

5/24/73

BEFORE THE UNITED STATES
ATOMIC ENERGY COMMISSION

TTTRAN

In the Matter of)
)
Consolidated Edison Company) Docket No. 50-247
of New York, Inc.)
(Indian Point Station, Unit No. 2))

APPLICANT'S PROPOSED CORRECTIONS TO THE TRANSCRIPT

Applicant requests that the transcript of the hearing sessions held on June 19, 1972 through April 26, 1973 in the above-captioned proceeding be corrected as follows:

<u>Page</u>	<u>Line</u>	<u>Delete</u>	<u>Insert</u>
*5761	13	lear	here
*5761	21	bhealf	behalf
*5786	2	effected	affected
*5786	3	effected	affected
5798	3	Conversation	Conservation
5800	6	on the	other than
5801	9	ntiehr	neither
5822	1	has	was
5822	2	been	
5825	11	because	but because
5828	15	within	

*Statement of a member of the Atomic Safety and Licensing Board.

5828	16	done	have been done
5828	16	Hudson, I	Hudson. I
5828	21	Tatheon	Raytheon
5830	6	fishes	fishes are
5831	16	and	
5834	12	significant	insignificant
5834	13	rtange	range
5834	13	temepratures	temperatures
5834	20	repeled	repelled
5835	5	Macbeth's	Macbeth is
5836	9	Ecological	Ichthyological
5838	1	discofery	discovery
5841	11	Ecological	Ichthyological
5842	13	yound	young
5843	3	yellow life	alewife
5843	12	yellow life	alewife
5847	6	in studies	studies
5855	2	inticated	indicated
5860	5	The	It
5867	9	watter	water

5885	1	gell	tell
5889	20	not do	do
5891	20	dealth	dealt

June 20, 1972

5919	12	adjournment	notice
**5921	7	them	then
5924	7	thermal	therm
5924	9	--quotes--plume.	--"the plume."
5924	23	your	you are
5924	23	tryint	trying
5925	20	isothermal	isotherm
5926	4	isothermal	isotherm
5926	5	isothermal	isotherm
5926	6	isothermal	isotherm
5927	5	isothermals	isotherms
5933	5	It	That
*5948	12	somewhat due	some undue
5952	2	streems	streams
5957	18	eye	high
5960	10	sant	want
5962	4	understand	understanding
5966	11	whieh	which
5967	2	fished	fish
5968	8	it	one
5968	19	Acclamated	Acclimated

**Statement of a party other than the Applicant.

5968	22	give way	give
5971	20	probably	probably can
5972	3	mostely	mostly
5974	22	wee,	weedy,
5974	23	shallow	
5977	7	might	
5985	9	got	get
5987	10	tagges	tag
5992	3	plume. Halfway	plume halfway
5992	21	This has been	There have been
6003	20	and	at
6010	12	etestimony	testimony
**6011	2	fammarus	gammarus
6015	10	tranged	ranged
6016	23	of	as
6018	1	April 15th	April 5th
6019	24	if	but
6030	17	we	when
6038	7	pbm	ppm
6038	7	pbm	ppm
6039	pagination	6049	6039
6047	18	amonia	ammonia

**6047	21	amonia	ammonia
6047	22	amonia	ammonia
6048	1	amonia	ammonia
6048	2	amonia	ammonia
6056	13	detail	detailed
6057	19	detail	detailed

6348	21	A-V-2 through A-55	A-V-52 through A-V-55
6349	4	od	of
6349	10	A-52 through A-55	A-V-52 through A-V-55
6349	11	A-513	A-V-13
6349	12	A-518	A-V-18
6352	2	25th	30th
6353	15	studeid	studied
6376	14	knew	know

December 5, 1972

6383	10	the	your
6388	4	included	which included
6390	10	Quinn	Gwyneth
6390	15	and	and I
**6391	13	fis	fish
**6391	18	writings	language
6391	25	of	
6391	25	when it	
6392	14	an	and
6398	15	and	although
6398	20	a	the
6412	5	Indian Point 2,	Indian Point 2, the Delta T's
6412	6	Delta T through the	
6412	13	Kindian	Indian
6413	1	other	the
6414	19	uncertainties	uncertainties about
6417	19	appendix	appendix, that is,
6412	15	affected by	similarly affected as
6422	18	perfected	affected
6428	8	peri-	plant

6428	9	plankton	
6433	22	how	when
6434	24	fore	for
6438	14	zopplankton	plankton
6438	15	80	85
6438	21	intake	
6441	1	that you	that you are
6446	15	correct?	correct, Mr. Siman-Tov
6448	10	point	point you measured
6448	17	is	and
**6457	23	effect of	effective
**6460	11	mackerel	macro-
6461	2	.3	point 3
6461	7	effect end	effective end
6463	1	wtaer	water
6463	18	discharged	discharge
**6464	6	chlorine	chloramine
**6471	19	short	sort
6473	15	Water and Waste Water Treatment	"Water and Waste Water Treatment"
6475	9	amino	ammonia
6476	5	chlorine	chloramine
6476	16	Lauer's	Lawler's

6480	8	layer of the cake then, linear relationship	
6480	17	product	chronic
6488	11	differences	references
6490	3	chlorine	chloramine
6491	5	correct	direct
6493	15	you had	is what you had
6493	23	factors	factors,
6493	24	dilutios	dilution,
6501	6	since the	The
6508	5	million or lose.	million.
6510	20	to man	demand
6511	12	bare	base
6511	14	question.	questioning.
6511	17	consumer	consumption
6513	7	of	have
6513	8	of	or
6521	15	or	are
6525	6	reit	recall
**6526	6	Ratcher	Rathjen
6527	12	spawning	spawning takes place
6527	16	spawning	spawning occurs

6528	4	whether	whether it
6528	14	a judgment	a better judgment,
6528	15	in	in,
**6528	18	ore	more
6529	10	location	location,
6537	24	substralt	substrate
6538	4	sure	sure it
6539	8	in the	in a
6539	21	these,	these fish,
6540	20	cllmatic	climatic
6543	9	if	if a
6543	11	probable	
**6547	14	substract	substrate
6548	18	amintain	maintain
6548	24	were	was
6563	9	to reflect for them	for them to be reflected in
6565	1	sized	sizes
6566	1	peer	gear
6570	22	ans	and
6579	11	ot	not
6583	21	beginnong	beginning
6587	6	Don't they have to be diversified	Aren't they demerial

6587	24	term,	term--
6588	18	point	report
6589	18	th	than
6589	23	could	could not
6590	6	to	would
6593	3	concentration	concentrate
6593	3	a	the
6593	23	did use	did not use
6594	4	A-12	A-5-12
6595	16	a	at
6595	17	to a	to
6597	23	Rathjer-Miller	Rathjen-Miller
6600	20	percent	per ten minute plankton tow,
6603	8	Rathjer-Miller	Rathjen-Miller
6606	5	passing	passive
6606	5	drift	drift,
6606	9	organism is	organisms are
6608	22	I	You
**6609	6	MR. TROSTEN:	
6615	24	Thos show	These show
6616	3	were	per
**6617	11	valley's	valves
6617	17	Lest	these

December 6, 1972

6633	6	ghe	the
6637	17	thought	those
6641	13	Appendix t	Appendix 2
6647	11	1955	1966
6649	21	again,	again, if
6649	23	sentences.	sentences,
6649	24	Could	could
**6651	5	38	88
6652	2	number,	number, of
6652	23	riod	period
6653	22	period	period
6653	22	greater	
6654	9	to	through
6654	24	--for	--I am sorry, for
6656	16	which	
6657	2	would	did
6659	10	can	this can
6631	21	are	are more than
6668	1	density	density dependent
6671	2	spawn	spawned
6679	16	your	my

6679	17	as	as that
6682	18	what	whether
6687	10	protion	portion
6689	10	Nwo	Now
6693	2	asking	answering
6694	20	factual	actual
6698	15	is	and
6699	8	of	
6706	14	20	That is, 20
6707	11	not	
6707	11	and that simply	and could that similarly
6708	24	upon level?	in the level of mortality?
6709	12	certainty	uncertainty
6711	18	away	away fish
6715	7	adults.	adults."
6718	18	bass, egg,	bass eggs
6719	24	and	
6722	20	bass,	bass
6740	16	population	population,
6743	19	potention?	potential?
6753	3	low	slow

6758	25	Bay	Bay?
6759	3	imporable	improbable
6759	12	percent?	percent --
6764	18	never less	nevertheless
**6771	4	cose	case
6773	10	tagges	tagged
6777	11	to	that is
6777	12	body	body,
6777	25	really	rarely
6781	20	mi	my
6789	6	the	that
6789	17	and	in
6790	9	the	that
6791	6	Danskammera	Danskammer
*6791	13	Danskammera	Danskammer
6792	13	bout	about
6792	14	Danskammera	Danskammer
6794	1	Leap year	weaker
6794	15	Danskammera	Danskammer
6796	8	they	there
6799	20	Lovett	Lovett,
6799	21	Danskammera	Danskammer

6801	1	of	of a
6801	14	Danskammera	Danskammer
6801	14	bass,	bass?
6801	19	and	are
6806	1	kypothesis	hypotheses
6807	13	in	and
6807	22	time	time,
6808	3	its	it
6806	6	and	as
6808	9	this	his
6808	17	I observed	I had observed this
6809	8	requested	request
6809	12	three other of	theory of
6811	23	by	of
6812	5	prepared	finished
6816	11	temporary	tentative
6819	14	year.	Learing.
6825	1	refers	reference
6833	12	allocation of	analysis by
6834	2	test	text
6834	23	larva when	larval and
6847	2	apply	imply
6847	6	the	they

6848	19	cuase	cause
**6851	17	year	yes
6865	11	temporarily	temporally
6867	17	efforts	itself
6868	17	everything	everyone

December 7, 1972

6888	8	Orange-Rockland	Orange and Rockland
6888	9	Niagra-Mohawk	Niagara-Mohawk
*6888	23	flume	plume
*6888	23	flume	plume
6891	18	replact	replace
6910	23	the	that
6924	9	planned	plan
6924	22	in a	in
6929	1		(before "portions") MR. COHEN: Mr. Chairman, at the time we shall ex- plore with the Regulatory Staff those
6932	10	in 11-25	in pages 11-25
6933	12	that	that a
6933	13	inposed	imposed
6938	11	limita-	implementation
6938	12	tion	
6942	2	could	company
6946	15	Most likely	
6946	20	That	This
6949	6	construction	construct

6959	15	\$190	\$119
6968	19	which is now a Vice	
6968	20	President of Con Edison	
6993	18	501	5-1
7012	16	proposing	proposing is
7015	24	presnet	present
7016	23	prepare	want
7025	25	Object	I object
7026	3	object	I object
7026	4	calls	It calls
7034	18	Commission	Commission's regulations

December 12, 1972

7045	7	propose	proposed
7047	23	Mahirsky	Mihursky
7053	6	gastrular	gastrula
7057	6	mgith	might
7066	24	would	why
7073	2	in	and
7073	3	yolk cycle	yolk-sac
7073	11	photo-tactic	phototaxic
7073	19	trepidity	turbidity
7078	25	saples	samples
7079	23	representative	and repre- sentatives
7087	7	like	
7087	25	to rephrase	to rephrase it
7094	14	Brook	Quirk
7094	15	lawn and Matuski	Lawler and Matusky
7095	1	or	of
7095	4	Brooklawn and Matuski	Quirk, Lawler and Matusky
7103	24	numbers	numbers for the

7132	4	this to	
7132	9	the	
7138	18	when	when the
7143	7	Ratheon	Raytheon
7147	14	allowed?	allowed.
7171	9	cuase	cause
7175	9	while	white
7175	14	Clapait	clupeid
7196	21	know, if	know. If
7211	16	orthodolotine	orthotoluidine
7213	7	componenets	components
7218	13	fine night	finite
7228	19	appeard	appeared
7235	19	conservably	conceivably

December 13, 1972

7249	4	Ainsley	Aynsley
7250	6	Ainsley	Aynsley
7260	17	standard	standing
**7262	14	at	and
7263	18	model	model's ability
7263	20	data	data,
7269	9	groove	move
7269	17	fee	feet
7274	4	whole	haul
7284	16	is:	is
7284	16	suggesting,	suggesting
7284	17	spawning	spawning,
7284	18	you	you,
7285	1	-McCann?	-McCann data?
7289	22	a complete	an incomplete
7292	20	as	is
7303	5	curve	term
7306	1	considering	considering the
7306	1	every	to have reached
7306	2	'equilibrium! "	'equilibrium' level. "
7306	3	use the word	used
7312	14	surface	surface,

7312	24	transit	transect
7312	25	transit	transect
7314	18	suing	using
7320	3	Lawlor	Lawler
7320	10	Lawlor	Lawler
7320	14	Lawlor	Lawler
7321	2	Lawlor	Lawler
7321	13	Lawlor	Lawler
7328	7	Lauer,	Lawler,
7328	22	to	is
7328	25	upon	upon a
7331	25	looked	looked at
7338	20	reason,	reason, than
7349	17	should be seen	it chooses to see
7352	9	Ainsley	Aynsley
*7354	3	Lawlor	Lawler
7355	2	the 90	Stony
7369	19	299	2.99
7371	25	1.14	4.14
7372	23	Lyle	Lauer
7376	3	"c"	"f _c "
**7377	2	yolks	yolk sac

**7377	3	on	
7378	9	is that	is that,
7387	4	migratories	(migratory
7387	5	with the ability,	swimming ability)--
7387	5	fashion,	fashion --
7387	7	plant	plant intake
7422	7	factor	factors
7431	1	We have received	MR. BRIGGS: We have received
7435	17	that	concerning
7436	9	this	it

December 14, 1972

*7444	11	arbitrary	arbitrarily
**7449	23	moved at	removed as
**7454	7	rechick	recheck
7457	9	preposition	proposition
**7461	15	is a	for the
**7461	18	the	
7469	1	that	
7472	16	our	but that our
7475	14	Harry G. Woodbury	James T. McFadden
7483	2	Lustine	QL & M.
7500	23	supplement	a portion
7505	24	accepted is	accepted if
7507	12	think	think for
7511	16	a typical	atypical
7512	12	than	than the
7512	16	with	with the
7512	19	relevant	irrelevant
7514	12	continuing,	a continuing
7515	15	collecting	collected
7515	16	the pond	upon the
7520	12	Ginnay	Ginna

7520	14	material	material for regions 2 and 3
7520	15	and	
7521	7	and	and in
7522	25	welding	welded vent
7523	1	Now	Now with
7523	5	puncture checking	penetrant examination
7525	14	couple	coupling
7526	9	and	but
7527	25	designed	design and
7547	1	3445	345
7550	3	fauna	flora
7559	21	recores.	records.
7587	3	bidding	building
7589	8	tour	tower
7590	25	goes	gives
7592	7	I	I would
7594	17	Newman	Raney
7594	22	Newman	Raney
7595	2	Newman	Raney

7595	5	Newman	Raney
7595	10	Newman	Raney
7595	11	Ratheon	Raytheon
7595	17	Newman	Raney
7599	6	estimates	estimate
7601	7	Newman	Raney
7601	9	Newman	Raney
7601	12	Newman	Raney
7602	2	Newman	Raney
7602	13	Newman	Raney
7602	18	Newman	Raney
7604	4	per record	
7605	8	direction	distribution
7605	10	direction	distribution
7605	25	direction	distribution
7606	1	direction	distribution
7606	3	direction	distribution
**7610	2	direction	distribution
7610	6	direction	distribution
7610	14	direction	distribution
7612	14	on	or
7612	21	ratio	racial
7615	10	Ther eason	The reason

7615	17	bass	bass need
7616	8	replicas	replicate
7618	17	unadjustments	entrainment
** 7620	12	plainly	mainly
**7620	13	Basis	bays
7625	14	Mr. Raney	Dr. Raney
7628	3	as	
7631	19	your	year
7632	21	fisher	fishery

December 15, 1972

7644	11	are	
7648	11	termal	thermal
**7656	6	bite	bight
7657	1	bite	bight
7657	20	papers	paper
7659	3	bite	bight
7659	8	Dr.	Mr.
7661	8	original	origin
7664	1	got	get
7686	6	whether	where
**7687	5	land goes	landings
7690	20	Royce-	Boyce-
7699	8	Ratheon	Raytheon
7701	13	Lowe	Low
7703	7	tremendos	tremendous
7703	9	sprint	spring
7707	17	not	now
7707	19	miner	minor
7710	8	year	year,
7710	9	November	November,
7721	4	turn	turn this

7726	13	reconciliation	reconcile
7735	4	GPN	GPM
7736	21	Trosten	Newman
**7746	19	unsteady	an unsteady
**7746	19	dimension	dimensional
**7746	19	natural	
**7746	19	longitudinal	longitudinally
**7746	20	segmented."	segmented model."
7750	5	include	included
7754	12	Bowling	Bowline
7755	4	solid	dissolved
7758	14	number	"fudge factor"
7760	7	Kormasn	Siman-Tov
**7762	4	high	
7766	10	preferred	proffered
7766	12	those	those others
7771	15	the factor	the F factor
7772	4	three factor	three F factors
7773	1	RANEY:	LAWLER:
7775	13	RANEY:	LAWLER:
7776	1	RANEY:	LAWLER:
7776	10	RANEY:	LAWLER:

7776	16	RANEY:	LAWLER:
7776	25	RANEY:	LAWLER:
7777	20	RANEY:	LAWLER:
7777	20	have	have not
* 7781	3	WITNESS LAWLER	CHAIRMAN JENSCH:
*7782	6	S	F
*7782	8	S	F
7782	18	You	We
7785	25	where	where we believe it would be help- ful if
*7786	25	Lauer	Lawler

January 10, 1973

7813	21	your	the
7833	17	New York's	New York University's
7833	17	personated	appreciated
7836	14	form?	form.
7844	9	Hydson	Hudson
7878	21	abour	about
7911	11	plantonic	planktonic
7912	8	plantonic	planktonic
7916	10	density and	density-induced
7917	22	Danskammera	Danskammer
7918	20	Danskammera	Danskammer
*7919	17	Kanskammera	Danskammer
7920	15	Danskammera	Danskammer
7920	18	Hudson	Hudson
7920	23	Danskammera	Danskammer
7927	12	view,	view have you
7954	20	is it.	it is.
7969	2	realtive	relative
7989	23	whas	was
7992	11	Keiran and Chadwich	Kerr and Chadwick

7997	8	entrainments	entrainment
7998	3	is	as
8010	5	impingements	impingement

January 11, 1973

8026	17	28	38
8032	23	504	504,000
8115	11	A.	Q.
8190	5	Contrarty	Contrary
8227	1	save	meet
8227	9	we	
8228	4	palnt	plant

January 12, 1973

8255	9	Ratheon	Raytheon
8255	20	Ratheon	Raytheon
8256	1	Ratheon	Raytheon
8256	5	Ratheon	Raytheon
**8276	6	Aleuras	Alevras
**8276	21	Q	
**8276	21	you	I
**8277	12	Aleuras	Alevras
8278	25	MR. ALEURAS:	MR. ALEVRAS:
8279	8	MR. ALEURAS:	MR. ALEVRAS:
8279	13	Aleuras	Alevras
8279	16	MR. ALEURAS:	MR. ALEVRAS:
8279	20	MR. ALEURAS:	MR. ALEVRAS:
8279	24	scopped	scooped
8280	15	MR. ALEURAS:	MR. ALEVRAS:
8280	21	MR. ALEURAS:	MR. ALEVRAS:
8281	5	MR. ALEURAS:	MR. ALEVRAS:
8281	8	MR. ALEURAS:	MR. ALEVRAS:
8281	12	MR. ALEURAS:	MR. ALEVRAS:
8281	16	MR. ALEURAS:	MR. ALEVRAS:
8313	6	THE WITNESS:	MR. TROSTEN:

8313	13	Sonmani	Sommani
8319	1	MR. TORSTEN:	MR. TROSTEN:
8320	17	plant	plan
8323	3	demonstrae	demonstrate
*8338	19	DR. McFADDEN:	CHAIRMAN JENSCH:
8339	3	Mr.	Dr.
8343	14	aksing	asking
8344	22	ture	true
**8356	3	with	white
8359	23	561	5-61
8364	6	sorf	sort
8367	14	substrate	?
8372	22	primciple	principle
8415	6	in population density	
**8443	1	DR. McFADDEN:	MR. MACBETH:
8447	9	A	
8447	13	Q	

January 15, 1973

8471	9	Crew's	Cruise
8474	4	Danskammera	Danskammer
8474	7	Danskammera	Danskammer
8476	14	shown	show
8479	3	opening	operating
8479	3	open	operate
8479	8	Danskammera	Danskammer
8479	16	Danskammera	Danskammer
**8480	8	opening	operating
**8480	10	opening	operation
8480	15	opening	operating
8480	17	Danskammera	Danskammer
8480	21	Danskammera	Danskammer
8480	22	opening	operating
8481	1	Danskammera	Danskammer
8481	8	Danskammera	Danskammer
8481	9	opening	operating
8481	11	opening	operating
8482	8	Danskammera	Danskammer

8482	8	opening	operating
8482	11	opening	operating
8482	20	datat	data
8483	10	I	you
8488	7	palnt	plant
8509	3	Aleuvas	Alevras
8509	17	Aleuvas	Alevras
8509	20	MR. ALEUVAS:	MR. ALEVRAS:
8510	10	by	bay
8511	4	MR. ALEUVAS:	MR. ALEVRAS:
8511	18	MR. ALEUVAS:	MR. ALEVRAS:
8511	21	MR. ALEUVAS:	MR. ALEVRAS:
8512	3	MR. ALEUVAS:	MR. ALEVRAS:
8512	8	MR. ALEUVAS:	MR. ALEVRAS:
8512	12	MR. ALEUVAS:	MR. ALEVRAS:
8512	23	Aleuvas	Alevras
8513	9	fishing	fish
8520	11	teh	ten
8535	2	MR. ALEUVAS:	MR. ALEVRAS:
8535	10	MR. ALEUVAS:	MR. ALEVRAS:
8536	15	Mr. Aleuvas	Mr. Alevras
8536	22	MR. ALEUVAS:	MR. ALEVRAS:
8537	8	MR. ALEUVAS:	MR. ALEVRAS:

8537	15	MR. ALEUVAS:	MR. ALEVRAS:
8537	18	MR. ALEUVAS:	MR. ALEVRAS:
8537	25	MR. ALEUVAS:	MR. ALEVRAS:
8538	4	MR. ALEUVAS:	MR. ALEVRAS:
8539	3	Mr. Aleuvas	Mr. Alevras
8539	6	Mr. Aleuvas	Mr. Alevras
8539	13	MR. ALEUVAS:	MR. ALEVRAS:
8538	4	MR. ALEUVAS:	MR. ALEVRAS:
8538	11	MR. ALEUVAS:	MR. ALEVRAS:
8539	3	Mr. Aleuvas	Mr. Alevras
8539	13	MR. ALEUVAS:	MR. ALEVRAS:
8540	14	Mr. Aleuvas	Mr. Alevras
8541	9	MR. ALEUVAS:	MR. ALEVRAS:
8541	14	MR. ALEUVAS:	MR. ALEVRAS:
8541	19	MR. ALEUVAS:	MR. ALEVRAS:
8542	2	MR. ALEUVAS:	MR. ALEVRAS:
8542	9	MR. ALEUVAS:	MR. ALEVRAS:
8542	16	MR. ALEUVAS:	MR. ALEVRAS:
8542	22	MR. ALEUVAS:	MR. ALEVRAS:
8544	3	MR. ALEUVAS:	MR. ALEVRAS:
8544	5	MR. ALEUVAS:	MR. ALEVRAS:
8546	2	MR. ALEUVAS:	MR. ALEVRAS:
8546	12	MR. ALEUVAS:	MR. ALEVRAS:

8547	5	MR. ALEUVAS:	MR. ALEVRAS:
8549	1	MR. ALEUVAS:	MR. ALEVRAS:
8549	4	MR. ALEURAS:	MR. ALEVRAS:
8549	11	MR. ALEUVAS:	MR. ALEVRAS:
8549	16	MR. ALEUVAS:	MR. ALEVRAS:
8552	18	Mr. Aleuvas	Mr. Alevras
8552	25	Mr. Aleuvas	Mr. Alevras
8553	10	MR. ALEUVAS:	MR. ALEVRAS:
8555	18	MR. ALEUVAS:	MR. ALEVRAS:
8555	20	rea	area
8556	14	MR. ALEUVAS:	MR. ALEVRAS:
8558	1	Mr. Aleuvas	Mr. Alevras
8558	4	MR. ALEUVAS:	MR. ALEVRAS:
8558	10	MR. ALEUVAS:	MR. ALEVRAS:
8558	19	MR. ALEUVAS:	MR. ALEVRAS:
8559	2	MR. ALEUVAS:	MR. ALEVRAS:
8559	8	MR. ALEUVAS:	MR. ALEVRAS:
**8593	3	A	Q
**8598	2	vessels	Vessel
8598	8	1973,"	173"
8598	9	Energy	Engineering
8598	11	"Equipments	Equipment

8598	15	Equipments	Equipment
8598	15	Equipments	Equipment
8599	3	today, will	today, and will
8599	9	midland	mid-atlantic
8617	23	you	explain
8631	18	yoke	yolk
8632	5	yoke	yolk
8633	7	yoke	yolk
**8647	25	Lawler's	Lauer's
8649	11	you	why

January 17, 1973

8900	10	problems	projects
8913	10	opening	operating
8917	20	as	at
9024	20	of the parts	or part
**9030	2	forming	form
9057	7	prive	prove
9061	22	fishing	fishery
9074	9	a	--
9103	4	7.6 Hudson	7.6 million Hudson
9104	1	Aras	Areas
9106	11	spors	sports

January 19, 1973

title	"Pages"	pages 9289-9405	pages 9289-9387
9292	12	page A-581	page A-5-81
9294	22	page A-582	page A-5-82
9296	6	Table A-513	Table A-5-13
9366	9	weas	was

March 5, 1973, Vol. 1

Title		Vol. II	Vol. I
Title		9407-9557	9388-9406
9400	11	MacBeth	Macbeth
9401	11	redirect, rebuttal	redirect-rebuttal
9401	20	Dr. Harry	Mr. Harry
9402	9	On Hudson	On the Population of the Hudson
9402	20	Chlorination."	Chlorination on the Aquatic Biology of the Hudson River."
9403	3	is entitled,	is the testimony of Dr. Lawler entitled,
9403	5	on "Striped	on "The Temperature Tolerance of Striped
9403	6	Bass."	Bass Eggs and Larvae Rela- tive to their Seasonal Occurrence and Expected Indian Point Plant Discharge Temperature."
9403	10	Temperature."	Temperature at Indian Point During Entrainment Period."

9403	13	on striped	on <u>Morone</u> <u>sp.</u> (Striped
9403	13	Perch Eggs	Perch) Eggs
9403	18	is Ronald	is testimony of Ronald
9403	18	Alevras "The	Alevras entitled "The
9405	7	document	documents
<u>March 5, 1973, Vol. II</u>			
9409	18	McFadden	Macbeth
9413	9	Maroni S.P.	<u>Morone sp.</u>
9413	9	Striped	(Striped
9413	10	Perch	Perch)
9413	10	by New York University	at Indian Point."
9413	18	competence	confidence
9415	3	"known"	"none"
9419	8	presents	presence
9419	10	probably	probably the
9434	20	McFadden	Macbeth
9461	12	gradeient	gradient
9464	2	Tappen	Tappan
9464	16	expended	expanded
9475	12	good	food

9488	20	contrarily	contrary
9488	24	equilibrate	equilibriate
9494	6	fueling	cooling
*9494	16	haul	trawl
9500	11	tesseprature	temperature
9501	4	Then	This
9502	10	basis	basic
9502	11	varance	variance
9505	23	ae	
9510	23	ampling	sampling
9511	3	salinicy	salinity
9514	12	seins	seines
9516	11	Edicons	Edison's
9518	4	impaced	impacted
9522	1	your	his
9526	9	coordianting	co-ordinating
9526	15	Talbot	Talbott
9526	16	our	Orange and
9526	19	include	include QL&M
9529	2	Lawler and Lawler	Quirk Lawler and Matusky
9535	10	think	thing
9535	14	fact	face
9549	15	Bigger's	Goodyear's

March 6, 1973

9568	5	an area	a weir
9568	6	session	session,
9568	17	mangling	mangled
9570	5	no water.	no water in them.
9570	5	. they are dried issue.	They are dried tissue.
9571	3	for that would be-- we	for. We
9571	17	period.	period?
9571	24	next group	next year's study effort by our group
9575	7	because a number	because the numbers
9575	20	see	have
9576	20	the	
9577	21	22nd?	20th?
9578	12	Bibco	Bibko
9579	6	hours and then this	hours. This
9583	1	members	numbers
9583	9	thtese	these
9583	13	that	similar to that which
9583	22	with that	within that

9584	4	passing	passed
9584	7	one would expect	
9584	12	more, really, any	more
9584	13	more	
9586	10	the delta T	the 15°F delta T
9586	11	less sufficient	less than sufficient
9589	17	B-1 and B-2	D-1 and D-2
9594	23	interested	interesting
9603	13	electroferetic	electrophoretic
9604	3	Q	A
9616	25	progression	regression
9626	3	TROSTON	TROSTEN:
9629	3	furhtermore	furthermore
9640	10	greate	great
9641	7	boar	boat
9654	17	41 cents	81 cents
**9655	12	on published	on unpublished
9664	18	is not a	is a
9669	2	the build-up	it builds-up
9670	23	concentrated	concentration
9671	9	make	made

9673	18	impeller	pellet inter-
9606	8	burned	burn-up
9707	24	veryify	verify
*9711	17	duing	doing
9713	24	dirft	drift
9715	8	regional	reasonable
9730	3	December	February

March 7, 1973

9742	19-21	ADDITIONAL APPEARANCE: Peter M. Skinner, Department of Law, 80 Centre Street, New York, New York 10013, appearing for New York State.	
9745	14	We are not offering it for that purpose.	
9767	21	DansKammera	Danskammer
9775	24	-Mailer	-Miller
9776	11	Corton	Croton
9779	8	takne	taken
9795	20	oaverall	overall
9797	8	governemtn	government
9810	14	may	my
9810	16	numerical	numerical
9813	14	9	none
9824	25	I	he
9825	21	who	who was
9827	9	trained	or technically trained
9827	9	contribute	conduct
9827	10	for. The	for in §2.733. This
9827	23	the examination	examination
9830	12	refer	refer was

9833	2	indiactors	indicators
9833	25	if	have
9837	12	dimply	simply
9841	3	are	
9841	12	aethetic	aesthetic
9845	19	the the	the
9849	21	coument	document
**9853	13	nine testing licenses	the testing license
*9883	8	lauer	Lawler

March 8, 1973

9984	pagination	9984	9985
9985	pagination	9985	9984
9999	9	refueling	testimony
10,013	23	you	We
10,034	11	conjectures	objectives
10,076	20	Committee's rule	Commission's rules
*10,084	12	nite	not
10,096	10	is the	is not the
10,100	7	you	We
10,100	8	ready?	ready.
**10,109	18	is any	is not any
**10,116	9	delinquent	delivering
10,118	12	of hings	of things
10,119	4	Mr. Roisman thought	
10,119	7	rejection	objection
10,119	22	Whitwick of	Chitwood to
10,122	10	Chidwick	Chitwood
10,126	5	though	thought
10,126	7	lease	least
10,130	19	attmept	attempt
10,135	10	snell	Shell

10, 135	15	Choctowahtchee	Choctawhatchee
10, 135	23	200	1200
10, 137	7	survivorability	survivability
10, 137	15	Conn Edison	Con Edison
10, 143	8	at	which

March 9, 1973

10,224	19	additional	additional information
10,225	8	bee	be
10,237	24	boundaries	boundary
10,249	5	an	and
10,318	4	so	do
10,328	13	term mitigating	term-mitigating
10,346	5	Schwarta	Schwartz
10,347	24	was	what
10,363	9	indicated by	indicated in my
10,365	11	Indicated	I indicated
10,371	3	merchant	commercial
10,371	5	Floriday	Florida
10,375	25	fingerline	fingerling
10,376	15	Choctauhatchee	Choctawhatchee
10,376	21	Choctahatchee	Choctawhatchee
10,377	1	cycling	sampling
10,380	22	he	the
10,383	18	fishermen do	fishermen that do
10,384	21	pin	thin
10,384	22	he has thinks	

10,387	5	Carl	Kerr
10,389	16	Ocean Breeze	Gulf Coast Research
10,392	18	Chemically	
10,392	18	operate	operated
10,392	18	based on	and had a
10,393	5	the egg	the viable egg
10,394	9	root	brood
10,403	12	million	billion
*10,408	6	million	billion
10,409	20	some	come
10,412	23	and set	
10,413	24	a	four
10,427	21	Estoria-6	Astoria-6
10,434	17	no	not
10,437	19	simply	simple
10,453	7	whilt	while
10,485	7	General	Federal
10,487	15	unbalancing	balancing
10,488	8	litigation	mitigation
10,488	21	that	

10,488	22	we can	that we can
10,490	21	Srosten's	Trosten's
10,502	24	litigation	mitigation
10,528	10	mechanical	botanical
10,533	5	Matuskie	Matusky

April 11, 1973

10,631	4	unacceptable	acceptable
10,631	4	required	requirements
10,647	6	MR. TROSTEN	MR. ROISMAN
10,647	16	nozzle at the screwed-in	nozzel at the-- makes the screwed in
10,647	17	wall, valve	wall; the valve
10,649	1	out	on
10,650	10	Brother	Mr. Bremmer
10,651	21	that was	
10,651	21	judgement that	judgement can be made that
10,660	18	in	and
10,661	25	choose	chose
10,669	14	run in	run and in
10,679	5	to	too
**10,731	3	large	larger
**10,742	1	reduced the	reduced with the
**10,760	6	BWRs	PWRs
**10,779	11	that	then
**10,810	18	pore	core

April 12, 1973

10,905	18	MR. TORSTEN	MR. TROSTEN
10,985	12	calculated	calibrated
10,988	13	next	neck
10,989	23	.3	point 3
10,989	25	.3	point 3
11,002	5	design in	design. In
11,002	18	burst	first
11,004	4	vertical	burnable
11,004	5	vertical	burnable
11,006	5	band	bank
11,016	12	Westing house	Westinghouse
11,018	12	which	with

April 25, 1973

11, 113	8	1. 8	1. 6
11, 117	24	fifth	April 9th
11, 127	24	striking	stocking
11, 128	15	intended	continued
11, 135	19	8	. 8
11, 143	24	the finest	to find
11, 151	22	McCowan	McIlwain

April 26, 1973

**11,281	14	"no	"null
**11,281	15	"no	"null
**11,281	21	"no	"null
**11,281	22	no	null
11,316	20	Stripeless	Stripers
11,316	22	Bidco	Bibko
11,317	3	obtained	they obtained
11,318	17	Danskammera	Danskammer
11,327	4	proceed	succeed
11,346	7	death	dealt
11,353	19	McFadden	Macbeth
11,392	20	Lawler	Quirk, Lawler
11,407	11	a total egg	total eggs
11,407	11	a viable	viable
11,407	12	egg	eggs
11,407	24	Eastman's	Oestmann's
11,412	23	competence	confidence
11,430	pagination	11,430	11,431
11,431	pagination	11,431	11,430

11,409	22	loses	losses
11,409	23	2.7	2.1
11,409	24	3.7	2.3

Corrections to document entitled "Responses to Questions by John P. Lawler, Ph.D., Quirk, Lawler & Matusky Engineers, on the Sensitivity of the Model Presented in the testimony of October 30, 1972 on the Effect of Entrainment and Impingement at Indian Point on the Population of the Indian River Striped Bass" dated February 5, 1973 (follows Tr. 9405). See corrected page 12, attached hereto.

Respectfully submitted,

LEBOEUF, LAMB, LEIBY & MACRAE
1821 Jefferson Place, N.W.
Washington, D.C. 20036
Attorneys for Applicant

By Leonard M. Trosten
Leonard M. Trosten
Partner

Dated: May 24, 1973

IV. SUMMARY

1. A sensitivity analysis of the QL&M transport model has been performed and presented in the foregoing. This analysis shows that the presence of compensation is important, but shifts in natural mortality rates need not be major to keep the percentage reduction in the population to a minimum. Such shifts appear to be no greater than the natural fluctuations in mortality rates which occur in a bio-system of this type, and which may simply be reflecting the system's own innate ability to compensate in a natural environment.
2. Consideration of actual early stage distributions in the Indian Point vicinity is also important, as is a knowledge of the actual plant-induced mortality as the organism passes through the circulating water system. Evaluation of all available data suggests strongly that these effects, translated into computational terms as "f" factors, cannot be ignored, i.e., "f" factor values are substantially less than unity.
3. Results of the sensitivity analysis, for uses when major migration is assumed to have occurred past Indian Point by the end of the assumed entrainable stage, and which cover the ranges of minimal to moderate compensation and moderate to maximum "f" factors, are given below:

<u>Compensation Ratio</u> (minimum mortality rate density independent rate)	<u>"f" Factor Estimate</u>			<u>Percent Reduction in</u>		<u>Reference</u> <u>Run # (Table 1)</u>
				<u>1 Year</u> <u>Year Class One</u> <u>Recruitment</u>	<u>10 Year</u> <u>Adult</u> <u>Population</u>	
	<u>Eggs</u>	<u>Larvae</u>	<u>Juveniles</u>			
minimal (0.8)	0.4	0.4	0.2	3.5	9.7	8
moderate (0.5)	0.4	0.4	0.2	2.3	4.9	1
moderate (0.5)	1.0	1.0	1.0	3.3	8.5	15