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DATE: April 27, 1988

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Before the Atomic Safety and Licensing Board

In the Matter of)	
LONG ISLAND LIGHTING COMPANY)	Docket No. 50-322-OL-3
(Shoreham Nuclear Power Station,)	(Emergency Planning)
Unit 1))	

GOVERNMENTS' RESPONSE IN OPPOSITION TO LILCO'S
MOTION TO STRIKE DIRECT TESTIMONY OF DAVID T. HARTGEN
REGARDING HOSPITAL EVACUATION TIME ESTIMATES

By motion dated April 20, 1988,¹ LILCO seeks to strike substantial portions of the Direct Testimony of David T. Hartgen, Ph.D., P.E., on Behalf of the State of New York Regarding Hospital Evacuation Time Estimates (April 13, 1988) (the "Hartgen Testimony"). The State of New York, County of Suffolk and the Town of Southampton (the "Governments") hereby oppose LILCO's Motion and urge the Board to deny it in its entirety.

LILCO advances three principal arguments in support of the motion to strike the testimony in question: (1) the testimony allegedly seeks to reopen already-litigated issues regarding the assumptions which form the bases of the special facility and hospital evacuation time estimates ("ETEs"); (2) the testimony

¹LILCO's Motion to Strike Direct Testimony of the State of New York's Witness David T. Hartgen Regarding Hospital Evacuation Time Estimates (April 20, 1988) (the "LILCO Motion").

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asserts that LILCO's failure to account for possible future changes and developments renders the hospital ETEs inaccurate; and (3) the testimony seeks to litigate alleged minute planning details which need not be the subject of evidentiary hearings, but rather, should be delegated to the NRC Staff. On the basis of these three objections, LILCO seeks to strike nine specific portions of the Hartgen Testimony as well as 15 attachments thereto.

LILCO's arguments, however, are groundless and unsupported in fact or in law. As will be explained in greater detail below, LILCO makes assertions of fact which are untrue and for which it is therefore unable to provide any record citations. In other instances, LILCO ignores the law which this Board has already established on the admissibility of traffic-related evidence. Moreover, LILCO's Motion ignores and/or mischaracterizes the Board's February 24, 1988 Order which identified the scope of the remanded proceeding on hospital ETEs.² Accordingly, the Motion should be dismissed in its entirety.

The Governments' response to LILCO's three principal arguments is presented below in a general discussion, followed by specific analysis of LILCO's individual requests to strike particular testimony and attachments.

²Memorandum and Order (Ruling on LILCO's Motion for Summary Disposition of the Hospital Evacuation Issue) (Feb. 24, 1988) ("February 24 Order").

A. Governments' General Response to LILCO's Three Principal Arguments for Striking Testimony

1. LILCO's Previous Litigation/Scope of Proceeding Argument

The LILCO argument asserted most often in favor of striking portions of the Hartgen Testimony is that the testimony seeks to reopen allegedly "already-litigated issues" regarding the assumptions underlying hospital evacuation time estimates. See Motion at 1. LILCO asserts that testimony regarding these "previously-litigated" issues is outside the scope of the remanded hospital ETE proceeding.

LILCO's "previously litigated" argument is both unfounded and patently misleading. The argument focuses largely on testimony offered by Dr. Hartgen to challenge assumptions stated in Revision ("Rev") 9 regarding traffic speeds and the bases underlying those assumptions. LILCO flagrantly misleads the Board and the parties with its blanket assertion that traffic speeds and the assumptions underlying these speeds have been previously litigated in earlier emergency planning proceedings. Indeed, most of the times reflected in LILCO's Rev. 9 hospital evacuation time estimates are completely new and were only recently derived. LILCO cites to a general reference in the PID to the effect that the speeds used in the prior special facility evacuation time estimates were reasonable. But LILCO has wholly

failed to establish that those are the same speeds used in the time estimates at issue. A review of the record reveals that they are not the same.

The speeds assumed in LILCO's latest analysis are set forth in Table XIIIIB of Appendix A of the LILCO Plan. A copy of that Table is Attachment 1 hereto. The speeds on which LILCO's prior special facility evacuation time estimates were based are stated at pages 8-9 of LILCO's Testimony on Contentions 72.A and E (March 21, 1984), f.f. Tr. 9101 ("LILCO Testimony"). A copy of this LILCO Testimony is Attachment 2 hereto. A comparison of the two attachments reveals how LILCO has misled the Board.

For instance, subpart 5 of Attachment 2 hereto reveals an assumed speed of eight mph for westward travel outside of the EPZ. Attachment 1 hereto shows a range of speeds from 10 to 15 mph depending on the route traveled. In addition, the speeds in Attachment 1 hereto differ depending on whether one is east or west of Brentwood and depending on the amount of time that has passed during the evacuation. Attachment 2 hereto reflects no such differentiation in speeds, except for one assumption (subpart 9) concerning ambulance and ambulance speeds within the EPZ after the general public has left.

Many other differences between the two attachments will be

evident to the Board upon examination and will not be dwelled upon here. The obvious conclusion one must draw from comparing the two attachments, however, is that most of the assumed speeds in LILCO's hospital evacuation time estimates are new and that those speeds have been further varied by geographical and temporal factors.

Indeed, Mr. Lieberman admitted in his recent deposition that many travel speed assumptions presented in Table XIII B are entirely new to these proceedings, having been derived only in the time since he was asked to prepare the Rev. 9 hospital ETES. See, e.g., Deposition of Edward B. Lieberman at 24 (March 25, 1988) (assumed speed for route I-495 not previously litigated);³ Tr. at 29-30 (other speeds also derived in October-November 1987 timeframe).

Thus, Mr. Lieberman's own testimony contradicts the assertions in LILCO's Motion that the travel speeds and assumptions presented in Rev. 9 have been previously litigated in prior proceedings. In fact, LILCO's "previously litigated" argument is merely a thinly-veiled attempt to exempt from scrutiny travel speed assumptions which rely on little beyond Mr. Lieberman's personal judgments as to normal traffic conditions on the routes in question. See, e.g., Tr. at 24 (new 40 mph

³The Lieberman deposition transcript is hereafter cited as "Tr."

assumption for eastbound traffic on I-495 is simply "a speed I feel comfortable with . . .").

In a variation of its vacuous "previously litigated" argument, LILCO argues that certain Rev. 9 speeds (presumably, the LIE) were litigated in the 1987 reception center remand hearing. This argument is particularly wrong and legally incorrect. The speeds assumed on the LIE in the reception center proceeding are different from the speeds assumed in the hospital evacuation time estimates. Also, LILCO's attempt to assert a res judicata claim on the basis of the reception center proceedings, despite the fact that there has been no decision in that proceeding, much less one which upholds LILCO's contested speeds and assumptions, is unfounded and should be summarily rejected by the Board.⁴

⁴Curiously, LILCO observes that at several points, the Hartgen Testimony makes reference to prior testimony on the same subject. LILCO conveniently overlooks both that: (1) the prior testimony in question is the State's reception centers testimony; and (2) LILCO itself seeks to rely on its reception center traffic speed testimony -- in fact, LILCO seeks to accord res judicata effect to the positions advanced in its 1987 reception centers testimony.

In any event, the applicable legal principle and law of the case establish that prior testimony is not ipso facto inadmissible in a subsequent proceeding. See Memorandum and Order (Ruling on LILCO's Motion to Strike the Testimony of Stephen Cole et al.), at 7 (June 9, 1987) ("Cole Ruling"). The appropriate inquiry concerns the relevance of the prior testimony to the proceeding at hand. See id.

2. LILCO's Future Developments Argument

LILCO's second argument is that the Hartgen Testimony cites possible future changes and developments in order to undermine the accuracy and reliability of the hospital ETES. See Motion at 1. LILCO attempts to buttress this argument by repeating its oft-asserted claim that "the regulations do not require emergency planners to speculate about such future changes; rather, such changes are matters for the continuing planning process." See id. This argument, however, has already been unequivocally rejected by the Board in the past, see Memorandum and Order (Ruling on LILCO's Motion to Strike Testimony of David T. Hartgen and Robert C. Millspaugh) (June 22, 1987) ("Hartgen- Millspaugh Ruling"), and should be dismissed here as well.

In the Hartgen-Millspaugh Ruling, the Board rejected LILCO's assertions that testimony citing projected future population growth and traffic patterns was outside the scope of the proceeding and an attempt to impose planning obligations not countenanced by the emergency planning regulations. See id. at 4-5 (nothing in the NRC's emergency planning regulations prohibits a Board from acting on reliable projections of future populations or traffic which weigh against the issuance of an operating license). The Board based its ruling on the predictive nature of its findings:

The predictive nature of emergency planning findings may ring to the advantage of applicants

(as it did in the case cited) when it permits applicants to commit to future actions to meet requirements that it has not met at the moment of trial [However] predictive information potentially adverse to a reasonable assurance finding is as admissible in a NRC proceeding as predictive information which supports such a finding.⁵

Hartgen-Millspaugh Ruling at 5 (emphasis added). This ruling constitutes the law of the case and mandates the rejection of LILCO's argument.

3. LILCO's Delegation Argument

The last of LILCO'S principal arguments is that portions of the Hartgen Testimony seek to litigate details which should be delegated to the NRC Staff for confirmation. The argument is unsupported on the facts at hand; moreover, LILCO's transparent mischaracterization of the Hartgen Testimony in question reveals the total absence of actual foundation for LILCO's delegation argument. The Governments address the delegation contention below in connection with the specific portions of testimony to which LILCO applies it.

⁵The Board found that LILCO's future developments objection goes to the weight to be accorded testimony, not to its admissibility. The same holds true with respect to the testimony which LILCO currently seeks to strike pursuant to its future developments theory.

B. Response to LILCO's Arguments to Strike Specific Portions of the Testimony

The Governments now address the nine specific portions of the Hartgen testimony which are the subjects of LILCO's Motion. The arguments below incorporate by reference those already discussed in the Governments' general response above.

1. LILCO's first request seeks to strike the parenthetical "(such as traffic speed)" from the following sentence: "If the conditions (such as traffic speed) prevailing at the time of an evacuation are not in accordance with those assumptions, then LILCO's hospital evacuation time estimates will be substantially inaccurate." Testimony at 8; see LILCO Motion at 3. The basis for LILCO's request is that the traffic speed component of LILCO's hospital ETEs has been litigated previously in connection with the general population and special facilities ETEs. See Motion at 3. The argument is meritless.

As stated in the general response above, LILCO's assertions that traffic speeds are not properly the subject of inquiry in the remanded hospital ETE proceeding does not bear up under scrutiny. The point established by the sentence in question is that the entire hospital ETE analysis is founded upon a pile of questionable and/or untenable assumptions which, if not borne out in reality, will render the Rev. 9 hospital ETEs wholly inaccurate. The testimony goes to the essence of the question

presented in the remanded hospital ETE proceeding -- i.e., whether the bases and accuracy of LILCO's hospital ETE calculations render the Rev. 9 hospital ETE analysis reliable. The parenthetical in question is thus wholly proper; is consistent with the Board's February 24 Order; and, in any event, is not subject to LILCO's hollow claim of previous litigation.

2. LILCO's second request seeks to strike several pages of the Hartgen Testimony which identify weaknesses in assumptions about the travel speeds of vehicles both inside and outside of the EPZ. See LILCO Motion at 4-5. Again, the basis of LILCO's request is its contention that traffic speeds and the assumptions underlying them have been previously litigated and are thus outside the scope of the remanded hospital ETE proceeding. See LILCO Motion at 4.

For the reasons stated in Section A above, LILCO's argument is both misleading and wholly devoid of merit.

Finally, LILCO's request to strike Dr. Hartgen's citation of a Lieberman publication is baseless. The Lieberman article is cited to bolster and confirm Dr. Hartgen's testimony. Experts are entitled to state what they rely upon to base their conclusions. And, it is particularly pervasive, relevant and important to bring to the Board's attention instances where LILCO's own expert supports the Governments' position.

3. LILCO's third request to strike testimony concerns two sentences at the conclusion of a response to a question asking Dr. Hartgen to identify additional concerns about the number of patients for whom transportation should be provided. See LILCO Motion at 3. LILCO bases this request on its future changes and developments argument.

LILCO's argument merits scant attention here. The testimony in question challenges the reliability of the hospital ETEs given LILCO's failure to account for the sensitivity of the ETEs to future hospital growth or reductions. As stated above, the Hartgen-Millspaugh Ruling, which permits testimony about future growth and changes, is the law of the case and mandates the admission of the testimony. Furthermore, the testimony is clearly relevant as it goes to the reliability of the hospital ETEs which are premised upon EPZ hospital population assumptions which fail to account for future hospital population growth. Accordingly, this LILCO request to strike should be rejected.

4. LILCO's fourth request seeks to strike a question and answer addressing the capability of the reception hospitals to receive patients. See LILCO Motion at 5. LILCO advances two arguments to support this request: (1) the February 24 Order concluded that the existence and resources of reception hospitals is a ministerial matter properly delegated to the NRC Staff for

resolution; and (2) the testimony in dispute deals with future changes which are "a matter for the continuing planning process." Motion at 5.

Because LILCO's second argument simply restates its future developments theory for striking testimony, the Governments will not address it further here. The argument should be rejected for reasons already stated.

LILCO's first argument is new, however, and merits a brief response. Essentially, LILCO mischaracterizes the purpose of the testimony in question. The testimony at issue does not seek to litigate the existence of reception hospitals. Rather, the testimony in question merely goes to the unreliability of the Rev. 9 hospital ETE calculations because they are premised on the erroneous assignment of patients to reception hospitals that are not even a part of LILCO's Plan and are not intended by LILCO to be relied upon. Thus, the analysis conducted by LILCO does not reflect what might happen in a real emergency. Whether the use of such hospitals was simply sloppiness or a deliberate attempt to mislead is unclear. What is clear is that it casts doubt on the reliability of LILCO's ETES, which is precisely the subject of the remanded proceeding.

5. LILCO's fifth request concerns a portion of an answer to the question: "Could this policy [of filling reception hospitals

to capacity] result in increased evacuation times?" See LILCO Motion at 6-7. LILCO cites three reasons for striking the question and answer: (1) they are beyond the scope of the remanded proceeding; (2) they have been previously litigated; and (3) future growth is a matter for the continuing planning process. LILCO Motion at 6.⁶

LILCO's scope of the proceeding argument apparently is based upon the contention that the testimony seeks to litigate the existence and resources of reception hospitals. Here, LILCO misinterprets the purpose of the testimony. The testimony clearly acknowledges that it accepts the 14% vacancy rate mandated by the Board. See Hartgen Testimony at 24. The testimony uses this assumption to illustrate the sensitivity of the hospital ETES to underlying assumptions, such as future EPZ hospital patient population, or an influx of general population

⁶The language which LILCO seeks to strike reads:

- A. Yes. Assuming that reception hospitals have a 14% vacancy rate, I have prepared Attachments 16 and 18 herein, which show the reception hospitals and their available capacities, along with the number of patients assigned to them from each evacuating hospital. Attachment 16 herein clearly illustrates that virtually all of the available capacity in the 10 nearest hospitals west of the EPZ is used up. Essentially, the LILCO Plan is right at the margin of capacity for all of the proximate reception hospitals. A slight increase in patients to be transported out of the EPZ, or a reduction in reception center capacity (perhaps due to an influx of arriving general population evacuees), could cause an increase in evacuation time.

Testimony at 24.

evacuees. This sensitivity is germane to the reliability of the ETEs as a planning tool.

LILCO's "previously litigated" argument merely nit-picks at a typographical error in the testimony which inadvertently refers to reception center capacity rather than reception hospital capacity.

LILCO's future growth contention merits no further attention.

6. LILCO's sixth request seeks to strike in its entirety a section of the testimony addressing Dr. Hartgen's concerns about vehicles and driver availability. See LILCO Motion at 7-8. Again, LILCO offers several reasons why the proffered testimony seeks to reopen previously litigated issues.

LILCO has simply misunderstood the nature of the testimony regarding driver and vehicle availability. The testimony is offered to challenge the validity of an assumption underlying the hospital ETEs -- specifically the assumption that 193 ambulances and ambulettes, and the requisite number of drivers will be available for continuous operation throughout the length of the evacuation. That number may indeed be under contract and the Governments do not dispute that here. However, the failure to allow in the analysis for driver fatigue, vehicle breakdown, etc. means that more vehicles might actually be required. The

testimony thus plainly goes to the issue of the reliability of LILCO's vehicle and driver availability assumption and ultimately to the reliability of the ETES. Accordingly, the testimony is admissible in its entirety.

7. LILCO's seventh request to strike testimony concerns a portion of an answer in which Dr. Hartgen expresses certain concerns regarding the evacuation routes to be followed in implementing the hospital evacuation. See LILCO Motion at 8. The language in question reads:

2. Route distances appear to be in error. Many route lengths were estimated by scaling the distances off Hagstrom maps, and multiplying by a scaling factor. To correct these problems, I carefully reviewed the distances on the trace path to assess this method. Of the 11 primary distances, two were correct. All of the segments on the State routes were, in fact, of different lengths, and arithmetic and scaling errors were made on the remainder of the segments. Some of these resulted in longer or shorter distances. Attachment 21 herein shows the results. When the trace is corrected for these errors, a +1.52-mile difference is introduced: The revised trace time is 12.40 (12:24). See Attachment 22 herein.

Testimony at 29.

LILCO mischaracterizes this language as an attempt to "litigate 1½ differences in route lengths over a total of more than 130 miles." LILCO Motion at 8. In fact, the testimony concerning the determination of route lengths is offered to

address the issue of the reliability of the Rev. 9 hospital ETE calculations. The point made by Dr. Hargten is that the calculations contain numerous errors and inaccuracies, both favorable and unfavorable to LILCO. The fact that the errors net out to a 1.52 mile difference does not obviate the fact that the analysis was not conducted conscientiously and accurately. This lack of accuracy pervades the entire analysis and jeopardizes its reliability.

8. LILCO seeks to strike the phrase "largely arbitrary and unsupported" from Dr. Hartgen's answer to the question of whether the hospital evacuation time estimates are sufficiently comprehensive. See LILCO Motion at 8. For the reasons set forth in Section A.1 above, LILCO's argument is meritless. However, it should be noted that LILCO misleadingly asserts that the PID's earlier conclusions are dispositive on the question of the accuracy and reliability of the Rev. 9 hospital ETEs and the assumptions underlying them, despite the fact that the February 24 Order specifically concluded that "the bases for the evacuation time estimates are not entirely clear." Id. at 11. On this basis, the Board ordered an evidentiary hearing on the subject of the bases and accuracy of the hospital ETEs. The language which LILCO seeks to strike addresses that very issue in that it summarizes Dr. Hartgen's basic conclusion that LILCO's Rev. 9 hospital ETEs are founded upon a collection of assumptions wholly lacking in support. See Hartgen Testimony at 31, 34.

This summary of Dr. Hartgen's expert opinion is thus properly admissible. See Cole Ruling at 11; see also Section B.9, below.

9. LILCO finally seeks to strike numerous portions of Dr. Hartgen's summary of his findings concerning the bases and accuracy of LILCO's hospital evacuation time estimates. See LILCO Motion at 9. LILCO states that they have already been litigated, but offers no further explanation. For the reasons set forth in Section A.1 above, this "previously litigated" argument is unfounded and LILCO provides no support to the contrary.

The portions of Dr. Hartgen's testimony which are the subject of this request to strike merely summarize Dr. Hartgen's expert opinion. Thus, the testimony in question is consistent with the Board's previous ruling that an expert's opinion is admissible when it summarizes admissible testimony. See Cole Ruling at 11.

C. Governments' Response To Arguments To Strike Specific Attachments To The Testimony

LILCO also identifies 15 attachments which it seeks to strike on the grounds of either: (1) previous litigation; (2) outside the scope of the remanded hospital ETE proceeding; (3) concerning future developments; or (4) the Waterford precedent--presumably referring to the State of New York's alleged attempts to litigate minute implementation details. However, LILCO fails to elaborate

on its reasons for striking the individual attachments other than using the above shorthand terms. In the absence of any meaningful argument in support of their requests to strike, the Governments are at a loss to determine exactly how each shorthand term is intended to apply to each attachment. The Board should reject these requests out of hand. LILCO obviously did not intend them to be taken seriously. If the Board actually considers the requests, the Governments rely on the arguments already advanced in opposition to similar LILCO complaints addressed herein.

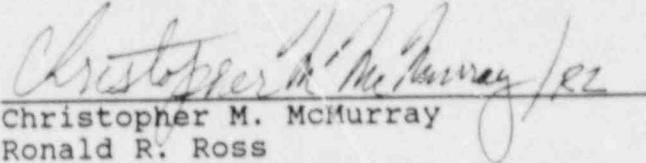
In addition, the Governments observe that the Board has already determined that exhibits supporting admissible testimony are themselves admissible. The Cole Ruling constitutes the law of the case. Because the attachments at issue support properly admissible testimony, the attachments are themselves admissible.

D. Conclusion

LILCO's grounds for moving to strike portions of the Hartgen Testimony are vacuous. LILCO's Motion should be denied in its entirety.

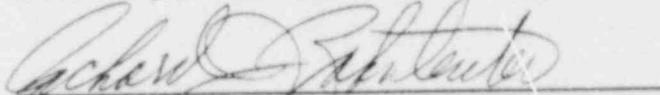
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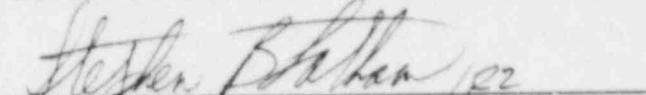
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TABLE XIII B
 TRAVEL SPEEDS FOR CALCULATION OF
 SPECIAL FACILITY AND SCHOOL EVACUATION TIME ESTIMATES

Eastbound Travel - West of Brentwood, (Route 111)

Routes	Normal Weather	Inclement Weather
I-495	40 mph	32 mph
RT-27	30 mph	24 mph
Other Roads	20 mph	16 mph

Eastbound (Inbound) Travel - East of Brentwood, (Route 111)

Routes	Normal Weather			Inclement Weather		
	Speeds	Prior to	Speed Afterward	Speeds	Prior to	Speed Afterward
I-495	20 mph	6.0 hrs	40 mph	16 mph	7.75 hrs	32 mph
RT-27	20 mph	6.25 hrs	30 mph	16 mph	8.0 hrs	24 mph
Other Roads	20 mph	6.5 hrs	20 mph	16 mph	8.25 hrs	16 mph

Westbound Travel - West of Brentwood, (Route 111)

Routes	Normal Weather			Inclement Weather		
	Speeds	Prior to	Speed Afterward	Speeds	Prior to	Speed Afterward
I-495	15 mph	6.5 hrs	40 mph	12 mph	8.25 hrs	32 mph
RT-27	12 mph	6.75 hrs	30 mph	10 mph	8.5 hrs	24 mph
Other Roads	10 mph	7.0 hrs	20 mph	8 mph	8.75 hrs	16 mph

TABLE XIII B

TRAVEL SPEEDS FOR CALCULATION OF
SPECIAL FACILITY AND SCHOOL EVACUATION TIME ESTIMATES

(Continued)

Westbound Travel - From EPZ Boundary to Brentwood, (Route 111)

Routes	<u>Normal Weather</u>			<u>Inclement Weather</u>		
	Speeds	Prior to	Speed Afterward	Speeds	Prior to	Speed Afterward
I-495	15 mph	6.0 hrs	40 mph	12 mph	7.75 hrs	32 mph
RT-27	12 mph	6.25 hrs	30 mph	10 mph	8.0 hrs	24 mph
Other Roads	10 mph	6.5 hrs	20 mph	8 mph	8.25 hrs	16 mph

Evacuation Travel Within EPZ

Vehicle	Routes	<u>Normal Weather</u>			<u>Inclement Weather</u>		
		Speeds	Prior to	Speed Afterward	Speeds	Prior to	Speed Afterward
Ambulance	All	6 mph	5.0 hrs	35 mph	5 mph	6.0 hrs	30 mph
Ambulette	All	6 mph	5.0 hrs	30 mph	5 mph	6.0 hrs	25 mph
Bus	All	6 mph	5.0 hrs	30 mph	5 mph	6.0 hrs	25 mph

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LILCO, March 21, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)
LONG ISLAND LIGHTING COMPANY) Docket No. 50-322-OL-3
(Shoreham Nuclear Power Station,) (Emergency Planning Proceeding)
Unit 1))

LILCO'S TESTIMONY ON
CONTENTIONS 72.A AND E

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Attachment

the initial alert to the ambulance and van companies. This information was obtained for both peak (6 a.m. to 6 p.m.) and off-peak hours. Since the arrival of ambulances and ambulettes was slightly slower for off-peak hours, this arrival distribution was used to compute evacuation time estimates. Buses were assumed to arrive at the edge of the EPZ within 2 hours of the declaration of a Site Area Emergency.

2. Vehicles were assumed to travel in a counterflow direction to evacuating traffic at a mean speed of 20 miles per hour from the staging areas to their pick-up location. The distance traveled on this leg varied depending on the location of the staging area and the special facility.
3. The time needed to load passengers at special facilities was assumed to be 10 minutes for ambulances; 15 minutes for ambulettes; and 10 minutes for buses. It was assumed that up to 6 vehicles could be loaded simultaneously at a given facility. Finally, it was assumed that given the period of time required for ambulances and ambulettes to reach special facilities, the residents of those facilities would be prepared to begin boarding those vehicles promptly upon their arrival.
4. Vehicles were assumed to travel at a mean speed of 6 miles per hour on their trip from the special facility to the EPZ boundary. This speed estimate was obtained from the results of Case 12, which is the base case evacuation of the entire EPZ.
5. Vehicles were assumed to travel at a mean speed of 8 miles per hour from the EPZ boundary to their assigned reception centers. Reception centers were assigned on the basis of information presented in LILCO's testimony on Contention 72.C.

6. The time assumed for unloading passengers at reception centers was the same as that assumed for loading them (see Item 1 above).
7. The mean speed for trips from reception centers to staging areas was assumed to be 20 miles per hour, since these trips will be in a counterflow direction to evacuating traffic.
8. All drivers were assumed to return to the staging areas to receive their next assignment. The time needed to obtain this assignment was assumed to be 15 minutes.
9. The assumptions used to calculate the time needed to complete a second pick-up and return to the EPZ boundary were the same as those presented in Items 2 to 4 above, except that the mean travel speed for both the inbound and outbound trips were assumed to be 35 miles per hour for ambulances and 30 miles per hour for ambulettes, if these trips occurred after the automobile-owning public had completed its evacuation.

Finally, in order to provide an evacuation time estimate in terms of the time following an order to evacuate, it was conservatively assumed that an order to evacuate would be given 25 minutes after the initial public notification. This is the same event sequence assumed for calculating the evacuation times for the general public needing bus transportation (see Appendix A, p. IV-74b).

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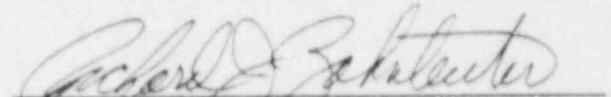
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Board Panel Docket
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