

'85 MAR 19 P3:16

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY & LICENSING BOARD  
OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

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In the Matter of:	:	
	:	
LONG ISLAND LIGHT COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station	:	
Unit 1)	:	
	:	
	X	

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PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTERMonday, October 22, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24369/13	33 through 41	33 through 40
24372/15	B-7 -- B-32	B-7 thru B-31
24372/16	B-34 -- B-41 and B-42 -- B-52	B-33 thru B-40 and B-42 thru B-51
24372/17	for identification)	and admitted into evidence.)

Pages 75 and 76 of Direct Testimony should be put into proper sequence; preceding cover page and page 1 of Attachment 3.

Attachments 1 and 2 to Direct Testimony should be placed before Attachment 3 to the Direct Testimony; currently located behind "Supplemental Testimony."

24373/18	this	his
24376/4	significant	sufficient
24378/8	cracked	crack

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24378/10	move the strike	move to strike
24381/14	filing	firing
24385/15	grab	grant
24386/3	parce	parcel
24386/8	on the explain	on to explain
24388/5	in '83 was based	in '84 was based
24388/16	to a	to answer a
24388/17	the	the witness to
24390/21	out	our
24396/7	seven	six
24397/10	try	trying
24402/6	17	B-17
24403/25	data	date in
24415	Page following is not numbered; it can be noted that page number 22416 and 22417 have not been used or pages have been omitted. If no pages have been omitted, at the top of the page following page 24415 insert "WITNESS YOUNGLING" before "there" and change "there" to "There".	
24420/25	out	about
24425/6	Mil	Mel
24425/18	DJ	DG
24427/20	DJ	DG
24428/14	Mil	Mel
24437/22	graphic	graphite
24442/13	that	by

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24444/16	Mil	Mel
24444/20	performed	performed a
24446/25	LERs	LDRs
24447/1	22622289	2262 and 2289
24447/25	untrasonics	ultrasonics
24448/9	22, 62,	2262
24448/9	metallographically	metallographically
24448/19	are	were
24450/9	penknife	pen knife
24454/11	with	into
24455/16	change	changed
24458/8	counterborel	counterbore
24459/4	23-1/2	2-1/2
24460/17	loop	LOOP/
24462/14	on	of
24463/23	line	line --
24463/24	intersepts examination	intercepts examination --
24464/15	separating	separated
24466/10	is,	is, or
24466/11	are higher	are, higher
24470/12	indispute	in dispute
24472/24	Widmanstateten	Widmanstaetten
24478/5	didn't material this continuity	degenerate Widmanstaetten

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24478/11	reading	readings
24480/3	would see is some of the safest locations that we have both	would see, in some of the crack locations that we have, both
24487/16	far matched	far has not matched
24488/15	This	If this
24496/21	or	of
24498/8	August 8, 1984	March 8, 1984
24499/12	apply	applied
24503	Remove duplicates of pages 24501, 24502 and 24503 following this page.	
24508/1	completion	completion of
24508/14	LDR 23-22	LDR 2322
24508/24	blacktop	block top
24508/25	blacktop	block top
24510/2	4	5
24510/3-9	Delete; partial duplication of page 24511 at lines 1-6.	
24511/8	loop	LOOP
24513/4	other	although
24513/11	our number	our answer number
24515/14	Q Are	JUDGE BRENNER: Are



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	:	
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	:	
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Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
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Tuesday, October 23, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24527/20	on	of
24529/11	conclude that	conclude whether
24529/15	best	least period
24531/7	models	models,
24531/21	give	given
24535/10	that on the	that in the
24535/11	the modulus	the moduli
24535/12	There is a	There are a
24536/21	covert	convert
24539/18	on liner 321"	on liner 3 to 1"
24539/22	failure analysis	Failure Analysis
24540/12	1.3442	1.342

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24541/4	termal	thermal
24541/10	lead	led
24542/8	rations	ratios
24543/10	existance	existence
24543/24	fact.	play.
24546/11	giveme	give me
24546/15	prenode experimental	preload experimental
24547/8	taken, to	taken. To
24547/9	testimony you	testimony, you
24547/13	bore	bad
24547/24	materials, properties	materials properties
24549/23	that superimposed	that (superimposed
24549/24	upon it, if you like.	upon it, if you like).
24550/19	of	in
24550/21	in this case we	in this case, we
24551/21	line up	liner
24553/1	B-30? Or	B-30, where
24556/2	bars	bars,
23557/17	tops	top
24558/21	1600 psi	16,000 psi
24559/2	calcuted	calculated
24560/4	degenerative	degenerate
24560/6	degenerative	degenerate

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24560/21	that	there
24561/7	to the numbers	the same numbers
24562/2	machine	machined
24564/9	exedition	expedition
24569/12	wiat	wait
24572/11	examnations	examinations
24582/16	the time same	the same
24582/23	to A	2A
24583/24	material is	material are
24585/9	an	as
24587/5	blocks	block sections
24590/1	is	it
24591/5	if	is
24592/7	see	don't see
24593/23	could	could not
24595/9	disquish	distinguish
24598/5	identification	for identification
24598	Page following this page, numbered 24648 should be deleted. Duplication of the same page which appears in proper sequence later in the transcript.	
24602/18	you	the way you
24602/19	also	also,
24607/19	microstructure of	microstructure, of
24609/1	has	was

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24609/16	elevations from	elevations, from
24611/14	A	(WITNESS WACHOB)
24611/23	A	(WITNESS RAU)
24612/4	a	"a"
24612/5	d or a e	"d" or "a" "e"
24612/6	a b	"a" "b"
24612/7	e	"e"
24612/9	a through d	"a" through "d"
24612/18	top	top,
24629/5	mill mills	mil mils
24629/13	testing it	testing, it
24629/15	mills	mils
24635/14	R-r	R-4
24640/10	position are	position 13 are
24640/17	properties for chemical iron	chemical properties for cast iron
24640/19	if	is
24640/22	represented above	representation of
24643/8	reported,	, reported tensile strength
24644/22	-done	known
24647/5	the fitness	, the thickness
24649/16	or	you're

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24649/21	certiain	certain
24650/11	increases it's	increases. It's
24659/20	a low	at no
24665/12	firm	firms
24665/18	we were	were we
24667/4	is not	is
24667/19	than	in
24669/9	phase	side
24676/23	in	an
24680/20	WITNESS	Mr.
24680/23	but	that
24688/2	FaAA not	FaAA, not
24689/1	cracks	cracks,
24689/2	microstructure	microstructure,
24689/13	and any	and to any
24691/3	and	on
24691/17	both	both low
24692/15	been to	to
24693/9	Now	How
24693/19	crack it increases. The	crack increases, the
24693/23	raise	raised
24693/24	raise	raised
24694/2	increases. This	increases, this

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24694/3	multiples	multiplicative
24694/9	14	13
24694/16, 24	Loop	LOOP/
24695/11	loop loca	LOOP/LOCA
24695/13	loop loca	LOOP/LOCA
24695/13	loop LOCA	LOOP/LOCA
24695/15	stop	stud
24695/18	Exhibit B-51 engine, blocks 101 and 103	Exhibit B-51, engine blocks 101, 102, and replacement 103
24697/11	again? A	again?
24698/14	are not	are incorporated, not
24700/24	stresses	stresses to
24702/12	the one	the stress
24702/13	that position	that stud position
24703/7	ruling	ruler
24707/20	conservative of a toll to be used	conservative to be used

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	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
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Wednesday, October 24, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24718/23	concernng	concerning
24722/25	stress	address
24726/3	out and do	out conservatism and do
24727/16	top that 3-1/2	top 3-1/2
24728/9	The cast	The block top
24731/11	Wacob	Wachob
24733/6	mechanical test	ultimate tensile
24738/17	replicate	replica
24741/13	Widmanstaetten in	Widmanstaetten graphite and
24741/16	coolant	cooling
24746/14	excessive	extensive
24746/24	again	again.



<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24747/2	question, that	question yes, the
24747/3	clearly	clearly the microstructure
24747/5	structure	microstructure
24748/5	excessive	extensive
24749/14	light	slight
24750/13	lenticular	ventricular
24751/24	projection	profile
24752/12	graphite because this	graphite, because it
24753/19	photomicrograms	photomicrographs
24756/2	macroscopic	microscopic
24760/8	he	have
24764/9	metallographic	metallography
24764/13	I don't mean examine it.	You don't mean examine the crack.
24764/15	of --	of it --
24765/18	anticiated	anticipated
24765/22	5500	55,000
24765/23	5100	51,000
24765/25	on average	on the average if
24766/5	4300	43,000
24766/13	5400	54,000
24767/2	rates	relates
24768/12	B-44	B-44 for

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24769/13	which	which come from it
24770/14	24	25
24770/21	once	on
24771/15	degrated	degraded
24772/9	adhere	are in
24773/2	but	when
24777/9	on	of
24777/20	expectl	expect
24778/7	to a	as a
24779/25	basel ine	base line
24783/20	adn	and
24784/11	baseline	term baseline
24784/14	March an April '84	March and April '84
24785/1	before that	the start of that
24785/1	after,	after it,
24785/16	loop LOCA	LOOP/LOCA
24786/4	loop LOCA	LOOP/LOCA
24787/20	loop LOCA	LOOP/LOCA
24788/19	inches. That	inches, that
24789/4	loop LOCA	LOOP/LOCA
24790/13	loop LOCA	LOOP/LOCA
24790/17	loop LOCA	LOOP/LOCA
24790/21	loop LOCA one	LOOP/LOCA, one,

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24793/8	mechanic	mechanics
24794/4	progression	progressing
24795/22	facture	fracture
24795/25	Low	Lau
24796/18	Howerr	However
24798/3	110	101
24798/13	attention	intention
24800/2	friction	fracture
24802/19	are very	are very,
24805/24	looked	looked at
24806/16	3 to 4	4 to 5
24806/20	4 or 5. All	4 or 5, all
24812/1	occurred,	occurred;
24812/3	.4 inch	4.4 inch,
24812/4	loop	LOOP/
24812/24	most -- was	was most
24818/4	that	that,
24818/5	developed	developed,
24818/25	Pomigrin's	Palmigrin's
24820/19	can'	can't
24821/16	origianal	original
24822/21	loop LOCA	LOOP/LOCA
24823/10	loop	LOOP

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24823/11	loop LOCA	LOOP/LOCA
24823/19	loop	LOOP
24825/5	35	3500
24828/9	degrees, in	degrees. In
24830/13	wih	with
24835/14	inspections were out	inspection results were out was
24846/22	that the	what the
24847/17	3/8ths, 1/2 inch	3/8ths to 1/2 inch
24848/12	compilations	calculations
24852/21	stream	strain
24853/19	reaches	meets
24854/25	pages	gages
24859/20	paraphernalia	paraphenalia
24859/21	an	in the
24860/2	ground	a ground
24860/4	have	have (Witness referring to samples being held by Witness Wachob)
24860/17	have painted	had paint on
24861/4	of casting stone	as castings
24862/4	furthe	further
24864/3	disc	dis-
24865/6	Mil	Mel

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24866/12	9/10 or 9/10	8/10 or 9/10
24870/21	mechanic	mechanics
24884/1	low	load
24890/18	reveal	review
24891/13	of	on
24893/12	number	amount

UNITED STATES OF AMERICA  
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In the Matter of:	X	
	:	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Monday, October 29, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24918/4	if	on
24922/22	stress	strength
24922/23	predicted and	predicted, and
24922/23	crack initiation	crack, initiation
24922/24	the	of
24925/24	with me t.l.e	with the
24925/25	directly but	directly, but
24926/13	start	starts
24927/14	(about 100 hours)	"about 100 hours"
24927/17	(10 to the sixth cycles)	"(10 to the sixth cycles)"
24928/18	specifice	specific
24930/3	ladder	liner

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24930/21	accurately	accurate
24932/13	Mil	Mel
24934/1	Mil	Mel
24934/13	on internally that	that internally
24934/21	matereial	material
24943/12	nevertheless and	nevertheless, and
24946/17	that size	the size
24950/16	agreement	103 were in agreement
24950/20	of areas	of other areas
24951/3	basis,	bases
24951/4	of	off
24959/18	funnels	follows
24961/8	that we	that he
24962/25	in	an
24963/20	Yes	Yet
24964/7	of the	to the
24968/15	consistent. With	consistent with
24968/16	oxide obviously	oxide. Obviously
24969/9	was looked at	was used to look
24971/6	surface	service
24972/14	mollecular	molecular
24972/20	mollecular	molecular
24973/9	mollecular	molecular



<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
24973/13	mollecular	molecular
24974/14	it gets	it (oxygen) gets
24974/15	it grows	it (the oxide) grows
24978/6	EDAX, Electron	EDX,
24978/7	Dispersive Energy	Energy Dispersive
24979/12	throughout the interface. There may well be	There may well be
24979/14	repairedl	repaired
24981/6	magnesium sulfite	manganese sulfide
24982/19	have any	have been any
24983/23, 24	-- calcium sulfide present in the diesel oil.	Delete
24986/3	halite	halide
24987/9	thickness if	thickness. If
24989/17	EDAX	EDX
24991/9	it but	it, but
24991/22	this cooldown	the cooldown
24994/6	block it	block casting it
24997/15	oxidation to	oxidation of
24997/16	basically	exist
24998/17	positioning of	position where
25000/4	which would have	which has
25000/13	there for	therefore

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25001/17	Dr. Schuster	Mr. Schuster
25017/20	St. Cloud bar	St. Cloud block
25018/3	problem1?	problem?
25021/12	it they	it, they
25021/25	Younling?	Youngling?
25026/7	103	101
25026/10	increase	inquiry
25031/4	glass	class
25047/12	attached the	attached to the
25049/14	what is motion	what this motion
25054/9	arise a higher	arise at a higher
25059/24	grade	rate
25064/18	ceramic that although	ceramic; although
25065/9	to be --	to be equal --
25065/25	uniform	ultimate
25066/12	it is	as "is
25066/13	equal to the	equal to" the

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Tuesday, October 30, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25077/2	believe hat that	believe that
25078/19	loop LOCA	LOOP/LOCA
25084/23	crank shafts	crankshafts
25087/1	or not	whether or not
25087/1	an oxide as	an oxide, as
25088/19	mechanic's	mechanics
25089/15	analysis	analyses
25089/22	extensions	extension
25091/3	block we	block, we
25092/2	corner	corner,
25092/3	164th	1/64th
25092/3	radius between	radius, between

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25093/6	over ranged conditions	over a range of conditions
25093/7	liner	liner,
25097/6	as sawed,	as-sawed,
25100/6	horizontal in	horizontal, from
25104/12	at B-9	of B-9
25105/6	transfers are	transfers, which are
25105/8	region.	region; occurred.
25108/8	region	region-
25108/9	arked	arced
25108/22	arked	arced
25110/3	he were to mean the other	he meant the other,
25110/4	about that	about oxide on that
25110/18	express	direct
25112/1	co,	to the weld metal,
25112/10	stresses	stresses,
25113/4-9-18	martinesite	martensite
25114/11	martinesite	martensite
25118/5	audience	audits
25118/8	records we	records, we
25119/2	specification that	specification of that
25121/22	and I	and the
25121/22	rusting in	rusting of
25121/23	at that	after that

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25124/11	through the	through, the
25124/15	regular to making	regularly making
25124/21	the Dr. McCarthy	to Dr. McCarthy
25129/4	elevent	eleven
25129/22	ASTM-A-40-A	ASTM-A-48
25130/14	Transamerican	Transamerica
25130/15	Itt	It
24131/10	Materials'	Materials,
25131/13	Purchase and	Purchase; and
25132/5	fact a 45-B and a 40-B,	fact class A 45-B and A 40-B,
25132/8	50 by	50-B by
25133/1	diameter bar,	diameter B-bar,
25133/6	too, for	too were cast for
25133/6	reasons but	reasons. But
25133/6	case it	case, it
25136/3	resultant packages,	resultant percentage changes
25139/3	compared	comparable
25147/15	tears, verocity,	tears, porosity,
25148/8	from verocity or,	from porosity or,
25149/1	to is	to do is,
25150/21	it that weld repair would	it, that weld repair, would
25151/20	passes	phases

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25151/22	your flex,	your flux,
25152/14	the Martin site,	the Martensite,
25152/15	prepare procedures	preparation procedures
25154/4	size for	size governing
25154/5	where that	whether that
25154/8	is affective in	is effective in
25156/6	the fuller the way	the further away
25156/17	hugh	huge
25156/20	I probably did,	I thought I did,
25159/24	by reducing some	by machining some
25161/11	1- to 3000ths of	1 to 3 one thousandths of
25164/3	the diameters,	the parameters,
25164/14	would	could
25175/24	loop LOCA	LOOP/LOCA
25175/25	loop LOCA	LOOP/LOCA
25179/25	insistance	insistence
25191/24	sent	sat
25210/1	no shown	not shown
25211/1	area and	area, and
25211/1	intersept	intersect
25218/12	mills	mils
25223/4	foundary	foundry
25224/4	uponthat	upon that

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25225/16	there, that anything	there, than anything
25229/13	this facility, my	this locality, in my
25229/21	anywhere that	anywhere near that
25229/25	5 mills,	5 mils,
25230/14	that is	that it is
25231/3	compressive strength stress.	compressive stress.
25233/19	postuled loop LOCA	postulated LOOP/LOCA
25233/21	cracking beyond	substantial cracking beyond
25233/23	loop LOCA	LOOP/LOCA
25237/23	loop LOCA	LOOP/LOCA
25238/14	additional of the conservatism	additional conservatism
25240/2	perlitic	pearlitic
25240/3	perlitic	pearlitic
25241/5	procedures.	process.
25241/5	absence of any thick	presence of thick
25245/8	we would have	we could have
25247/13	virtually	virtually
25257/19	mills	mils
25257/22	edition	leaking



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(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
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Wednesday, October 31, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25271/9	EDGS	EDGs
25273/4	makeup	makeup,
25275/1	mill	mil
25276/18	kind	kinds
25277/2	mill	mil
25277/9	mill	mil
25279/4	mill	mil
25279/16	indiction	indications
25281/1	not repair	beneath the repair
25281/4	they had	the oxides had
25281/5	it had	the cracks had
25281/8	Turing	Turning

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25282/8	as in fact it is	that in fact it
25284/14	crack depth gages.	TSI crack depth gage.
25285/6	occur	occurs
25287/21	This	The
25292/2	graphite formed	gray cast iron formed
25297/16	along	alone
25301/10	inmy	in my
25303/5	in in	it in
25308/2	with	without
25308/3	out him,	him,
25308/14	is it not highly likely	is it is highly unlikely
25309/16	think	thank
25312/9	and file	and final
25313/3	loop LOCA	LOOP/LOCA
25313/5	loop LOCA	LOOP/LOCA
25313/25	loop LOCAs	LOOP/LOCAs
25314/5	loop LOCAs	LOOP/LOCAs
25314/10	loop LOCA	LOOP/LOCA
25314/13	file crack	final crack
25315/14	loop	LOOP/
25315/21	loop	LOOP/
25316/5	inch	inches
25317/1	what	that

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25317/4	loop	LOOP/
25317/9-10	block were out of	block results in
35317/21	addition time	additional time
25317/25	loop LOCA	LOOP/LOCA
25318/20	conservatism,	conservatism.
25318/21	for	For
25320/3	loop LOCA	LOOP/LOCA
25322/17	strain as the strain	strain at strain
25325/8	only are	only, are
25325/10	at that	in that
25325/16	loop LOCA	LOOP/LOCA
25332/21	fact of	factor of
25332/22	loop	LOOP/
25333/20	ways that are evidence for	ways to estimate
25334/6	only 1.75; an hour	only 1.75 hours; an hour
25335/17	may overestimate the	may have overestimated the
35337/4	the study holes	the stud holes
25341/2	finite model	finite element model
25341/23	analyze to determine	analyze and determine
25342/10	very finite element	very fine element
25342/3	respect	respects
25343/21	thermally-induced	thermally-induced

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25346/1	remember,	remembers,
25347/14	line in any	line at any
25348/24	this more	this is more
25348/25	thread will	thread, this will
25351/12	fatigue	fatigue
25353/16	loop	LOOP/
25354/5	on line on 17	on line 17
25355/9	Dr. Bush.j	Dr. Bush.
25355/21	konw	know
25366/13	such at River Bend	such as River Bend
25370/8	loop LOCA	LOOP/LOCA
25370/13	effect ford	effect would
25371/17	levels of 3935 and	levels of 3900, 3500 and
25375/4	bases	basis
25375/5	bases	basis
25376/2	TDI had repaired	TDI had prepared
25376/20	No, he did not	No, we did not
25377/14	Thank you, Farley, that	Thank you, that
25378/16	Mr. Morris Lowrey	Mr. Maurice Lowrey
25378/17	Mr. Greg Veshouri	Mr. Greg Beshouri
25382/12	3,429, rounded off	3,409, rounded off
25386/25	Text omitted	
25387/18	dispersive	dispersive

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25409/6	can be look at	can be looked at
25410/11	of couse	of course
25416/8	perlitic	pearlitic
25416/12	perlite	pearlite
25418/16	pore	pour
25419/9	that's why I do condenses and it	that's why the dew condenses and it
25419/18	low negligible	low, negligible
25428/14	fracture breaking	fracture or breaking
25438/19	semi-circular	semi-circul
25439/4	the inner section	the intersection
25439/9	innerface	interface
25440/16	whole which	hole, which
25448/12	demonstrated by	demonstrated, by
25446/18	wall, in the wall	will, in the wall
25448/15	loop LOCAs	LOOP/LOCAs
25448/18	loop LOCAs	LOOP/LOCAs
25449/21	loop LOCAs	LOOP/LOCAs
25449/24	loop LOCAs	LOOP/LOCAs
25449/25	loop LOCAs	LOOP/LOCAs
25450/3	the difficult.	the difficulty.
25450/12	loop LOCA	LOOP/LOCA
25450/23	loop LOCA	LOOP/LOCA
25451/1	loop	LOOP/

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25451/7	loop LOCA	LOOP/LOCA
25451/12	loop LOCA	LOOP/LOCA
25451/15	loop LOCA	LOOP/LOCA
25451/16	profile which	profile, which
25452/4	loop LOCAs	LOOP/LOCAs
25452/6	loop LOCA	LOOP/LOCA
25452/12	loop LOCA	LOOP/LOCA
25452/14	loop LOCA	LOOP/LOCA
25453/11	loop	LOOP/
25456/15	is 1-1/4 at	is 1-1/4 inches at
25476/7	I've got him on another	I've got another



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of:	X	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Thursday, November 1, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25489/13	a quanter was cut	a corner was cut
25490/12	(Witness Johnson)	(Witness Youngling)
25498/13	ever	every
25499/20	fine element	finite element
25501/19	consistenting	consisting
25508/5	conservative comment	conservative estimate
25508/22	calculation. The	calculation, the
25509/16	the testimony	the testimony
25509/18	crack propagation	crack propagation;
25509/19	was said that	was said was that
25509/20	representation which	representation, which
25509/21	results could	results, could



<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25510/1	location used	location and that used
25511/12	water in some of the order	water in the order
25515/8	loop LOCA	LOOP/LOCA
25526/5	four mills	four mils
25526/23	four mill	four mil
25529/20	the Stere binocular	the Stereo binocular
25560/25	Text omitted	
25561/18	motion motion expressly	motion expressly
25570/21	What he referring to about Dr. Rau	What he's referring to about Dr. Rau's testimony
25570/23	specifically give	specifically gave
25609/22	motoin	motion
25614/12	Mr. Britagi	Mr. Brigati
25634/10	EDG blokes	EDG blocks
25634/25	Text omitted	
25657/11	scrapped	scratched

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
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	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Friday, November 2, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25709/1	Omitted Text	
25709/2	I will also	MR. BRIGATI: I will also
25713/15	He is not character- izing it and not allowing the witness to answer.	He is characterizing it and now allowing the witness to answer.
25729/17	has been regained	has been retained
25729/25	would do under	would do this under
25730/18	of the	on the
25749/12	weldment	weld material
25752/1	there is no	there is in no

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of:	:	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Wednesday, November 7, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
25789/3	inference it it's	inference; if it's
25796/3	reaize	realize
25800/14	fatigue on fracture	fatigue and fracture
25832/16	failure analysis	Failure Analysis
25855/23	degrated	degraded
25864/6	need to in	need to be in
25885/17	no absolute	no absolute
25929/18	cross plant	cross plan
25931/1	loop LOCA	LOOP/LOCA
25931/5	loop LOCA	LOOP/LOCA
25937/11	non-descriptive	non-destructive
25941/13	to be on	to be

Page/Line

Reads

Should Read

25941/14

compression

compressive

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BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of:	X	
	:	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Thursday, November 8, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26018/12	block?	block.
26021/19	approsiximately	approximately
26030/6	Dr. Bushj?	Dr. Bush?
26033/2	statically	statistically
26034/14	materia	material
26045/2	Got	Gott
26046/3	Got	Gott
26046/14	Got	Gott
26049/1	Got	Gott
26049/2	Got	Gott
26068/22	loop LOCA	LOOP/LOCA
26072/1	is IEE	is IEEE

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26088/18	loop	LOOP/
26092/9	that I did	that it did

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of:	X	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Friday, November 9, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26187/24	loop LOCA	LOOP/LOCA
26233/14	mills	mils
26258/8	would also you to also	would ask you to also
26260/5	nothing now	nothing new
26265/20	mills	mils



UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of:	X	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station, Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Tuesday, November 13, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26282/20	mill	mil
26293/9	loop LOCA	LOOP/LOCA
26293/16	as the	as they
26293/16, 17	loop LOCA	LOOP/LOCA
26294/1	greater	greater than
26301/5	loop LOCA	LOOP/LOCA
26307/11	in in	in
26316/12	Wachob	Wachob
26336/17	Rave	Rau
26340/10	field <sup>1</sup>	field
26342/4	supplemnt	supplement
26344/19	are must	must

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26360/6	inlcude	include
26360/9	land	landing
26361/20	shrear	shear
26372/1	loop LOCA	LOOP/LOCA
26382/7	all flavors and has them	all flavors
26382/8	run through all flavors and	and
26393/1	sustaned	sustained
26397/22	No	no
26400/4	occur .	occur.
26410/25	nickle	nickel
26411/6	nic' le	nickel
26422/25	Text omitted	
26425/12	accomodate	accommodate
26431/11	efficiently	efficiency

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
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In the Matter of:	X	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Wednesday, November 14, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26446/20	500 X	500X
26458/14	testimony	testify
26459/4	ETGs	EDGs
26446/2	cracks	cracks,
26466/3	oxide	oxide,
26466/4	from the	of the
26466/6	and the	and it is the
26466/22	bases	basis
26467/11	from that	from
26467/20	paren thick oxide paren	(thick oxide)
26467/22	inch	inch,

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26468/6	we've got	we've got a
26468/8	perlite	pearlite
26468/9	cetera. It	cetera as it
26468/20	crack	crack,
26468/22	or the heat-affected zone parentheses	(or the heat-affected zone)
26470/20	both of	both in
26471/7	made	made,
26473/20	taken that	taken that
26474/20	mill	mil
26477/9	porour	porous
26480/20	condition	condition, and
26481/14	photo micrographs	photomicrographs
26482/18	perlitic	pearlitic
26483/13	perlite	pearlite
26483/13	ferrite	(ferrite)
26483/17	perlite	pearlite
26483/25	degress	degrees
26484/10	carburization	decarburization
26484/12	perlite	pearlite
26485/2	photo micrographs	photomicrographs
26486/15	motion	growth
26488/24	running	run under
26489/11,15	of absence	or absence

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26491/2	evidence was	evidence of benchmarks was
26494/21	perlite	pearlite
26495/2	it is	it is not
26495/3	Fe2O3	Fe <sub>2</sub> O <sub>3</sub>
26495/4	high-graded	hydrated
26495/15	the shrinkage	the casting shrinkage
26495/21	demarcation	the demarcation
26501/21	perlite	pearlite
26502/23	Sims or Auje	SIMS or Auger
26509/5	Eska and Auje	ESCA and Auger
26511/3	on reason	one reason
26511/12	CO2	CO <sub>2</sub>
26516/22	ferrous	ferric
26517/12	discussing with	discussing it with
26520/12	label -- that	label. That
26523/3	perlite	pearlite
26523/5	sid	side
26523/8	perlite	pearlite
26523/10	is	has
26525/13, 19	500 X	500X
26527/2	is	with is
26527/2, 7, 10, 22	500 X	500X
26531/25	defraction	diffraction

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26534/13	FE2O3	Fe <sub>2</sub> O <sub>3</sub>
26536/5, 13, 15	X-ray	x-ray
26536/14	Crone	McCrone
26537/20	X-ray	x-ray
26538/8	probitive	probative
26538/19	X-ray	x-ray
26545/5	crack	cracks
26565/24	must.	must be.
26568/10	high	high load
26568/25	repititious	repetitious
26570/22	measures	measured
26578/15	350 or 39	35 or 3900 KW
26580/24	WITNESS RAUN	WITNESS RAU
26581/13	levels in	levels, and
26581/15	LOLCO	LILCO
26584/15	and the	in the
26585/8	inferring	measuring
26588/1	through	though
26590/9	Fe2O3	Fe <sub>2</sub> O <sub>3</sub>
26590/11	have less	have reddish
26591/16	million	millionth
26591/16	1/10	10
26593/9	oxide	oxidize

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26593/20	500 X	500X
26594/21	it can	you can
26596/3	and particles	nor have particles been
26596/17	mill	mil
	Delete duplicate pages 26587 through 26596	
26599/21	come it	come in
26601/8	result	result,
26601/9	solidified	solidified,
26602/5	cooling	cooling,
26611/20	can	cam
26613/7	there	that
26620/23	Basically te	Basically the
26621/8	what the	what that
26621/22	Text omitted	
26624/7	cracks to	cracks in 101 and 102 to
26625/10	in 101 made	made in 101
26630/22	shows in	shows the
26632/1	wells	welds
26632/10	gage	gage measurement,
26633/24	not	not the case in 101
26635/13	crack thta	crack that
26635/22	less	less severe
26640/5	bridging	bridging



<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26641/6	are a deep	are as deep
26642/3	inner cooler	intercooler
26643/21	on because	onto because
26643/25	support	support,
26644/1	shrinks	shrinks,
26645/18	were, the	were. The
26646/6	We cant	We can't
26652/13	location	locations
26654/1	a navicular	an accicular
26655/3	to very extensive amounts	in very extensive amounts,
26655/20	two type locations	two locations
26655/21	it in one very	indications and in those
26655/21	instance	instances
26656/5	utectic	eutectic
26656/5	This last	This is the last
26656/7	intersect	intersect,
26656/12	that one	in which one
26656/13	seeing.	seeing Widmanstaetten graphite.
26656/18	regions	no regions
26657/14	walls and	walls, and
26657/15	microstructure	microstructure,
26660/17	until thie	until the

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of:	X	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Thursday, November 15, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26682/16	there was	there was a
26684/20	numbers on	numbers are on
26687/5	right towards from right towards	right towards
26692/8	Andseron	Anderson
26693/22	particle	particles
26698/17	one	on
26699/8	top in	top and in
26700/3	in	at
26700/25	Text omitted	
26701/1	Text omitted	
26701/16	what	that

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26706/11	to temperature	to a temperature
26706/21	proviced	provided
26706/26	"derived"	Delete
26707/5	to temperature	to a temperature
26707/11	over	beyond
26707/13	thickness	thicknesses
26707/19	technical	analytical
26708/9	rust, what	rust. What
26714/18	at higher	at a higher
26714/2	0.5	.05
26715/15	it's	and it's
26717/23	if I	if he
26722/2	Eulig	Ulig
26722/15	perlite	pearlite
26724/17	manufacturer	manufacturers
26728/19	particular electrode	particular electrode
26733/5	you	your
26735/16	Witness Anderson)	(Witness Anderson)
26739/21	photogrpahs	photographs
26744/12	pariticular	particular
26744/16	for number	of number
26745/9	lables	labels
26746/8	.1.	.1 inch.

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26748/6	original 103	original 103;
26755/24	essentially	essential
26758/12	Craig	Greg
26761/2	assume	assumes
26769/17	the formation	the crack formation
26773/25	other	stronger
26775/10	JUDGE BRENNER:	WITNESS RAU:
26776/8	replacement	replacement block
26776/9	appropriatae	appropriate
26777/11	be in the	be on the
26779/4	the assigned the	he assigned the
26779/14	zero. Then	zero, then
26779/15	level	levels
26779/22	variant	very
26781/2	thing	block
26784/24	defraction	diffraction
26785/1	defraction	diffraction
26790/11	bases	basis
26790/13	compressive	tensile
26795/5	that I	whether I
26795/19	materials'	material's
26795/20	no	not
26798/4	clearly	clearly.

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26799/7	Hauppaugh	Hauppauge
26809/14	shining	shiny
26811/14	89	81
26818/14	turn	turned
26825/25	board	Board
26827/13	be	been
26832/7	though	thought
26835/25	characateristics	characteristics
26837/24	you?	you?"
26838/14	fore	before
26838/15	reference.	reference
26838/23	testify	testified
26839/10	mill	mil
26851/16	perlite	pearlite
26854/15	FE2O3	Fe <sub>2</sub> O <sub>3</sub>
26854/16	FE3O4	Fe <sub>3</sub> O <sub>4</sub>
26854/17	FE3O4	Fe <sub>3</sub> O <sub>4</sub>
26854/21	FE2O3	Fe <sub>2</sub> O <sub>3</sub>
26856/22	magnatite	magnetite
26857/7, 9,, 10, 12	magnatite	magnetite
26858/24, 25	question. The	question than the
26859/2, 5, 8, 9, 16	magnatite	magnetite

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26860/9, 11, 15, 17, 20, 24	magnatite	magnetite
26860/18	dehydrated	hydrated
26861/11, 13, 15, 20, 21, 24, 25	magnatite	magnetite
26862/3, 12, 17	magnatite	magnetite
26863/1, 3	magnatite	magnetite
26863/2	focusing	focusing
26864/21	happen	happy
26867/14	no	none
26871/3	thousandths	thousandth
26882/1	collate	cooling rate
26883/9	a	any
26885/12	photograph	photograph,
26891/4	loop LOCA	LOOP/LOCA
26892/12	mentioned	mention
26893/8	a piece	apiece
26904/10	so	some

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
BEFORE THE ATOMIC SAFETY & LICENSING BOARD

In the Matter of:	X	
	:	
LONG ISLAND LIGHTING COMPANY	:	Docket No. 50-322-OL
	:	
(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Friday, November 16, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26923/25	Text omitted	
26924/17	loop	LOOP/
26925.1/18	/LOCA	LOCA
26925.1/20	loop LOCA	LOOP/LOCA
26929/18	menas	means
26941/4	of	on
26945/25	schedue	schedule
26948/14	reflecting	reflecting
26949/19	focussed	focused
26952/15	focussed	focused
26953/5	bases	basis
26953/13	accomodations	accommodations



<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26954/4	bases	basis
26957/14	Court. .	Court.)
26966/13	The point point I	The point I
26976/18	receit	receipt

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
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(Shoreham Nuclear Power Station,	:	
Unit 1)	:	
	X	

PROPOSED ERRATA TO TRANSCRIPT  
OF HEARING IN ABOVE ENTITLED MATTER

Tuesday, November 20, 1984

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
26986/5	us	up
26986/13	is	it
26995/4	sy	say
26996/2	is	of
27004/25	because there	because if there
27016/24	applied	applied.
27033/21	critera	criteria
27035/2	miht	might
27036/11	North Anne	North Anna
27037/25	staff	Staff
27038/1	there is	there is a
27038/15	appeal board's	Appeal Board's

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
27038/19	staff	Staff
27039/7	report	reports
27039/13	county	County
27039/20	appeal	Appeal
27039/21	board	Board
27039/23	county (twice)	County (twice)
27040/5	county (once)	County (once)
27040/7	county (once)	County (once)
27040/10	licensing board, the appeal board told the licensing board	Licensing Board, the the Appeal Board told the Licensing Board
27040/12	developes	develops
27040/12	county	County
27040/14	licensing board	Licensing Board
27040/17	county	County
27040/18	board	Board
27040/24	appeal board	Appeal Board
27040/25	board	Board
27041/1	appeal board	Appeal Board
27041/1	board	Board
27041/3	board	Board
27041/17	Mr. Dau	Mr. Dawe
27041/25	Mr. Dau	Mr. Dawe
27042/1	county	County

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
27042/5	board	Board
27042/6	county	County
27042/10	board	Board
27042/10	appeal board	Appeal Board
27042/11	board	Board
27042/11	county	County
27042/17	board	Board
27042/24	giving	give
27043/2	permitting license	permitting a license
27043/5	board	Board
27043/8	board	Board
27043/12	licensing board	Licensing Board
27043/24	county	County
27043/25	secific	specific
27044/2	board	Board
27044/3	board	Board
27044/7	county	County
27046/24	pendancy	pendency
27050/13	supercede	supersede
27050/24	want apologize	want to apologize
27051/5	supercede	supersede
27052/2	bases	basis
27056/9	parce (twice)	parcel

<u>Page/Line</u>	<u>Reads</u>	<u>Should Read</u>
27058/11	bases	basis
27059/8	bases	basis
27066/21	crystalized	crystallized
27071/24	bases	basis
27073/5	But certainly	But we certainly
27074/14	bases	basis
27075/17	pendancy	pendency
27075/24	bases	basis