-VIII-15		10	in	for
2-VIII-15		13 20	2.VIII.H below). (TI 1975b:39)	2.VIII.F). (TI 1975b:V-15)
2-VIII-16		2	This included	This included:
2-VIII-17		3-6	Delete references to 1974 data since this data is not included in the FRR.	
		4	(FRR Section 7.9)	(FRR Section 6.2)
		7	(FRR Section 7.9)	(FRR Section 6.2)
2-VIII-18		9	a mean ratio	a geometric mean ratio
		14	resulting mean	resulting geometric mean
		15	(0.41).	of 0.45.
2-VIII-20	3	2	the year 1973...	The year 1973...
2-VIII-23		9	166:42	1966:42
		12	(FRR Section 6.2)	(FRR Section 7.3 & 7.4)
		15	the maximum catch	the initiation of spawning and first major catch
		17	6.2)	7.3 & 7.4).

Page	Para.	Line(s)	Change From	Change To
2-VIII-23		21	(RM 43;	(RM 42;
2-VIII-24		23	Section 2.VIII.F	Section 2.VIII.E
2-VIII-26			see attached replacement page	
2-VIII-27			see attached replacement page	
2-VIII-29		18	nine	ten
2-VIII-32		6	age IV, V and VII males and age IV, V, and VII	age IV and V males and age IV and V
2-VIII-33		9	4th paragraph	1st paragraph
2-VIII-35		2	Section 10.6	FRR Section 10.6
2-VIII-35		14	9.14%	9.20%
2-VIII-35		20	(Section 12.2)	(FRR Section 12.2)
2-VIII-36		2	Section II	FRR Section II
first page of REFERENCES CITED			Pleusonectes	Pleuronectes
second page of REFERENCES CITED		add:	Pinus, G.N. 1974. Some factors influencing early survival and abundance of Clupeonella in the sea of Azor. In: The early life history of fish (J.H. Blaxter, ed.)Springer, Verlag, N.Y. 765p.	
third page of REFERENCES CITED		add:	Stevens, R.E. 1966, A report on the operation of Moncks Corner striped bass hatchery 1961-1965. S.C. Wildl. Res. Dept. Mimeo 29p.	
third page of REFERENCES CITED		ref. 8,	distribution and...	Distribution and...

Page	Para.	Lines(s)	Change From	Change To
Part 3 IV.C.2	TABLE OF CONTENTS		...stage durations	...stage duration for young-of-the-year
Part 3 IV.C.6	TABLE OF CONTENTS		...and reproduction parameters	...and fertility parameters
Part 3 V.B	TABLE OF CONTENTS		Model Formulations of...	Model Formulation of...
Part 3 IX.F	TABLE OF CONTENTS		of Power Plant Impacts	of Impact on the Striped Bass Population
3-III-2	eq. 3-III-1		$\frac{1}{A}\frac{\alpha}{dx}\left(EA\frac{C^k(x,a,t)}{x}\right)$	$\frac{1}{A}\frac{\alpha}{dx}\left(EA\frac{dC^k(x,a,t)}{\alpha x}\right)$
3-III-5	2	9	by Emlens (1973).	by Emlen (1973).
3-III-6	eq. 3-III-5		$\sum_{i-1}^{14}$	$\sum_{i=1}^{14}$
3-IV-5	eq. 3-IV-1		Ebb $0 \leq t \leq T_E^k$	Ebb $0 \leq t' \leq T_E^k$
			Flood $T_E^k \leq t \leq \tau$	Flood $T_E^k < t' < \tau$ and $t' < 0$
3-IV-6		4	$t' = t + \theta$	$t' = t - \theta$
3-IV-9	eq. 3-IV-4		D_W	D_w
3-IV-10	eq. 3-IV-8		$E = A\ H\ U_L\ g^{1/2}/c + D_W$	$E = A_S\ H\ U_L\ g^{1/2}/c + D_W$
3-IV-13	3	1	in Table VII-1	in Table 3-VII-1
3-IV-17	2	2	Table 3-IV-14	Table 3-IV-15
3-IV-29	2	11	"...were used."	"were used, with two exceptions: (1) Egg Abundance at Bowline during 1974 and (2) Egg abundance at Roseton during 1975."
3-IV-32	1	1	application Cov(X,Y)=0	application the covariance Cov(X,Y)=0

Page	Para.	Line(s)	Change From	Change To
3-IV-32	2	7-8	respectively.	respectively, for 1974 and 1975, and 0730-1759 and 2100-0429 hours for 1973.
3-IV-38	1	3	(LaSalle 1976)	(LaSalle 1976a)
3-IV-38	2	12	Insert the following sentence after "of w ratios.": "Further, as shown in Table B-7, since no river samples were taken on 27 June, the plant data for this date were excluded from the w ratio calculations."	
3-IV-39	3	2	13 May	12 May
3-IV-39	3	3	"dates)"	"dates, excluding 22 May)"
	3	3	20 May	19 May
3-IV-39	3	4	"dates)"	"dates, excluding 22 May)"
3-IV-40	2	1	for stiped bass	for striped bass
3-IV-43	4	1	in May 1974 the	in May 1974 in the
3-IV-44	3	6	larvae found in	larvae were found in
3-IV-51	1	1	taken coincidant with	taken coincident with
3-IV-52	2	11-12	concentrations were estimated as...and with bottom samples	concentrations, which were assumed to equal the channel mid-depth concentrations, were estimated as the average of the variances of the surface and bottom samples.
3-IV-53	2	9	and 2 June for... and 29 May, 2, 9, 19, and 23 June...	and 2 and 5 June for...and 29 May, 2, 5, 9, 19, 23, and 26 June...
3-IV-53	2	9	2, 5, 9, 19, 23 and 26 June	2, 5, 9, 23 and 26 June
3-IV-53	3	2	relevent	relevant

Page	Para.	Line(s)	Change From	Change To
3-IV-56	2	4	For Bowline, The daily...	For Bowline, the daily...
3-IV-61			after paragraph 1 add the following paragraph:	
			Tables C-4 and C-5 in Appendix C present the predicted f_c factors under projected plant operating conditions (Tables A-1 through A-5, C-2 and C-3 for cases with once-through cooling and closed cycle cooling at all plants, respectively.	
3-IV-62	1	2	(LMS 1976)	(LMS 1976b,c)
3-IV-62	1	3	(1976c)	(1977)
3-IV-62	3	2	(LaSalle-682 1976)	(LaSalle 1976a)
3-IV-62	3	4-5	(LaSalle-667-1976)	(LaSalle 1976b)
3-IV-63	3	6	(Lawler, 1972; Con Ed 1975)	(Lawler, 1972b, 1974; Con Ed 1975)
3-IV-64	3	2	Space impingement in...	impingement in...
3-IV-71	2	5	less than of the actual...	less than the actual
3-V-1	2	2	(1974)	(1977)
3-V-2	3	5	and Lawler, 1977, Christensen, 1977	and Lawler et al., 1977, Christensen et al., 1977
3-V-2	5	2	LMS, 1975;	LMS, 1975c;
3-V-3	6	3	in Lawler, 1973 showing...	in Lawler (1972b), showing...
3-V-5	2	1	Point 3 FES, ORNL...	Point 3 FES (USNRC, 1975), ORNL...
3-V-5	2	4	in LMS, 1975;	in LMS (1975c);
3-V-7	2	5	level of a is:	level of α is:
3-V-7	eq. (3-V-2)		$\frac{-\ln \alpha(1-m)}{\ln \alpha} \times 100\%$	$= \left[1 - \frac{\ln(\alpha(1-m))}{\ln \alpha}\right] \times 100\%$

Page	Para.	Line(s)	Change From	Change To
3-V-8	2	2-3	(Equation V-1),	(Equation 3-V-1),
3-VI-4	3	6	for contributary	for contributory
3-VI-7		1		Add the following heading: (ii) Oscillatory Component
3-VI-8	2	3	$\underline{u}_t = T_t - S_t$,	$\xi_t = Y_t - S_t$ where $Y_t = X_t - T_t$ is the trend free series
3-VI-9	second from bottom		values of i was that	values of ξ_i was that
3-VI-9	page no.		VI-9	3-VI-9
3-VI-11	2	4	(1975b)	(1975c)
3-VI-11	2	17	Fe and f defined in	Fe and f_s defined in
3-VI-13	2	3	fc values described in...	fc values (Tables C-4 and C-5, Appendix C) described in...
3-VII-1	2	16	1975) and...	1975c) and...
3-VII-1	2	16	(Lawler, 1972, 1974)	(Lawler, 1972b, 1974)
3-VII-6	2	5	Section 3.IV.C.b.	Section 3.IV.C.1
3-VII-8	1	11	abundance crop past September.	abundance past September.
3-VII-8		6		delete: "when mark/recapture data were available to refine the standing crop estimate,"
3-VII-8		11		delete: "crop"
3-VIII-3	1	1	"about 8%."	"about 8 to 9%."
3-VIII-3	3	12	"8.30%"	"8.64%"

UT 3 - Text - 13

Page	Para.	Line(s)	Change From	Change To
3-VIII-3	3	13	"8.34%"	"8.66%"
3-VIII-4	1	3	"(8.37%)"	"(8.43%)"
3-VIII-4	2	2	"from 8.3% to 1.5%, a net change of 6.8%"	"from 8.7% to 1.6%, a net change of 7.1%."
3-VIII-4	2	3-4	"from 8.3% to 2.7%, a net gain of only 5.6%"	"from 8.4% to 2.3%, a net gain of only 6.1%."
3-VIII-5	2	6	"8.3%"	"8.7%"
3-VIII-5	3	4	"8%"	"8 to 9%"
3-VIII-5	3	6	on compensation Section	on compensation in Section
3-VIII-6	2	1	"8%"	"8 to 9%"
3-IX-9	page no.		3-IV-9	3-IX-9
3-IX-9	3	5	to continued to...	continued to...
3-IX-9	3	7	"8%"	"8 to 9%"
REFERENCES, P.1			Add the following reference:	
			Consolidated Edison Company of New York, Inc. (Con Ed) 1975. Environmental report to accompany application of facility license amendment for extension of operation with once-through cooling for Indian Point Unit No. 2 USNRC Docket No. 50-247.	
REFERENCES, P.2			Lawler, J.P. 1972c. Effect of...	Lawler, J.P. 1974. Effect of...

Description of Headings

Table (Pg.)	Column	Row	Change From	Change To
2-IV-2	delete entire table			
2-IV-3	delete entire table			
2-IV-4	Column 2	Line 1	249,000	660,000
2-IV-5	delete first six rows, i.e., delete all values associated with equations 8, 13 and 14. This material is replaced in EPA hearings exhibit 58. delete values associated with "Average, all cases "and "Average, excluding highest α ".			
2-IV-6	delete first five rows, i.e., delete all values associated with equations 8, 14, and 15; delete averages at the bottom of the table.			
2-IV-7	delete first four rows, i.e., delete all values associated with equations 8 and 14; delete averages at bottom of table; delete "0.55, NO, 0.87" associated with equation 15.			
2-VI-2	Combined Entrainment and Impingement - Multiplant-1974:			
			0.1190	0.1198
	under column Alpha=4, subheading 1974, change last number 9.14 to 9.20; under column Alpha=5, subheading 1974, change last number 7.87 to 7.93		9.14	9.20
			7.87	7.93
2-VIII-1	In title "During April and May 1976" should read "During March, April, May and June 1976"		"During April and May 1976"	"During March, April, May and June 1976"

Description of Headings

Table (Pg.)	Column	Row	Change From	Change To
2-VIII-1	Age XI - No. Examined:		16	15
	Age XV - No. Examined:		2	1
	Age XVIII - No. Examined:		2	1
2-VIII-2	In title "During April and May 1976" should read "During March, April, May, and June 1976"		"During April and May 1976"	"During March, April, May, and June 1976"
2-VIII-2	Age V - No. Examined:		50	53
	Age VI - No. Examined:		43	45
	Age VIII - No. Examined:		12	13
	Age XI - No. Examined:		10	11
	Age V - % Mature:		86	92
	Age VI - % Mature:		77	78
2-VIII-3	Heading		April and May	April, May and June
2-VIII-5	Heading-Fecundity	Row-III	660,000	660,000***
	Bottom of Table - add footnote			
	*** Age III fecundity not known; data from age IV used.			
	Heading - % of Eggs Produced by Stock		2.3	2.4
			23.0	22.9

Description of Headings

Table (Pg.)	Column	Row	Change From	Change To
2-VIII-5	Heading - % of Eggs Produced by Stock		17.2	17.1
			6.7	6.8
			5.0	5.1
			17.6	17.3
			6.0	6.2
2-VIII-6	additions to this table are included in an attached table			
2-VIII-7			Table 2-VIII-7	Table 2-VIII-8
2-VIII-8			Table 2-VIII-8	Table 2-VIII-7
2-VIII-9	CPUA for 1969:		29.2**	32.1**
	CPUA for 1970:		15.1**	16.7**
	CPUA for 1972:		8.8**	9.7**
	Footnote**		by a mean	by a geometric mean
			1/2.45 = 0.41	0.45
2-VIII-11	see attached replacement table			
2-VIII-12	see attached replacement table			

Description of Headings

Table (Pg.)	Column	Row	Change From	Change To
3-IV-13	2nd column		34-37	34-36
3-IV-15	For Age 2 For Age 5		"494.000" "101.000"	"494,600" "101,000"
3-IV-19	see attached replacement table			
3-IV-20	see attached replacement table			
3-IV-26	see attached replacement table			
3-IV-27	see attached replacement table			
3-IV-28 footnote c			LaSalle, 1976	LaSalle, 1976a
3-IV-29	see attached replacement table			
3-IV-30	see attached replacement table			
3-IV-34	line 1		STRIPED BASS AND JUVENILE III[a]	STRIPED BASS JUVENILE II AND JUVENILE III[a]
3-VI-5	values under "Roseton" column			See attached Table 3-VI-5a
3-VIII-1	see attached replacement table			
3-VIII-2	see attached replacement table			
B-5	see attached replacement table			
B-6	see attached replacement table			
B-7	see attached replacement table			

Description of Headings

Table (Pg.)	Column	Row	Change From	Change To
B-8	see attached replacement table			
B-9	see attached replacement table			
B-10	see attached replacement table			
B-24, App. B	see attached replacement table			
B-25, App. B	see attached replacement table			
B-26, App. B	see attached replacement table			
B-27, App. B	see attached replacement table			
C-5, App. C, Title			TABLE C-5 PREDICTED FC FACTORS* ONCE-THROUGH COOLING AT ALL UNITS	TABLE C-5 PREDICTED FC FACTORS* CLOSED-CYCLE COOLING AT ALL UNITS

Figure (Pg)	Location of a Change	Change From	Change To
2-III-1		2-111-1	2-III-1
2-III-1	For the "Total Mortality" arrow in the upper right of the figure	Impingement 0.041×10^9 Entrainment 0.0033×10^9	Impingement Entrainment 1.02×10^3
2-IV-2			x-axis label should read: Parents (P)
2-IV-3		see attached replacement figure	
2-VIII-1	Heading		insert "April," before "May"
2-VIII-1	Ordinant	delete "Weight(g)"	
2-VIII-1	Abscissa		insert "weight(g)"
2-VIII-2		see attached replacement figure	
2-VIII-6	Fisherman A	n = 631	n = 632
	Fisherman B	n = 529	n = 531
2-VIII-7		2-VIII-7	2-VIII-8
2-VIII-8		2-VIII-8	2-VIII-7
3-VII-2		see attached replacement figure	
3-VII-3		see attached replacement figure	
3-VII-4		see attached replacement figure	
3-VII-5		see attached replacement figure	
3-VII-10	Legend, Line 2	Measurements, 197	Measurements, 1974
3-VII-11		see attached replacement figure	