

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD 85 DEC 24 A11:06

In the Matter of)
LONG ISLAND LIGHTING COMPANY)
(Shoreham Nuclear Power Station,)
Unit 1))

OFFICE OF SECRETARY
DOCKETING & SERVICE
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Docket No. 50-322-OL-3
(Emergency Planning)

NRC STAFF BRIEF IN OPPOSITION TO "SUFFOLK COUNTY,
STATE OF NEW YORK, AND TOWN OF SOUTHAMPTON
BRIEF ON APPEAL OF LICENSING BOARD APRIL 17, 1985
PARTIAL INITIAL DECISION ON EMERGENCY PLANNING"

Bernard M. Bordenick
Counsel for NRC Staff

December 23, 1985

8512260226 851223
PDR ADOCK 05000322
G PDR

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TABLE OF CONTENTS

	<u>Page</u>
Table of Authorities	v
Introduction	1
Statement of the Case	2
Argument	5
I. Response to Appellants' Introductory Arguments	5
II. ASLB Did Not Commit Procedural Error	8
A. Denial of Contentions	8
1. The Licensing Board's Ruling Excluding Contention 22.A, B, and C, Seeking to Enlarge the EPZ Should be Affirmed	8
2. The Licensing Board Properly Excluded a Proposed Contention on Telephone Communications at the Phase II Stage of This Proceeding	14
3. The Licensing Board Correctly Denied Admission of a Proposed Contention Relating to the Effects of a Labor Strike	16
B. Discovery Against FEMA Was Properly Limited	22
III. The PID Should Be Affirmed	26
A. Schools (Contentions 24.E, 24.F, 24.M, 61.C-71)	26
1. Lack of Letters of Agreement With School Districts (Contention 24.E)	27
2. Lack of Agreements With Bus Driver Companies to Evacuate Children (Contention 24.M)	29
3. Assurance That School Children Will Be Adequately Sheltered (Contention 61.C)	30
4. Provisions for Early Dismissal of School Children (Contentions 68 and 69)	32
5. Lack of Preplanning for Evacuation (Contention 70)	32

	<u>Page</u>
B. Special Facilities (Contentions 24.G, 24.J, 24.K, 24.N, 60, 63 and 72)	33
1. Agreements Are Not Required with Special Facilities Which Are Not Support Organizations (Contention 24.J)	34
2. Protective Action Recommendations for the Radiosensitive (Contentions 60 and 63)	36
3. The Record Shows Adequate Planning for Evacuation of Hospital Patients (Contentions 24.G, K, 60, 63, 72.D, E)	37
4. Relocation Centers for Hospitals (Contentions 24.N and 72.C)	39
5. Sheltering Hospital Patients (Contention 72.D)	41
C. Credibility and the Evacuation Shadow Phenomenon (Contentions 15 and 23)	42
1. The Effect of LILCO's Lack of Credibility (Contention 15)	44
2. The Likelihood of "Evacuation Shadow" (Contention 23)	46
3. The Licensing Board Did Not Ignore the Regulatory Standards in Ruling on Contentions 15 and 23	51
D. Role Conflict (Contention 25)	51
1. Role Conflict Will Not Interfere With an Emergency Response	52
2. The Licensing Board Properly Excluded the Teachers' Testimony	54
3. The Licensing Board Also Properly Excluded a Survey of Volunteer Firemen	55
4. The Licensing Board's Findings on Role Conflict Have Ample Record Support	56
E. Sheltering (Contention 61)	58

	<u>Page</u>
F. Evacuation (Contentions 65, 23.D 23.H, 66, 67.C, 72.A and 73.B.4)	59
1. The Licensing Board Properly Excluded the Testimony of Finlayson, <u>et al.</u>	60
2. The Licensing Board Correctly Accepted Testimony Which Quantified Evacuation Times Rather Than Testimony Which Did Not Do So	62
3. The Licensing Board Properly Considered and Weighed Evidence on Route Deviation	64
4. The Licensing Board Properly Rejected Appellants' Evacuation Time Estimates (Contention 23.D)	67
5. The Licensing Board Did Not Err In Its Consideration of Expert Testimony	69
6. The Board Was Correct In Its Ruling on Other Evacuation Issues	70
G. The Number of Buses for the Transit-Dependent Population Is Sufficient (Contention 24.F.2)	74
H. Mobilization of Emergency Workers (Contention 27)	76
I. Notification of Emergency Personnel and the Public (Contentions 26, 24.T, 55-59)	79
1. The Record Supports the Licensing Board's Findings on the Notification of Emergency Workers and the Public (Contentions 55 and 56)	79
2. Notification to Boaters (Contentions 24.T & 59)	80
J. Communications (Contentions 24.L and 28-34)	81
K. Training (Contentions 24.S, 39-41, 44 and 98-100)	85
L. Ingestion Pathway Protective Actions (Contentions 81 and 24.R)	88
1. The Record Supports the Licensing Board's Findings That LILCO Can Implement Ingestion Pathway Protective Actions (Contention 81)	88

	<u>Page</u>
2. The Licensing Board's Findings That Connecticut Would Take Adequate Protective Measures (Contention 24.R)	90
M. The Recovery and Reentry Provisions Are Adequate (Contention 85)	92
Conclusion	94

TABLE OF AUTHORITIES

	<u>Page</u>
<u>CASES</u>	
<u>U.S. v. Lambert</u> , 589 F.Supp. 366 (M.D. Fla. 1984)	6
<u>ADMINISTRATIVE DECISIONS</u>	
<u>COMMISSION</u>	
<u>Duke Power Co. (Catawba Nuclear Station, Units 1 and 2),</u> <u>CLI-83-19, 17 NRC 1041 (1983)</u>	18
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station,</u> <u>Unit 1), CLI-83-13, 17 NRC 741, aff'g LBP-83-22,</u> <u>17 NRC 608 (1983)</u>	3
<u>Southern California Edison Co. (San Onofre Nuclear</u> <u>Generating Station, Units 2 and 3), CLI-83-10, 17 NRC</u> <u>528 (1983)</u>	40, 41, 58, 61, 76
<u>ATOMIC SAFETY AND LICENSING APPEAL BOARD</u>	
<u>Cincinnati Gas & Electric Co. (W. H. Zimmer Nuclear</u> <u>Power Station, Unit 1), ALAB-727, 17 NRC 760 (1983)</u>	42, 58, 61, 75, 78
<u>Detroit Edison Co. (Enrico Fermi Atomic Power Plant,</u> <u>Unit 2), ALAB-730, 17 NRC 1057 (1983)</u>	61, 62
<u>Detroit Edison Co. (Enrico Fermi Atomic Power Plant,</u> <u>Unit 2), ALAB-707, 16 NRC 1760 (1982)</u>	20
<u>Duke Power Co. (Catawba Nuclear Station, Units 1 and 2),</u> <u>ALAB-813, 22 NRC 59 (1985)</u>	8, 42, 86
<u>Houston Lighting & Power Co. (Allens Creek Nuclear</u> <u>Generating Station, Unit 1), ALAB-582, 11 NRC 239 (1980)</u>	91
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station,</u> <u>Unit 1), ALAB-824, 22 NRC ____ (Nov. 21, 1985)</u>	55, 62
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station,</u> <u>Unit 1), ALAB-818, 22 NRC ____ (Oct. 18, 1985)</u>	2, 31, 78
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station,</u> <u>Unit 1), ALAB-780, 20 NRC 378 (1984)</u>	24

	<u>Page</u>
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-773, 19 NRC 1333 (1984)</u>	22, 24
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-743, 18 NRC 387 (1983)</u>	20, 22
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-788, 20 NRC 1102 (1984), aff'g LBP-82-115, 16 NRC 1923 (1983)</u>	14, 16
<u>Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076 (1983)</u>	7, 42
<u>Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-781, 20 NRC 819 (1984)</u>	5, 7, 11, 12, 42, 58, 68, 75
<u>Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1 & 2), ALAB-461, 7 NRC 313 (1978)</u>	85
<u>Public Service Co. of New Hampshire (Seabrook Station, Units 1 & 2), ALAB-422, 6 NRC 33 (1977)</u>	6
<u>Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 & 3), ALAB-717, 17 NRC 346 (1983)</u>	80
<u>Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 & 3), ALAB-680, 16 NRC 127 (1982)</u>	80
<u>Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 & 3), ALAB-673, 15 NRC 688 (1982)</u>	55
<u>Tennessee Valley Authority (Hartsville Nuclear Plant, Units 1A, 2A, 1B & 2B), ALAB-367, 5 NRC 92 (1977)</u>	85
<u>Washington Public Power Supply System (WPPSS Nuclear Project No. 3), ALAB-747, 18 NRC 1167 (1983)</u>	19

ATOMIC SAFETY AND LICENSING BOARD

<u>Carolina Power & Light Co. (Shearon Harris Nuclear Plant, Units 1 & 2), LBP-84-29B, 20 NRC 389 (1984)</u>	92
--	----

	<u>Page</u>
Cincinnati Gas & Electric Co. (W. H. Zimmer Nuclear Power Station, Unit 1), LBP-82-48, 15 NRC 1549 (1982), <u>aff'd</u> , ALAB-727, 17 NRC 760 (1983)	29
Consolidated Edison Co. (Indian Point, Unit No. 2), LBP-83-68, 18 NRC 811 (1983), <u>modified</u> , CLI-85-6, 21 NRC 1043 (1985)	2, 29, 48, 56, 57, 58, 59, 63, 87
Consumers Power Co. (Big Rock Point Plant), LBP-84-32, 20 NRC 601 (1984)	73
Consumers Power Co. (Big Rock Point Plant), LBP-83-44, 18 NRC 201 (1983)	78
Consumers Power Co. (Big Rock Point Plant), LBP-82-77, 16 NRC 1096 (1982)	87
Duke Power Co. (Catawba Nuclear Station, Units 1 & 2), LBP-84-37, 20 NRC 933 (1984)	50, 63, 67, 70, 77
Kansas Gas & Electric Co. (Wolf Creek Generating Station, Unit 1), LBP-84-26, 20 NRC 53 (1984)	41, 80, 87, 87
Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-85-31, 22 NRC 410 (1985)	2, 30, 43, 47, 51, 76, 90
Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-85-12, 21 NRC 644 (1985)	<u>passim</u>
Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-82-115, 16 NRC 1923 (1982), <u>aff'd</u> , ALAB-788, 20 NRC 1102 (1984)	3
Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-82-19, 15 NRC 601 (1982)	6
Louisiana Power & Light Co. (Waterford Steam Electric Station, Unit 3), LBP-82-100, 16 NRC 1550 (1982)	48
Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), LBP-81-59, 14 NRC 1211 (1981), <u>aff'd in most respects</u> , ALAB-697, 16 NRC 1265 (1982) & ALAB-698, 16 NRC 1290 (1982), <u>modified</u> , CLI-83-7, 17 NRC 336, <u>rev'd in part</u> , CLI-83-22, 18 NRC 299 (1983)	28, 30, 41, 48, 56, 58, 80, 87

	<u>Page</u>
<u>Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 & 2), LBP-82-70, 16 NRC 756 (1982), aff'd, ALAB-781, 20 NRC 819 (1984)</u>	56, 57, 58, 87, 93
<u>Pennsylvania Light & Power Co. (Susquehanna Steam Electric Station, Units 1 & 2), LBP-82-30, 15 NRC 771 (1982), sua sponte review, ALAB-702, 16 NRC 1530 (1982)</u>	28
<u>Philadelphia Electric Co. (Limerick Generating Station, Units 1 & 2), LBP-85-14, 21 NRC 1219 (1985)</u>	30, 59, 63, 75
<u>Public Service Co. of New Hampshire (Seabrook Station, Units 1 & 2), LBP-82-106, 16 NRC 1649 (1982)</u>	12
<u>Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 1 & 2), LBP-82-39, 15 NRC 1163 (1982), aff'd, ALAB-717, 17 NRC 346 (1983)</u>	12, 59, 93
<u>Union Electric Co. (Callaway Plant, Unit 1), LBP-83-71, 18 NRC 1105 (1983)</u>	78

UNPUBLISHED LICENSING BOARD ORDERS

<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Memorandum and Order (Denying Motion of Suffolk County to Admit New Contention) (Sept. 7, 1984)</u>	16, 18, 20
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Memorandum and Order (Determining That a Serious Safety Matter Exists) (July 24, 1984)</u>	4, 17
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Memorandum and Order (Ruling on Suffolk County Motion to Compel Production of Documents by FEMA) (May 18, 1984)</u>	22
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Order (Reconsidering Memo & Order Ruling on Suffolk County's Motion for Leave to File Modified Contentions 16 & 18 Concerning the LILCO Public Education Brochure) (April 10, 1984)</u>	4

	<u>Page</u>
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Order (Ruling on Suffolk County Motion for Leave to File New Contention Concerning the LILCO Offsite Emergency Preparedness Training Program) (March 19, 1984)</u>	4
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Memorandum and Order (Denying Motion of Governor Cuomo, Representing the State of New York, for Leave to File Rebuttal Testimony on Contention 65) (March 16, 1984)</u>	65
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Order (Ruling on Suffolk County Objections to Memo & Order Ruling on Intervenors' Proposed Modified Emergency Planning Contentions) (Feb. 28, 1984)</u>	5
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Memorandum and Order (Ruling on Intervenors' Proposed Emergency Planning Contentions Modified to Reflect Rev. 3 of the LILCO Plan) (Feb. 3, 1984)</u>	4
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Order (Granting Motions to Strike the Testimony of Fred C. Finlayson, Greg C. Minor and Edward P. Radford) (Jan. 11, 1984)</u>	60
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Order (Confirming Changes in Schedule with Respect to "Group 11" Contentions and Rulings on Motions to Strike) (Dec. 2, 1983)</u>	54
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Order (Ruling on Objections to Special Prehearing Conference Order) (Sept. 30, 1983)</u>	4, 13,
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Memorandum and Order (Denying Motion for Rejection of LILCO Transition Plan and for Certification to the Commission) (Aug. 30, 1983)</u>	3
<u>Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Special Prehearing Conference Order (Aug. 19, 1983)</u>	4, 13, 14

	<u>Page</u>
Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1): Prehearing Conference Order (Phase I - Emergency Planning) (July 27, 1982)	16
 <u>REGULATIONS</u>	
10 C.F.R. § 2.714	16, 18, 19, 20, 21, 22
10 C.F.R. § 2.743(c)	61
10 C.F.R. § 2.758	10, 11, 13
10 C.F.R. § 2.762	2
10 C.F.R. § 50.47	<u>passim</u>
10 C.F.R. Part 50, Appendix E	2, 79
 <u>MISCELLANEOUS</u>	
Environmental Protection Agency Protective Action Guidelines, EPA 520/1-75-001 (Sept. 1975)	58
Federal Rules of Evidence, Rule 401	61
NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants," (December 1978)	10
NUREG-0654/FEMA-REP-1, Rev. 1, "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," (November 1980)	<u>passim</u>
NUREG/CR-1745, "Analysis of Techniques for Estimating Evacuation Times for Emergency Planning Zones," (November 1980)	69
NUREG/CR-1856, "An Analysis of Evacuation Time Estimates Around 52 Nuclear Power Plant Sites," (May 1981)	69
Statement of Consideration, "Emergency Planning and Preparedness," 45 Fed. Reg. 55402, 55403, 55406 (August 19, 1980)	11

	<u>Page</u>
Statement of Consideration, "Emergency Planning and Preparedness," 47 Fed. Reg. 20323, 20325 (July 13, 1982)	7
Statement of Consideration, "Emergency Planning and Preparedness," 50 Fed. Reg. 19323 (May 8, 1985)	7

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INTRODUCTION

On April 17, 1985, the presiding Atomic Safety and Licensing Board issued a Partial Initial Decision (PID) ^{1/} on most of the litigated off-site Emergency Planning issues involving the Shoreham Nuclear Plant. On October 23, 1985, Suffolk County, the State of New York and the Town of Southampton (Appellants) jointly submitted a brief ^{2/} in support of an appeal of those portions of the PID which found the Long Island Lighting

^{1/} LBP-85-12, 21 NRC 644 (1985).

^{2/} Footnote 1 of the brief states that Appellants have not addressed all the asserted errors committed by the Licensing Board because the Appeal Board's 100-page limit has prevented that. Appellants ask the Appeal Board to permit "reasonable time" and no more than 20 pages to deal with several asserted errors they were unable to include in the brief presently before the Appeal Board. No reason, beyond an attempt to comply with the 100-page limit, is assigned for the request which the Staff opposes. Additional unwarranted extensions of time and page limits will only serve to further delay resolution of the off-site emergency planning controversy.

Company (LILCO) emergency plan to be in compliance with various elements of 10 C.F.R. § 50.47. ^{3/} Pursuant to 10 C.F.R. § 2.762, the NRC staff (Staff) files this brief in response to the joint appeal.

STATEMENT OF THE CASE

The PID below addressed the question whether, as to matters placed in controversy by Appellants, the LILCO offsite emergency response plan for the Shoreham Nuclear Power Station satisfies NRC regulations set out in 10 C.F.R. § 50.47 and 10 C.F.R. Part 50 Appendix E. ^{4/}

In Shoreham, for the first time, an NRC applicant has taken the responsibility for offsite emergency planning, without state or local participation. LILCO has attempted to satisfy this responsibility by preparing an offsite emergency response plan, known as the "LILCO Transition Plan," and by setting up an emergency plan implementing organization known as "LERIO" (Local Emergency Response Implementing Organization). The organization that would implement the plan in an emergency is known as "LERO" (Local Emergency Response Organization). LERO is composed primarily

^{3/} The Licensing Board's PID also concluded that LILCO lacks the legal authority to implement material portions of its proposed offsite emergency response plan (plan), and that, absent such legal authority, LILCO could not carry out its plan in conformity with Commission regulations. In ALAB-818, this Appeal Board affirmed the Licensing Board's decision in that regard. 22 NRC ___, October 18, 1985. In addition, a contested issue dealing with the adequacy of a proposed relocation center was resolved by the Licensing Board in a separate partial initial decision. LBP-85-31, 22 NRC 410 (August 26, 1985). Cross appeals from that decision have been filed by LILCO and the Appellants and are pending before the Appeal Board.

^{4/} In deciding this question, the Licensing Board gave considerable weight to the FEMA-NRC guidelines in NUREG-0654. See Consolidated Edison Co. (Indian Point, Unit No. 2), LBP-83-68, 18 NRC 811, 944 n.71 (1983), modified on other grounds, CLI-85-6, 21 NRC 1043 (1985).

of LILCO employees and contractors, who work with outside support organizations such as the American Red Cross, the U.S. Coast Guard, the U.S. Department of Energy, and local bus, ambulance, and aircraft companies. See LILCO Transition Plan, LILCO Ex. 80, Chap. 2. ^{5/}

On February 17, 1983, Suffolk County decided not to participate in offsite emergency planning for Shoreham. Subsequently Suffolk County moved to terminate this proceeding, arguing that without its participation LILCO could not meet NRC planning regulations. The Commission rejected this argument, and held that LILCO should be given an opportunity to show that its emergency plan can meet regulatory standards. Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), CLI-83-13, 17 NRC 741, 743, aff'g, LBP-83-22, 17 NRC 608 (1983). LILCO then prepared its own offsite emergency plan, which it submitted to the NRC on May 26, 1983. After submission of this plan, the County moved the Licensing Board to reject it without further proceedings. The Licensing Board denied this request. Memorandum and Order Denying "Motion for Rejection of LILCO Transition Plan and for Certification to the Commission," Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), (August 30, 1983) (unpublished).

^{5/} Onsite emergency preparedness was addressed in "Phase I" of the emergency planning proceeding, when Suffolk County, the Shoreham Opponents Coalition, the North Shore Coalition, and the Town of Southampton raised issues concerning LILCO's onsite emergency plan, as well as those elements of offsite preparedness for which LILCO had responsibility and which could be litigated at that time, before the preparation of an offsite plan. In November 1982 Suffolk County, et al., refused to go forward with the litigation of those issues pursuant to evidentiary procedures ordered by the Licensing Board and were held in default by the Licensing Board. Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), LBP-82-115, 16 NRC 1923 (1982), aff'd ALAB-788, 20 NRC 1102, 1176-79 (1984).

On July 26, 1983, the Appellants, and others, submitted 97 contentions, with numerous subparts. LILCO revised its emergency plan on July 28, 1983 (Revision 1), on November 7, 1983 (Revision 2), and on December 21, 1983 (Revision 3). ^{6/} Suffolk County et al. revised their emergency planning contentions on January 12, 1984. Additional contentions were later admitted on the LILCO training program, "Order Ruling on Suffolk County Motion for Leave to File New Contentions Concerning the LILCO Offsite Emergency Preparedness Training Program" (March 19, 1984) (unpublished), and modified contentions were admitted which related to the public education brochure, "Order Reconsidering Memorandum and Order Ruling on Suffolk County's Motion for Leave to File Modified Contentions 16 and 18 Concerning the LILCO Public Education Brochure" (April 10, 1984) (unpublished). The Licensing Board also raised, sua sponte, the issue of the effect on emergency preparedness of a strike, since settled, by LILCO union employees. "Memorandum and Order Determining that a Serious Safety Matter Exists" (July 24, 1984). During this period the Licensing Board ruled that certain of the proffered contentions or parts of those contentions were inadmissible. ^{7/} Ultimately, over sixty-five contentions, with numerous

^{6/} Revision 2 is LILCO's Exhibit 1; Revision 3 is LILCO's Exhibit 80. Revision 4, issued June 29, 1984, was not entered into the record, except for selected portions that LILCO included as attachments to written testimony. A Revision 5 has also been issued by LILCO and was reviewed by FEMA on October 8, 1985. It is not a part of the record of this proceeding.

^{7/} Special Prehearing Conference Order (Aug. 19, 1983) (unpublished); Order Ruling on Objections to Special Prehearing Conference Order (Sept. 30, 1983) (unpublished); Memorandum and Order Ruling on Intervenor's Proposed Emergency Planning Contentions Modified to Reflect Revision 3 of the LILCO Plan (Feb. 3, 1984) (unpublished);

subparts, were litigated. Appellants have appealed certain of the Licensing Board's determinations on the admitted contentions as well as the Board's refusal to admit other contentions.

ARGUMENT

I. RESPONSE TO APPELLANTS' INTRODUCTORY ARGUMENTS

Appellants, in the "Introduction" to their brief (at 1-6), make several generalized arguments regarding what they term the Licensing Board's errors. Appellants state that it would be useful to "highlight" several examples of errors made by the Licensing Board in order to provide what they term a general framework for the specific issues they briefed.

First, the Appellants argue that the witnesses they sponsored clearly gave the more probative testimony and that their testimony must be accepted in lieu of the testimony of LILCO and the Staff (principally the testimony of the Federal Emergency Management Agency (FEMA)). These arguments are best answered in the Staff's response to the individual points on appeal where the Licensing Board's basis for choosing the evidence it relied upon is elucidated. ^{8/} The Licensing Board's opinion amply indicates why it

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

Order Ruling on Suffolk County Objections to Memorandum and Order Ruling on Intervenors' Proposed Modified Emergency Planning Contentions (February 28, 1984) (unpublished).

^{8/} Appellants do not address, either in the introductory portion of their brief or elsewhere, the standard applicable to appeal board review of a licensing board's factual finding. This standard is whether an appeal board's examination of the evidence compiled below convinces it that the record compels a different result. See Pacific Gas and Electric Company (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-781, 20 NRC 819, 834 (1984), and cases there cited.

choose to rely on one set of witnesses rather than another. See e.g. PID, 21 NRC at 661-62, 792, 794, 805-07. The Board more than fulfilled its obligation to set out the basis of its findings. See generally Public Service Co. of New Hampshire (Seabrook Station, Units 1 and 2), ALAB-422, 6 NRC 33, 41 (1977). ^{9/}

Second, Appellants argue that the Licensing Board precluded them from presenting "compelling probative evidence" on the size and configuration of the EPZ (Contention 22). For the reasons more fully set out in Section III.A.1 below, the Licensing Board's ruling in this regard was proper in that the stricken parts of Contention 22 sought to litigate the propriety of the 10 mile emergency planning zone (EPZ) required by 10 C.F.R. § 50.47(c)(2), and not whether local conditions required minor adjustments in the 10 mile EPZ boundary. ^{10/}

Third, Appellants argue that the Licensing Board failed to make findings in accordance with the legal standards set in NRC regulations because many of the Licensing Board's findings were predictive in nature.

^{9/} Appellants rely on U.S. v. Lambert, 589 F. Supp. 366, 370 (M.D. Fla. 1984), for the proposition that "substantial deference" must be given to the testimony of Governmental witnesses charged with administering their enabling legislation. The Staff and Federal Emergency Management Agency (FEMA) as well as the Appellant's witnesses, are charged by law with administering the provisions of law involved in this controversy.

^{10/} Appellants' statement that the Licensing Board in ruling on Contention 22 inadmissibly retreated from a 1982 statement that it would itself pursue the size and configuration of the EPZ is not accurate. The Licensing Board's statement, which appears at LBP-82-19, 15 NRC 601, 618-19 (1982), was made before Contentions on that plan were submitted by Appellants. Additionally, the Board did hear and consider whether demographic or other local conditions required minor changes to the EPZ boundary. See PID, 21 NRC at 701-707 (1985).

Predictive findings can support a conclusion that proposed protective actions under 10 C.F.R. § 50.47(a)(1) are "adequate" and "can and will be implemented." As pointed out in Louisiana Power and Light Company (Waterford Steam Electric Station, Unit 3), ALAB-732, 17 NRC 1076, 1103 (1983), in July 1982 the Commission amended its regulations to clarify that "the findings on emergency planning required prior to license issuance are predictive in nature". See Statement of Consideration "Emergency Planning and Preparedness," 47 Fed. Reg. 20323, 20325 (July 13, 1982). In amending 10 C.F.R. § 50.47(a)(2) this year, to indicate that pre-licensing emergency preparedness exercises could be the subject of litigation, the Commission stated: "This revision does not change the general predictive nature of the Commission's findings on emergency planning and preparedness." Statement of Consideration "Emergency Planning and Preparedness," 50 Fed. Reg. 19323 (May 8, 1985).

LILCO was not required to prove, and the Licensing Board was not required to find, that the present state of emergency planning for Shoreham is fully adequate. Rather, the Licensing Board was only required to find that there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency. As stated in Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), ALAB-781, 20 NRC at 834-35:

The Commission's emergency response regulations, however, contemplate, in appropriate circumstances, predictive findings on emergency response planning so that operation of a facility need not be delayed unnecessarily by the hearing process. Emergency planning need not be complete at the time of the hearing as long as the evidence permits the Licensing Board to find that "there is reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency." Indeed, prior to 1982, the agency's regulations

required a finding that "the state of onsite and offsite emergency preparedness provides reasonable assurance that adequate protective measures can and will be taken." In 1982, the Commission deleted the reference to the "state" of emergency preparedness "to clarify that the findings on emergency planning required prior to license issuance are predictive in nature and need not reflect the actual state of preparedness at the time the finding is made." Thus, as here, the Licensing Board's findings can properly be predictive in nature. Similarly, the Board's licensing authorization may be appropriately conditioned on the completion of items found deficient at the time of the hearing. [Footnotes omitted]

See also Duke Power Co. (Catawba Nuclear Station, Unit 1 & 2), ALAB-813, 22 NRC 59, 78 (1985).

II. ASLB DID NOT COMMIT PROCEDURAL ERROR

A. Denial of Contentions

1. The Licensing Board's Ruling Excluding Contention 22.A, B, and C, Seeking to Enlarge the EPZ Should be Affirmed

By Special Prehearing Conference Order dated August 19, 1983 (August 19 Order), the Licensing Board rejected Subparts A, B, and C of Contention 22. ^{11/} as improperly seeking to "challenge the 10 mile EPZ." August 19 Order at 11. Appellants argue that this ruling mischaracterized Contention 22, violated NRC regulations, and misapplied NRC precedent. App. Br. at 7-12.

10 C.F.R. § 50.47(c)(2) provides in pertinent part that:

Generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 10 miles (16 km) in radius The exact size and configuration of the EPZs surrounding the particular nuclear power reactor shall be determined in relation

^{11/} As earlier noted, Contention 22.D, seeking to modify the EPZ to have it conform with local jurisdictional boundaries was admitted by the Board and was litigated by the parties. See PID, 21 NRC at 701-707.

to local emergency response needs and capabilities as are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries.

Proposed Contention 22 indicated that Suffolk County sought to litigate the need for a much larger EPZ. It read as follows:

Intervenors contend that LILCO's proposed 10-mile EPZ is inadequate in size. Under the site specific circumstances existing on Long Island, an EPZ larger than 10 miles and perhaps as large as 20 miles is necessary.

Under this general contention Appellants sought to litigate the radiological consequences of accidents. As subpart A of the contention asserted:

The radiological consequences of a severe accident at Shoreham are likely to be experienced at serious levels at distances greater than 10 miles from the plant A Shoreham-specific consequence analysis demonstrates that in the event of a core-melt accident at Shoreham, there could be doses far in excess of PAG levels at the edge of the 10-mile EPZ proposed by LILCO.

Subpart A of Contention 22 then continues by detailing why Appellants believe that the doses from a severe accident at Shoreham require a 20 mile EPZ on the basis of the radiation a person could receive at various distances from Shoreham. Contention 22.B listed what Appellants assert are eight specific "distinguishing characteristics of Long Island" which allegedly require planning to encompass an EPZ perhaps as large as 20 miles. These eight factors include the effects of significant seasonal increases in population, inadequate roads, no exodus from the east, planning for Shelter Island, and flooding and snow storms. Contention 22.C asserted the larger EPZ was necessary because:

An EPZ larger than 10 miles is required for the additional reason that people from outside the 10-mile EPZ will attempt to evacuate, whether ordered to do so or not. . . . The voluntary evacuation will impede the evacuation of persons within the 10-mile EPZ

The Licensing Board, in denying the admission of these parts of Contention 22, reviewed the history of the 10 mile EPZ in 10 C.F.R. § 50.47(c)(2), explained why the contention in question constituted an attack on the 10 mile EPZ in 10 C.F.R. § 50.47(c)(2) and was contrary to the provisions of 10 C.F.R. § 2.758, which provides that NRC rules and regulations are not subject to challenge or attack in adjudicatory proceedings absent a specific Commission determination to allow questioning of the regulatory standards. August 19 Order at 9-12. The Licensing Board further pointed out that it had admitted some of the matters in Contention 22 as part of Contention 23 on the evacuation "shadow phenomenon." On September 30, 1983, the Board provided further explanation for its rejection of subpart B of Contention 22. It stated that to the extent that Contention 22.B sought to question whether an ad hoc emergency response was possible outside the 10 mile EPZ, it sought to challenge the determination in 10 C.F.R. § 50.47(c)(2) that a 10 mile EPZ was sufficient; and to the extent it sought to question specific matters in the plan, such as transient populations, inadequate roads, etc. those matters were already the subject of other contentions. September 30 Order at 3-4.

The 10 mile EPZ in 10 C.F.R. § 50.47(c)(2) was the result of a joint NRC-EPA task force study entitled "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants." NUREG-0396, December, 1978. This study recommended that an EPZ of about 10 miles be established for the

plume exposure pathway because that area was sufficient for the initiation of predetermined protective actions. Subsequently, a joint FEMA-NRC Steering Committee in its "Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants," adopted the recommendations contained in NUREG-0396 that the plume exposure pathway EPZ radius should be approximately 10 miles. NUREG-0654, January, 1980, at 10-12.

When the Commission amended its emergency planning regulations in August 1980, effective November 3, 1980, the Statement of Consideration accompanying the amendment provided that "the standards are a restatement of basic NRC and now NRC-FEMA guidance to licensees and to State and local governments. See NUREG-0654" 45 Fed. Reg. 55402, 55403 (August 19, 1980). The Commission thus generally determined that a plume exposure EPZ with a radius of about 10 miles was considered large enough to provide a response base that would support activity outside the planning zone should this ever be needed." 45 Fed. Reg. at 55406.

Commission precedent clearly indicates that any party who seeks to radically depart from the standard 10 mile EPZ may only do so by seeking an exception to 10 C.F.R. § 50.47(c)(2) under 10 C.F.R. § 2.758. In Pacific Gas and Electric Co. (Diablo Canyon Nuclear Plant, Units 1 & 2), ALAB-781, 20 NRC at 831-82, the Appeal Board stated:

Contrary to the argument of the joint intervenors and the Governor, the Licensing Board's focus on emergency planning within the EPZs set forth in 10 C.F.R. 50.47(c)(2) was correct. That regulation evidences the Commission's considered expert judgment as to the necessary size of the plume exposure pathway EPZ and the ingestion pathway EPZ for light water commercial nuclear power plants. Although the regulations provide that the exact size and

configuration of a particular EPZ is to be determined with reference to site-specific factors, the wholesale enlargement of the Commission-prescribed EPZs by the State cannot preclude a licensing decision based upon the requirements of the NRC regulations. As the Licensing Board concluded in considering the same type of expanded state EPZs in Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-82-39, 15 NRC 1163, 1181 (1982), aff'd, ALAB-717, 17 NRC 346 (1983), the Commission's regulations "clearly allow leeway for a mile or two in either direction, based on local factors. But it . . . clearly precludes a plume EPZ radius of, say 20 or more miles." The same Board then correctly determined that a party seeking to impose such a radical departure from the Commission's prescribed EPZs should seek an exception to the rule pursuant to 10 C.F.R. 2.758. (Footnotes omitted)

See also Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 1 and 2), LBP-82-39, 15 NRC 1163, 1177-84 (1982), affirmed, ALAB-717, 17 NRC 346 (1983); Public Service Co. of New Hampshire (Seabrook Station, Units 1 & 2), LBP-82-106, 16 NRC 1649, 1661 (1982).

Although purely local conditions "such as demography, topography, land characteristics, access routes and jurisdictional boundaries" can affect "the exact size and configuration of the EPZ", a Board cannot broaden the regulation to allow an undercutting of the basic generic determination that a 10 mile plume exposure EPZ provides adequate protection to the public. See San Onofre, LBP-82-39, 15 NRC at 882; Diablo Canyon, ALAB-781, 20 NRC at 882. The Board looked at the local conditions under admitted Contention 22.D and looked at whether the EPZ should be amended to include the villages of Port Jefferson and Terryville and the Town of Riverhead. See PID, 21 NRC at 701-07. It however refused to reexamine under Contentions 22.A, B, and C, the Commission's generic determination that a 10 mile EPZ is sufficient. Subcontention 22.A particularly sought to put into litigation a study of the radiological consequences of a severe

accident at Shoreham in order to litigate the basis of the Commission regulation. See August 19 Order at 11; September 30 Order at 2-3.

Subcontention 22.B, to the extent it questioned whether ad hoc planning was sufficient beyond an appropriate 10 mile radius, was again a questioning of whether the regulatorily set EPZ was of sufficient size. To the extent it sought to question whether the LILCO plan adequately dealt with local matters within the EPZ such as transient populations, roads, and weather, those matters were already dealt with under other contentions. See September 30, 1983 Order at 3-4. Subcontention 22.C, dealt with the effects of the actions of people outside a 10 mile EPZ on evacuation within that zone and maintained that the EPZ had to be substantially enlarged because of "shadow evacuation". Again the contention was correctly dismissed as an attempt to enlarge the EPZ set out in Commission regulations. Further, as the Board pointed out, the extent to which a shadow evacuation outside the EPZ would affect evacuation in the EPZ, that matter was set for litigation under Contention 23. See August 19, 1983 Order at 12; PID, 21 NRC at 655-71. Thus contrary to the argument in Appellants' brief, at 12, Appellants sought a substantial enlargement of the EPZ in Contention 22, and not just adjustments to the boundary of the EPZ permitted by 10 C.F.R. § 50.47(c)(2).

If the Appellants believed that special local conditions existed which required, in their view, an extension of the 10 mile EPZ, they were free to seek a waiver of 10 C.F.R. § 50.47(c)(2) under 10 C.F.R. § 2.758. They did not do so. As detailed above the Licensing Board, under Commission rules, regulations and precedents, correctly denied admission of subparts A, B and C of Contention 22.

2. The Licensing Board Properly Excluded a Proposed Contention on Telephone Communications at the Phase II Stage of This Proceeding

The Licensing Board in denying admission of Contention 26.B, dealing with the adequacy of "non-dedicated commercial telephone lines" for emergency notification, stated:

26.B is denied. The subject matter of this subcontention is the alleged inadequacy of nondedicated commercial telephone lines for notification of emergency response personnel. Contention EP11 specifically addressed this issue during Phase I of this proceeding; that contention was dismissed as a sanction for the Intervenor's intentional failure to comply with orders of the Board, ("Memorandum and Order Confirming Ruling on Sanctions for Intervenor's Refusal to Comply with Order to Participate in Prehearing Examination," LBP-81-115, 16 NRC _____, December 22, 1983). We will not relitigate issues which were raised in Phase I.

Special Prehearing Conference Order, August 19, 1983, at 15-16.

The Board's sanction of dismissing contentions, including EP11 on the adequacy of "non-dedicated commercial telephone lines", in the earlier phase of the hearing for default was affirmed in Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-788, 20 NRC 1102, 1176-79 (1984).

An examination of the matters proposed for litigation in Contention 26.B and dismissed Contention EP11 shows that they were the same.

Dismissed Contention EP11 read in part:

The Plan relies completely for communication with off-site national, state, and local response organizations upon telephone communications (e.g. 7.2.1 through 7.2.8) . . .

- A. Insofar as the Plan relied on telephone communications (7.2.1 through 7.2.8), it does not take into account the possibility of (1) a power outage, (2) sabotage and (3) overload. The omission is especially significant because the Plan describes the Hotline as the "primary means for notification of the State and County of emergency conditions at Shoreham." (7.2.1; see also 5.4).

- B. Assuming that the telephone communications depend upon overhead, outdoor lines (there is nothing to the contrary in the Plan), the telephone communication network is vulnerable to extreme weather conditions, especially to sleet and ice formations on its lines and poles.
- C. The Plan relies on commercial telephone lines as "the primary communication link" for hospitals, Coast Guard, and DOE (7.2.4). These lines will become overloaded in an emergency, thus preventing communication with these vital offsite organizations.
- D. The Plan does not describe the "redundant power supplies" (7.2) which purportedly ensure communications with off-site facilities. NSC understands a "power supply" to mean the source of the power to maintain the communications systems and not the different communication modes and systems.

Contention 26.B essentially repeated these matters. It began:

Under the LILCO Plan, non-dedicated commercial telephone lines, with no backup means of communication, are relied upon for notifying essentially all categories of emergency response personnel. The notification procedures which are dependent upon commercial telephones are . . .

Contention 26.B then listed those who would be dependent upon commercial telephone communications including with the County, the Coast Guard, other governmental organizations, emergency response personnel and non-LILCO organizations. It then, as did EP11, stated that reliance on commercial telephones was inappropriate because they are "subject to overload, or may be out of service in the event of an emergency."

Thus it appears that the matters offered by Appellants for litigation under Contention 26.B were subsumed under the already dismissed Contention EP11. The ability to reach "offsite" entities and the possible problems with the use of telephones because of overload or for other reasons was the

subject of both contentions. No different equipment or procedures are involved in Contention 26.B than were involved in Contention EP11.

Further, "Prehearing Conference Order (Phase I - Emergency Planning), July 27, 1982 (unpublished) at 1-2, stated that the matters for resolution in that phase of the hearings included not only onsite emergency planning matters, but other matters capable of final resolution at that time before submission of an off-site emergency plan. See also Shoreham, ALAB-788, 20 NRC at 1176. Matters involving the telephones could have been resolved at that time.

Having suffered a default on the subject of a contention dealing with adequacy of commercial telephone lines for emergency response notification in the first phase of the EP hearings, the Appellants were foreclosed from recouching the subject in other language and offering it again in a later phase of the emergency planning hearings.

3. The Licensing Board Correctly Denied Admission of a Proposed Contention Relating to the Effects of a Labor Strike

Appellants argue that the Licensing Board committed error by ruling in an Order dated September 7, 1984, ^{12/} that a late filed proposed contention concerning the quality of participation by LILCO employees in the LILCO emergency response plan after a strike was not admissible. App. Br. at 15-20. The bases of the Licensing Board's ruling was that Appellants had not met the late filed contentions standard set out in 10 C.F.R. § 2.714

^{12/} "Memorandum and Order Denying Motion of Suffolk County to Admit New Contention."

and that the Contention's bases were not stated with reasonable specificity.

On July 10, 1984, LILCO employees instituted a strike. On July 17, 1984 the Licensing Board inquired "whether the strike presents an issue concerning the availability of LILCO's union employees for their designated LERO jobs which should be pursued at this hearing." Tr. 13,075. On July 19th during a discussion of the strike matter, counsel for Suffolk County raised the issue of the quality of participation by LERO personnel in LERO after the strike ended. Tr. 13,844.

On July 24, 1984 the Licensing Board issued a Memorandum and Order Determining that a Serious Safety Matter Exists, and set out the following three issues for hearing: 13/

1. Whether LILCO's ability to implement its offsite emergency preparedness plan would be impaired by a strike involving the majority of its LERO workers.
2. Whether LILCO should be required to place the reactor in cold shutdown in the event of a strike by LERO workers.
3. Whether placing the reactor in cold shutdown during a strike by LERO workers, after the reactor had operated at full power, would give "reasonable assurance" that adequate protective measures can and will be taken in the event of a radiological emergency.

The Licensing Board's July 24, 1984, Memorandum and Order did not set out the "quality of participation" by LILCO employees in the emergency

13/ Issues 1 and 2 were resolved by stipulations prior to hearing. A proposed license condition was presented by LILCO as to issue 3 and was litigated. The Licensing Board approved, with certain modifications, the license condition proposed by LILCO. PID, 21 NRC at 888-895.

planning activities after a strike as an issue it wished to hear. On August 8, 1984, the Licensing Board rejected the County's construction of its sua sponte issues to include a matter involving after the strike actions by LILCO employees.

On August 20, 1984 a "Motion of Suffolk County to Admit New Contention" was filed to add a new contention concerning the quality of LILCO employees participation in emergency planning after a strike. The admission of a late filed contention is governed by the five factors set out in 10 C.F.R. § 2.714(a). See Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), CLI-83-19, 17 NRC 1041, 1045 (1983). In an Order of September 7, 1984, the Licensing Board weighed these factors, and denied admission of the new contention. It ruled that four of the five factors in 10 C.F.R. § 2.714(a) weighed against admission of this contention; and that no basis for the contention was set forth with reasonable specificity.

As to the first factor the Licensing Board found no "good cause" for filing late (September 7 Order at 7). The County waited 40 days from the time the strike began to file its new contention. The proposed contention was filed at a time when the County knew that the end of the lengthy hearings was imminent. County witnesses had even testified on matters relating to the strike on July 17, 1984. Tr. 13,289-90 (Cosgrove). Further, as the Board found, the County had not acted promptly after August 8, 1984 when it was specifically told by the Licensing Board that the sua sponte issues did not encompass the "quality of participation" in LERO after the strike. The County did not then give notice of an intent to raise a new issue, although hearings on strike related matters were scheduled to start in a few weeks. No "good cause" was established for the County not filing its new contention in a timely manner.

Regarding the second factor in 10 C.F.R. §2.714(a), the Licensing Board found that the County's interest would be protected by FEMA's evaluation of a graded exercise which would consider the quality of participation of LILCO employees. Nothing is set out in Appellant's brief that demonstrates FEMA would wrongly judge the quality of LILCO employee participation in a FEMA graded exercise. Thus while FEMA may not represent the County's interest, it would be acting to protect them in regard to this matter. The resolution of this factor against the County was not unreasonable. Cf. Washington Public Power Supply System (WPPSS Nuclear Project No. 3), ALAB-747, 18 NRC 1167, 1174-75 (1983).

With regard to the third factor in 10 C.F.R. § 2.714(a), the extent to which the County's participation may reasonably be expected to assist in developing a sound record, the Licensing Board ruled that Suffolk County had failed to set forth with specificity the evidence which it would present. The County's mere submission of the names of four witnesses, without detailing the matters to which they were to testify amounted to a failure to meet this standard and precluded the Licensing Board from finding that the County's participation could be expected to assist in developing a sound record. In this very proceeding the Appeal Board had already stated:

In our decision last December in Mississippi Power & Light Co. (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-704, 16 NRC 1725 (1982), we stressed anew the importance of the third lateness factor - the extent to which the petitioner's participation might reasonably be expected to assist in developing a sound record. Because of that importance, we observed, "[w]hen a petitioner addresses this criterion it should set out with as much particularity as possible the precise issues it plans to cover, identify its prospective witnesses, and summarize their proposed testimony." Id. at 1730, citing South Carolina Electric and Gas Co. (Virgil

C. Summer Nuclear Station, Unit 1), ALAB-642, 13 NRC 881, 894 (1981), aff'd sub nom. Fairfiled United Action v. NRC 679 F.2d 261 (D.C. Cir. 1982); Detroit Edison Co. (Greenwood Energy Center, Units 2 and 3), ALAB-476, 7 NRC 759, 764 (1978) (Footnote omitted)

Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-743, 18 NRC 387, 399-400 (1983). The Appellants failed to summarize the evidence they would present.

As to the fourth factor in 10 C.F.R. §2.714(a), the Licensing Board found that the County's interests in the proposed contention would not be adequately represented by other parties since no party has presented a similar contention. Accordingly, that factor was resolved in favor of Suffolk County.

As to the last factor in 10 C.F.R. 2.714(a), the Board found that the admission of the proposed contention would broaden the issues and delay the proceeding. Despite the fact that the strike commenced on July 10, 1984 and was the subject of testimony by a Suffolk County witness on July 17, 1984, the County took no action to bring its proposed contention before the Licensing Board until nine days prior to the close of the hearing. A schedule had been established for the submission of proposed findings of fact and conclusions of law on this phase of the extended Shoreham emergency planning proceedings. The County had previously complained that it had not been given enough time to adequately prepare its proposed findings. Thus, the Board properly concluded that to permit a late-filed contention, it would have to adjust the schedule and delay the issuance of its initial decision. This factor weighed strongly against the County. September 7, 1984 Order, at 11. See Detroit Edison Company (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-707, 16 NRC 1760, 1766 (1982).

The Licensing Board found that only one of the five factors in 10 C.F.R. § 2.714(a) weighed in favor of the admissibility of the late-filed contention in question. There was ample basis for the Licensing Board to balance the factors set out in 10 C.F.R. § 2.714(a)(1) and conclude that the new contention should not be admitted.

In addition the Board determined that the Appellants had not stated the bases for the contention with reasonable specificity as required by 10 C.F.R. 2.714(b). The primary basis asserted in support of the contention was an allegation that 1200 of the 1800 LERO members had resigned en masse during the strike. However, in an affidavit attached to LILCO's August 27, 1984 response to the County's motion to add a new contention, Robert X. Kelleher, Manager of the Employee Relations Department at LILCO, stated:

From July 1 to the commencement of strike July 10, 23 union workers submitted written resignations from LERO; during the strike one additional union worker tendered his written resignation; and following the strike, two other workers have formally resigned. In addition, following the strike, seven union workers have given oral resignation notices to their supervisors, but have yet to tender written notice. Following the strike, two new union workers have also joined LERO. Thus, the total loss to LERO, out of 1246 union members was 31.

At no time has the County attempted to refute Mr. Kelleher's affidavit or to support its allegations concerning the alleged "en masse" resignations. Thus, the Board was justified in finding that there was no basis for paragraph one of the County's new contention. ^{14/}

^{14/} While a party need not plead evidence in filing contentions at the original time provided in the Commission's rules for filing

Appellants do not challenge the Licensing Board's conclusion that the remaining paragraphs of the County's proposed new contention dealt only with speculative matters concerning a reconfiguration of the LERO organization, and there is no showing that they were not also properly dismissed. The Licensing Board's action in denying the admission of the contention as not meeting the tests of 10 C.F.R. 2.714(a), and as being without basis, was correct.

8. Discovery Against FEMA Was Properly Limited

In Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), ALAB-773, 19 NRC 1333 (1984), the Appeal Board reversed a Licensing Board order ^{15/} requiring FEMA to release certain FEMA documents concerning that agency's emergency preparedness determinations for Shoreham. The Appeal Board determined that the documents in question were privileged under the executive or deliberative process privilege and that Suffolk County had not made a showing of need sufficient to override the privilege. 19 NRC at 1343. However, the Appeal Board also stressed the preliminary nature of its conclusion in this regard and the narrowness of its holding. Thus, the Appeal Board provided that upon further deposition or cross-examination of the FEMA witnesses, or the review of documents voluntarily

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

contentions, it must set out with particularity the matters it wishes to litigate and summarize its proposed evidence if it seeks to have a late filed contention admitted. See Shoreham, ALAB-743, 18 NRC at 399-400.

^{15/} "Memorandum and Order Ruling on Suffolk County Motion to Compel Production of Documents by FEMA," dated May 18, 1984.

released, disclosure of the withheld documents might be warranted if it appeared that there were good and sufficient reasons for such disclosure. By way of example, the Appeal Board stated that Appellants could establish a compelling need for the FEMA documents under circumstances where

- (1) There were "significant differences of opinion among members of the RAC on important issues affecting the adequacy of LILCO's plan;" or
- (2) The "witnesses [were] unable to defend or explain adequately the underlying bases for FEMA's determinations;" or
- (3) The witnesses "reveal[ed] that they ha[d] relied to an inordinate degree on the views of others."

19 NRC at 1348.

On June 27 and 29, 1984, FEMA voluntarily made its witnesses available for deposition. On July 6, 1984, Appellants filed with the Licensing Board a "Motion to Compel Production of Documents by FEMA, and to Postpone the Cross-Examination of FEMA's Witnesses, and for Issuance of Subpoenas to the Members of the RAC." This Motion requested the Licensing Board (1) to compel FEMA to produce the documents; (2) to issue subpoenas to members of FEMA's Regional Advisory Committee (RAC) so they could be deposed regarding their participation in the RAC review of the LILCO Plan; and (3) to postpone cross-examination of FEMA's witnesses, scheduled to commence on July 10, 1984, until an opportunity to conduct discovery pursuant to the requested subpoenas was afforded. This motion was denied by the Licensing Board on July 10, 1984 at the commencement of the resumed hearings on Long

Island. Tr. 12,127-130. ^{16/} The Licensing Board found that the County's desire to identify the dissenting RAC members and the reasons for their dissenting views represented a "complete about-face" from the County's position before the Appeal Board where "[c]ounsel for the County [had] disavow[ed] any particular interest in the names of individuals putting forth specific views . . . [but sought] only the basis of the RAC conclusions." Tr. 12,128; see ALAB-773, 19 NRC at 1344. Appellants did not explain why it suddenly had become important to have such information.

Further, the Licensing Board in following the guidelines set forth by the Appeal Board in ALAB-773, 19 NRC at 1348, decided that the County had failed to establish a compelling need for the documents withheld by FEMA. Specifically, the Licensing Board stated:

At this time, Suffolk County has not established 'significant differences of opinion among members of the RAC on important issues affecting the adequacy of LILCO's [P]lan.'

Moreover, the County has not established that these FEMA witnesses are unable to defend and explain adequately the FEMA findings or that the witnesses view[s] were inordinately derivative of other views. Unless the County makes such a showing, the executive privilege precludes probing the individual views of individual RAC members.

Tr. 12,128-29.

Appellants argue that as a result of this ruling they were unable to inquire into the reasons for and the substance of specific findings in the final FEMA RAC report, and were unable to obtain meaningful explanations of

^{16/} Appellants sought immediate review of the Licensing Board's July 10 Order. This Board held that the appeal was interlocutory in nature and declined to review the Licensing Board ruling. Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-780, 20 NRC 378 (1984).

the bases for the conclusions of individual RAC members, or even to ascertain the materials the RAC members had reviewed. ^{17/}

A review of the June 27 and 29, 1984 FEMA deposition transcripts shows these assertions are without merit. The FEMA witnesses gave Appellants notes they prepared for their depositions in an attempt to be fully responsive to the concerns of Appellants and facilitate the conduct of the depositions. FEMA witnesses Keller and Baldwin were then questioned extensively on these notes and they clearly explained each notation. Tr. 25-56, 67, 70, 99-102 (Keller), Tr. 119, 131-152 (Baldwin). They were also questioned as to the NUREG standards reviewed, Tr. 28 (Keller), the number of comments received, Id. and Tr. 123 (Baldwin), the number of preliminary comments in agreement with the final RAC report, Tr. 29-30 (Keller), Tr. 123 (Baldwin), the number of preliminary comments which differed from those contained in the final RAC report, Tr. 30, 34-35 (Keller), Tr. 123 (Baldwin), and the basis for those ratings submitted but not adopted at the RAC meeting of January 20, 1984. Tr. 45 L.7-9, 48 L.1-2, 50-51, 92, 99-102 (Keller); Tr. 133, 138-139, 140-142 (Baldwin).

Further, the FEMA witnesses provided information on the basis of the preliminary differences in ratings. The only questions the witnesses

^{17/} In footnote 31 of their brief, Appellants allege that they are entitled to know why the preliminary opinions of some of the RAC members were not contained in the final RAC report. This was explored by Appellants with the FEMA witnesses at the depositions. The witnesses explained the RAC process, Tr. 53 (Keller), Tr. 68-80, 84-88, 88-96, 159-163 (Baldwin), Tr. 76-97 (Kowieski), the fact that the RAC reached consensus opinions, Tr. 65 (Keller), Tr. 157-158, 159-163, 164-165, 170, 196-197 (Baldwin), Tr. 92, 93-96 (Kowieski), that no RAC member was intimidated, Tr. 105-106 (Keller), Tr. 158-159 (Baldwin), Tr. 95-96 (Kowieski), and that the witness panel could

declined to answer were those which asked the identity of the individual RAC members associated with each preliminary rating. The FEMA witnesses who submitted preliminary comments (Keller and Baldwin) provided their own preliminary ratings to Suffolk County. Tr. 39, 44, 54 (Keller), Tr. 151 (Baldwin). ^{18/}

A review of the deposition transcripts reveals that 1) all RAC members agreed with the final RAC report, 2) that the FEMA witnesses were able to adequately explain the basis for FEMA's determination, and 3) that these witnesses did not rely to an inordinate degree on the views of others. Thus, the Licensing Board was justified in ruling that Appellants had not established facts sufficient to make a showing of compelling need. Tr. 12,128-12,129. The Licensing Board's July 10, 1984, discovery ruling should be affirmed.

III. THE PID SHOULD BE AFFIRMED

A. Schools (Contentions 24.E, 24.F, 24.M, 61.C and 68-71) PID, 21 NRC at 855-875

Eight specific contentions were accepted into the litigation dealing with the alleged failure of the LILCO Plan to provide adequate protection

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collectively "describe significant, substantive information that was discussed among the RAC members" in reaching their conclusions. Tr.127 (Keller), Tr. 86 (Kowieski), Tr. 158-161 (Baldwin).

^{18/} Mr. Kowieski did not submit preliminary evaluation comments Tr. 26. However, he was able to answer Appellants' deposition questions without utilizing his notes, Tr. 103-104 (Kowieski). The availability and production of the notes of Mr. Keller and Mr. Baldwin obviated the need for the production of Mr. Kowieski's notes since no foundation had been laid for the production of these notes, Tr. 103 (Kowieski).

for children at school in the event of a radiological emergency at Shoreham. ^{19/} There was no contention dealing with the "overall" lack of adequate school preparedness, and the Board was not called upon to make such a finding. As to the matters addressed in the contentions, the Board made diverse findings. In regard to some contentions, such as letters of agreements with school districts, the Board found they were not required by regulation (PID, 21 NRC at 858); as to others, such as preplanning for sheltering school children (which involves keeping children in school), the Board found that such a task could be accomplished without preplanning (PID, 21 NRC at 862); whereas to other matters, such as the evacuation of school children, the Board concluded that the "LILCO plan does not provide reasonable assurance that adequate protective measures can and will be taken" (PID, 21 NRC 874). We will address the alleged defects Appellants claim exist in the Board's findings in the order in which Appellants present them at pages 23-34 of their brief.

1. Lack of Letters of Agreement with School Districts
(Contention 24.E) PID, 21 NRC at 856-58

There is no question that there are no letters of agreement with school districts to provide assistance in a radiological emergency. PID,

^{19/} These Contentions dealt with (1) lack of agreements with schools, bus drivers and parents to implement the emergency response plan (Contention 24.E); (2) lack of a sufficient number of committed buses to evacuate schools (Contention 24.F), (3) lack of agreement with bus drivers to drive buses in a radiological emergency (Contention 24.G); (4) lack of ability of schools to "shelter" and lack of preplanning for "sheltering" (Contention 61.C); (5) lack of basis for protective action recommendations for schools (Contention 58); (6) lack of detail in school early dismissal plans and their failure to deal with

21 NRC at 857. NUREG-0654 §II A.3. only requires written agreements with "support organizations having an emergency response role within the Emergency Planning Zones." FEMA testified that schools, except where they function as reception or relocation centers, are not "support organizations". Tr. 12,193-95, 12,754 (Kowieski); see also Tr. 12,214, 12,196 (McIntire); Tr. 12,433 (Keller). School officials would not have a unique emergency response role. Assisting school children in an emergency is part of their normal job and they would be taking protective actions similar to those they normally taken and those taken by the general public. Tr. 12,194-95 (Kowieski, McIntire); Tr. 12,214 (McIntire). Thus no letters of agreement with schools are required. See Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), LBP-81-59, 14 NRC 1211, 1639-40 (1981).

Appellants rely on Pennsylvania Light & Power Co. (Susquehanna Steam Electric Station, Units 1 & 2), LBP-82-30, 15 NRC 771, 781-782, 798 (1982); sua sponte review, ALAB-702, 16 NRC 530 (1982), for the proposition that schools must submit written plans. The case is not germane to the contention. The case does not deal with the subject of the contention, of whether "written agreements" are required, but with whether emergency plans (no matter how formulated) were adequate. The Licensing Board here

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contingencies (Contention 69); (7) failure to identify school relocation centers or evacuation procedures (Contention 70); and (8) lack of emergency planning for nursery schools in regard to relocation centers, school bus availability, and evacuation times (Contention 71).

concluded that New York State requires all school districts to file written disaster plans and that these plans would be "adequate to provide reasonable assurance that adequate protective measures can and will be implemented in the event of an emergency at the Shoreham Plant. PID, 21 NRC at 858. See FEMA Testimony, Tr. 12,193-94, 12,754 (Kowieski); 12,214 (McIntire); see also Tr. 11,044 (Muto). ^{20/}

No authority is cited to support Contention 24.E, which solely deals with LILCO's failure to have agreements with schools in the EPZ. ^{21/} Contention 24.E was properly decided in favor of the Applicant.

2. Lack of Agreements with Bus Driver Companies to Evacuate Children (Contention 24.M) PID, 21 NRC at 858-60

Contention 24.M alleges that the LILCO plan cannot be carried out because there are no agreements with school bus companies or institutions to provide transportation in the event of an early dismissal or evacuation because of a radiological emergency. PID, 21 NRC at 978. The Licensing Board concluded that the LILCO plan provides reasonable assurance that an adequate number of school bus drivers would be available in the event of either an early dismissal or an evacuation of schools in the plume EPZ.

^{20/} The Board also concluded that the "LILCO plan does not provide reasonable assurance that adequate protective measures can and will be taken in the event of an evacuation of school children from the Shoreham EPZ", for failure to properly estimate the times needed for evacuation or consider the availability of buses. PID, 21 NRC at 874.

^{21/} The other cases cited by Appellants also deal with the adequacy of plans and not with whether a written agreement is needed with schools which are not support organizations. See Cincinnati Gas & Elec. Co. (Zimmer Nuclear Power Station, Unit 1), LBP-82-48, 15 NRC 1549, 1569-70 (1982), affirmed, ALAB-727, 17 NRC 760, 773 (1983); Consolidated Edison Co. (Indian Point, Units 2 & 3), LBP-83-68, 18 NRC at 982-83.

PID, 21 NRC at 859. Although there are no agreements with the bus companies or institutions covering radiological emergencies, bus companies are obligated to pick up children if requested by the schools, and have never failed in this obligation. Tr. 3115-16 (Muto). Again, as in the case of the school districts, no separate letters of agreement are needed with the school bus companies. See TMI, LBP-81-59, 14 NRC at 1639-40; Section III.A.1, supra; see also Philadelphia Electric Co. (Limerick Generating Station, Units 1 & 2), LBP-85-14, 21 NRC 1219, 1276 (1985).

In addition, the LILCO plan calls for LILCO to offer training and dosimeters to the bus drivers. Cordaro et al., ff Tr. 9154 at 60; Tr. 960-61 (Weismantle). In the opinion of FEMA this should mitigate driver fears, and together with extra compensation, result in them performing their task of driving the school children home or to relocation centers. Tr. 2142-43 (McIntire); see also PID, 21 NRC 679.

Appellants have failed to show any error in the Board's conclusion that the LILCO plan provides reasonable assurance that, even without letters of agreement, an adequate number of school bus drivers would be available in a radiological emergency. PID, 21 NRC at 859. ^{22/}

3. Assurance that School Children will be Adequately Sheltered (Contention 61.C) PID, 21 NRC at 860-63.

In regard to Contention 61.C, the Appellants' fault the Board for concluding that adequate provision for sheltering exists (PID, 21 NRC at

^{22/} But cf. PID, 21 NRC at 872-74; Shoreham, LBP-85-31, 22 NRC at 430, dealing with defects in the agreements to provide additional buses to evacuate school children in the event of a radiological emergency at Shoreham. The Board found that the plan must be amended to eliminate the subordination of LILCO's right to use school buses to evacuate school children in an emergency to preexisting contracts providing for the normal use of some of the buses by schools outside of the EPZ.

860-63), without the preplanning for sheltering which the school districts refuse to perform. App. Br. 31-32. ^{23/}

Sheltering in a school building is performed in the same manner as in one's home. Cordaro et al. ff. Tr. 9154, Vol. II, at 46. LILCO has performed preplanning for sheltering in schools and has offered to make recommendations in that regard to schools. Id. at 26-27. The schools are aware of this offer, but have not accepted it. Tr. 11,015 (Muto).

School buildings in general are better for sheltering than average residences. PID, 21 NRC 862-63; Tr. 14,223-24 (Keller). Generic guidelines on sheltering have been given to the schools. Id. There is no requirement that schools be individually surveyed to find the best area to shelter and FEMA has "projected that the schools would be sufficient to accommodate the sheltering of their students in the event of a radiological emergency." Baldwin et al., ff. Tr. 12,179, at 59. Schools would follow the best sheltering recommendations they could get to protect children in a radiological emergency. Tr. 11,004, 11,009-10 (Muto), 11,004, 11,058-61 (Petrilak), 11,005 (Jeffers). In the context of the evidence in this proceeding, it is plain that the schools not only could, but would implement sheltering without preplanning. ^{24/}

^{23/} Appellants have not briefed any other matter with regard to Contention 61.C, and other matters in regard to sheltering in schools should be deemed abandoned.

^{24/} Appellants cite Long Island Lighting Co. (Shoreham Nuclear Power Station), ALAB-818, 22 NRC _____ (October 18, 1985) (slip op. at 42-43), for the proposition that the public cannot be left to fend for itself and more than ad hoc responses to emergencies are necessary. On the record here it is clear that the schoolchildren would not be left to fend for themselves, but would be sheltered by school officials in their school buildings, if that were the protective action recommendation.

4. Provisions for Early Dismissal of School Children (Contentions 68 & 69) PID, 21 NRC at 863-69

Appellants brief only one aspect of the Board's findings on Contentions 68 and 69 dealing with the proposed protective action involving the early dismissal of schoolchildren, i.e., a failure to plan for any disruption of an early dismissal which might be caused by parents going to school to pick up their children. App. Br. at 32. ^{25/} The Licensing Board considered this matter and concluded that, "the Board finds no evidence or basis to believe that this activity will be of such a magnitude as to result in significant disruption of early dismissal." PID, 21 NRC at 866. Appellants point to no evidence to show that parents calling for children would significantly disrupt an early dismissal. No need is shown to plan for this non-problem.

5. Lack of Preplanning for Evacuation (Contention 70) PID, 21 NRC at 870.

The last assertion of error, with regard to the Licensing Board's findings on the protection of school children, is the Board's conclusion that existing school plans for early dismissal in the event of a natural disaster combined with information provided by LILCO make the LILCO plan for school evacuation workable. ^{26/} PID, 21 NRC at 870. Contention 70 dealt with that aspect of the LILCO emergency response plan which covered children in school. PID, 21 NRC at 1016. It did not deal with emergency

^{25/} Other matters raised in Contentions 68 and 69 appear abandoned.

^{26/} No other errors are pointed to in the Board's conclusions on Contention 70 and 71.

response plans which may or may not be prepared by school districts. The Appellants attack on this finding is totally based on the lack of school plans for evacuation, and is not pertinent. ^{27/}

The Licensing Board concluded LILCO has given schools the information necessary to implement an evacuation, that the schools (through their early dismissal plans) could implement an evacuation, and that therefore LILCO's plan for evacuation is workable. PID, 21 NRC at 870. Appellant's have pointed to no evidence in the record to lead the Appeal Board to reverse this determination. ^{28/}

B. Special Facilities (Contentions 24.G, 24.J, 24.K, 24.N, 60, 63 and 72)

These Contentions relate to proposed protective actions for residents of nursing and adult homes, health care facilities, hospitals, and the radiosensitive. Many of these assertions of error on the Licensing Board's part are similar to the assertions made with respect to schools and demonstrate a similar misunderstanding of the record below and Commission precedent.

^{27/} The schools themselves have emergency plans which are updated yearly and incorporate preplanning for the protection of school children in an emergency. Tr. 12,196, 12,740-41, 12,754 (McIntire, Kowieski), 11,044 (Muto), 9228 (Robinson), 9231-33, 9420 (Cordaro); Cordaro et al. Tr. May 30, 1984, Vol. II, at 28, Att. 15-17.

^{28/} As previously indicated the Licensing Board found that although the LILCO plan is "workable" as to the evacuation of schoolchildren, "the LILCO plan does not provide reasonable assurance that adequate protective measures can and will be taken." PID, 21 NRC at 874. This involved principally the availability of school buses in an emergency and failure to realistically estimate the length of time necessary for evacuation of the schools. Id. at 872-74.

1. Agreements Are Not Required With Special Facilities Which Are Not Support Organizations (Contention 24.J) PID, 21 NRC at 833-35

Appellants assert the Licensing Board erred in finding that special facilities such as nursery schools, nursing homes and hospitals are not support organizations within the meaning of NUREG-0654, Section II.A.3, and that letters of agreement with these facilities are not required. App. Br. at 34. Appellants assert that written agreements for schools and school districts have previously been required and there exists no basis for treating other special facilities differently. App. Br. at 35. The Staff has previously shown that letters of agreement are not required from schools. See, Section III.A.1, supra.

FEMA witnesses testified and the Board found that special facilities, such as hospitals and nursing homes, are not support organizations, since "these facilities have no assigned roles to support the overall emergency response effort." Baldwin, et al., ff. Tr. 12,174, at 12, 17; Tr. 12,250 (McIntire) 12,251 (Kowieski), 12,254 (Keller); PID, 21 NRC at 834. These organizations will require assistance from LILCO, not provide assistance to LILCO as would "support organizations." Cordaro, et al. Tr. May 10, 1984 Vol. II at 7-8; Baldwin, et al. ff. Tr. 12,174 at 12, 17. ^{29/} No letters of agreement are required with these "special facilities".

^{29/} In footnote 46 of Appellants' Brief (at P. 35), Appellants assert "[t]he Plan assumes many facilities will provide evacuation transportation . . ." (citing the Plan, App. A at IV-166 to 178), and, hence, these facilities will not merely require assistance from LILCO. However, a reading of the Plan shows LILCO plans to provide transportation to nursery schools (IV-171), hospitals (IV-172), and nursing/adult homes (IV-174), as well as any additional transportation needed by handicapped individuals. See Plan, App. A IV-171-178

LILCO has involved these facilities in its emergency planning effort for the Shoreham EPZ by meeting with them and offering assistance in the development of response plans, providing tone alert radios, and by offering to train employees of such facilities. Cordaro et al. Tr. May 10, 1984 Vol. II at 8-9. In addition, LILCO has arranged for sufficient equipment and personnel to transport the residents of these facilities should evacuation be necessary. Id.; see also PID, 21 NRC at 826-27, 830-31. Consequently, contrary to Appellants' assertion, there is adequate record support for the Board's finding that there is reasonable assurance that LILCO has made provisions for the special facilities.

The only "role" the staff and residents of these facilities would have in an emergency is that of protecting themselves. PID, 21 NRC at 835. There is no evidence in the record to support the proposition that these people would behave in a manner inconsistent with that goal without letters of agreement. In this regard, the Board correctly identified LILCO's responsibility as providing advice and assistance to enable these people to take appropriate actions. Id. There is ample evidence showing that LILCO has made adequate provision in its Plan to fulfill this responsibility. Cordaro et al. Tr. May 10, 1984 Vol. II at 8-9; Tr. 9038 (Robinson); Tr. 9043-44 (Weismantle). The Licensing Board findings on Contention 24.J and its conclusion that no letters of agreement are required with these "special facilities" should be affirmed.

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(Rev. 3). Hence, Appellants are in error regarding their interpretation of what "role" these facilities would have to play in an emergency.

2. Protective Action Recommendations for the Radiosensitive
(Contentions 60 and 63) PID, 21 NRC at 775-778

Appellants allege that the LILCO Plan contains no guidelines or implementation procedures for the protective actions of either selective sheltering or selective evacuation of the radiosensitive population (i.e., pregnant women, very young children and the elderly). App. Br. at 35. On this basis the Appellants assert that the Licensing Board had no basis for finding the LILCO Plan in compliance with 10 C.F.R. 50.47(b)(10) or NUREG-0654 II.J.9 and II.J.10.m. Id. at 36.

The Licensing Board found that LILCO's Plan contains guidelines and implementation procedures setting out selective protective actions for these special populations which would be taken only in consultation with the New York State Commissioner of Health, and that absent such instructions from the State, selective sheltering or evacuation would not be recommended for these special populations. PID, 21 NRC at 776. Thus, the Board was correct in finding LILCO had criteria for selective sheltering and was in compliance with the regulations.

Further, the record shows that the EPA protective action guidelines for the protection of such groups had been considered by LILCO in developing its procedures and criteria for the implementation of protective actions for these groups. See Plan, OPIP 3.6.1, Att. 4, p. 44; Tr. 8787 (Cordaro); 8789-90 (Watts, Miele); 8810-11 (Cordaro).

The Licensing Board's findings on Contentions 60 and 63 should be affirmed.

3. The Record Shows Adequate Planning for Evacuation of Hospital Patients (Contentions 24.G, K, 60, 63, 72.D and 72.E) PID, 21 NRC at 841-47

This group of contentions asserts that the Licensing Board erred in finding the LILCO Plan adequate in its provisions dealing with hospital patients. In support of this assertion, Appellants argue that the LILCO Plan constitutes an ad hoc approach to protective action decision-making and evacuation of hospital patients. App. Br. at 36-38. Appellants thus conclude that the Board erred in finding the LILCO Plan in compliance with 10 C.F.R. 50.47(b)(10) and NUREG-0654, II.J.10.

Appellants' arguments ignore the plain language of the regulation:

A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed. 10 C.F.R. 50.47(b)(10).

The range of protective actions contemplated by the regulation include both sheltering and evacuation as protective action options. The LILCO Plan considers both of these options. It provides for sheltering this segment of the population in the first instance due to the distance of the hospitals from the Shoreham site, the substantial shelter which would be afforded by the hospital buildings and the need to take into account the physical safety of hospital patients. Cordaro et al. ff. Tr. 9101 at 11.

Appellant's assertion that the LILCO Plan represents an absence of preparedness is without merit. The Licensing Board correctly found that "LILCO has planned thoughtfully for the difficult problem of protective actions for hospitals." PID, 21 NRC at 843. As to the three hospitals of concern, two are located at the very edge of the Shoreham 10 mile EPZ, i.e.

9 miles from the plant, and the third hospital is located outside the 10 mile EPZ. Cordaro, et al. Tr. April 6, 1984 Vol. II at 12. The hospital buildings have a shielding factor of 0.2, and thus would protect one from 80 percent of the whole body dose one would receive if one were out-of-doors. Tr. 8885 (Miele); see PID, 21 NRC at 773. Consequently, the preferred protective action recommendation for patients at these hospitals is that they shelter rather than evacuate unless circumstances show that an evacuation would be more prudent. PID, 21 NRC at 841. ^{30/} This determination is based on a consideration of the EPA manual which specifies that special criteria and circumstances apply in the determination of protective actions for hospital patients. Cordaro et al. Tr. May 10, 1984 Vol. II at 24-25. Furthermore, the Board correctly found that the Plan specifies a method of calculating the dose to the hospital populations and that consultations will be had with hospital administrators in order to select appropriate protective actions for hospital patients. Id.; Tr. 8878 (Cordaro). The Licensing Board correctly recognized that different criteria apply to hospital patients, and the need to balance both the dose savings and the physical condition of hospital patients, especially where the substantial hospital structures lie at the very boundary of the 10 mile EPZ, need not be resolved in favor of a predetermined commitment to dose savings. PID, 21 NRC at 844.

The Board correctly reasoned that the approach taken by LILCO does not constitute an ad hoc plan for protective action decision-making. PID, 21

^{30/} It is noted that Mr. Finlayson's cited testimony on doses did not specifically pertain to conditions inside buildings that have a 0.2 shielding factor nine miles from Shoreham. Finlayson et al., ff. Tr. 12,320, at 6-9.

NRC at 843. Rather, as the record shows, methods and procedures are specified for determining dose levels and the actions in regard to hospital patients are carefully considered in the LILCO Plan. Cordaro et al. Tr. May 10, 1984 Vol. II at 26, Att. 69-98.

If evacuation is recommended for hospital patients, the Plan calls for utilization of the ambulance and ambulettes that LILCO has under contract to transport these patients. While it is true that the evacuation of all special facilities and these three hospitals could not be done in one wave, the Plan provides that vehicles LILCO has under contract would be redirected to hospitals once they became available after the evacuation of other special facilities. Cordaro et al. Tr. April 6, 1984, Vol. II at 13. Appellants assertion that this expansion of transportation resources for the evacuation of hospitals constitutes an absence of preparedness is unfounded. LILCO's planning efforts have taken into account the EPA guidelines and specifications which provide that this segment of the population must be treated differently than the general population. FEMA has found that this aspect of the Plan constitutes a reasonable approach to the problem of protection for hospital patients. Baldwin et al. ff. Tr. 12,174 at 77-78; see also Tr. 12,928-930 (Keller).

The Licensing Board findings as regards Contentions 24.G, K, 60, 63, 72.D and 72.E should be affirmed.

4. Relocation Centers for Hospitals (Contentions 24.N and 72.C)
PID, 21 NRC at 838-40

Appellants assert that the Licensing Board erred in finding that LILCO did not have to identify and have agreements with relocation facilities for

hospital patients. ^{31/} App. Br. 39-40.

The Board was correct in its ruling on this issue. The Commission stated in Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-83-10, 17 NRC 528, 533 (1983):

It was never the intent of the regulation to require directly or indirectly that state and local governments adopt extraordinary measures, such as construction of additional hospitals or recruitment of substantial additional medical personnel, just to deal with nuclear plant accidents. The emphasis is on prudent risk reduction measures. The regulation does not require dedication of resources to handle every possible accident that can be imagined. The concept of the regulation is that there should be core planning with sufficient planning flexibility to develop a reasonable ad hoc response to those very serious low probability accidents which could affect the general public.

The record below shows that LILCO has engaged in substantial planning for hospital patients, including contact with hospitals outside the EPZ, and has obtained verbal agreements that these hospitals, to the extent they have room, will accept patients evacuated from the EPZ. Cordaro et al. Tr. May 10, 1984 Vol. II at 15. In addition, the LILCO Plan includes a list of identifying hospitals and procedures for the relocation of hospital patients if necessary. On this basis the Licensing Board concluded that the hospitals were on notice that they could be called upon for assistance, that they would do all they could to assist in a disaster, and that no additional benefit to the public health and safety would be obtained from requiring letters of agreement from hospitals. PID, 21 NRC 840. Id. at 16-17. These are the same arrangements for the care of hospital patients

^{31/} The Licensing Board agreed that agreements are necessary between special health care facilities (nursing homes, etc.) and relocation facilities for their patients. PID, 21 NRC 840.

as were found adequate in Metropolitan Edison Co. (TMI Nuclear Station, Unit No. 1), LBP-81-59, 14 NRC at 1649-50. There, as here, the emergency plan was approved on the basis of verbal commitments to accept hospital patients, without letters of agreement with the relocation hospitals. ^{32/}

Further, as the Board found, because of the distance of the hospitals from the Shoreham site, sheltering, and not evacuation is the principal protective action. PID, 21 NRC at 843. Evacuation of the hospitals in the Shoreham EPZ would only be necessitated by one of the very low probability accidents envisioned by the Commission in San Onofre, CLI-83-10, 17 NRC at 533, and the LILCO Plan provides the flexibility the Commission deems important in emergency response planning for that situation.

5. Sheltering Hospital Patients (Contention 72.D) PID, 21 NRC at 840-44

Finally, Appellants assert that the lack of finalized facility-specific plans for implementing a sheltering recommendation "compels a finding that there is no reasonable assurance that sheltering can or will be implemented for hospital and infirmary patients." App. Br. at 40.

This assertion ignores previous Appeal Board decisions holding that emergency plans need not be final as to every detail. The record must show

^{32/} Unlike the situation in Kansas Gas and Electric Co. (Wolf Creek Generating Station, Unit 1), LBP-84-26, 20 NRC 53, 70-71 (1984), hospitals in New York State are required to have written emergency and disaster preparedness plans which include the reception and treatment of patients in emergencies or disasters that occur within or outside the hospitals. Cordaro et al. Tr. May 10, 1984 Vol. II at 16-17; Tr. 9704 (Glaser), 9088 (Yedwab). There is ample evidence in the record which shows, based on past disaster experience, that hospitals do everything in their power to respond to patient and community needs in emergencies, Cordaro et al., id. at 15-17.

that the plans are sufficiently developed so as to permit a licensing board to make a finding that there is reasonable assurance that adequate protective measures can and will be taken in a radiological emergency. Diablo Canyon, ALAB-781, 20 NRC at 834; Waterford, ALAB-732, 17 NRC at 1104; Cincinatti Gas & Electric Co. (W.H. Zimmer Nuclear Station, Unit No. 1), ALAB-727, 17 NRC 760, 770 (1983); see also Catawba, ALAB-813, 22 NRC at 78.

The record in this proceeding shows that substantial development of such plans has already taken place, including some training and drills which utilize sheltering procedures. Tr. 10,060 (Robinson), 10,061 (Miele). Further, LILCO has committed to continuing with this planning effort. Tr. 10,060 (Robinson). ^{33/}

The Licensing Board's findings as regards Contention 72.D should be affirmed.

C. Credibility and the Evacuation Shadow Phenomenon (Contentions 15 and 23)
PID, 21 NRC at 687-701 and 655-671

Contention 15 essentially alleged that LILCO's lack of credibility would cause the public to ignore LILCO's protective action recommendations. Contention 23 essentially alleges that regardless of LILCO's recommendation a larger voluntary evacuation would occur in the event of a radiological emergency at Shoreham because people would not believe LILCO's protective

^{33/} Appellants' reliance on the Zimmer and TMI cases, above, regarding this issue is misplaced. Both of those cases were concerned with written school plans for evacuations which were necessitated by the need to plan for bus and transportation requirements, not sheltering.

action recommendation. ^{34/} Appellants assert that the Licensing Board's rulings on these contentions are contrary to the evidence and fail to apply the regulatory standard of 10 C.F.R. 50.47(a)(1). App. Br. at 41-54. Contrary to Appellants' assertions, the evidence fully supports the Licensing Board's conclusions on the questions related to LILCO's credibility. See PID, 21 NRC at 687-701, 655-71.

^{34/} It should be noted that the Board found that its conclusions on this Contention "strongly depends" upon "there being clear nonconflicting notice and instructions to the public at the time of an accident." PID, 21 NRC at 670. It stated that although the LILCO plan is technically adequate, the evidence is unclear as to the actions of the State and County in an emergency. Id. at 671. Thus it concluded:

The lack of assurance of integrated action on the part of State and local governments constitutes a substantive deficiency in the Board's confidence that the public health and safety could be protected as well by LILCO acting alone as by actions that were fully integrated with State and local governments.

Id. In its Concluding Partial Initial Decision the Licensing Board reemphasized this point, stating:

LILCO had given adequate consideration to the evacuation shadow phenomenon in its emergency planning process so that the LILCO evacuation plan for Shoreham is technically adequate in that respect, if implemented as LILCO has outlined. But the Board's finding to that effect strongly depends on there being clear, nonconflicting notice and instructions to the public at the time of an accident. If confused or conflicting information were disseminated at the time of an accident the evacuation and protective actions planned for could be jeopardized. The lack of assurance of integrated action between the State and local government and the utility constitutes a substantive deficiency in the Plan and diminishes the Board's confidence that public health and safety could be protected as well by LILCO acting alone as with State and local government. See Board Finding 1.A.12 (21 NRC at 669-70).

Shoreham, LBP-85-31, 22 NRC at 429 (1985). See also id. at 431.

1. The Effect of LILCO's Lack of Credibility (Contention 15)
PID, 21 NRC at 687-701

The question presented upon appeal of the Licensing Board's findings on Contention 15 is whether LILCO's lack of credibility will be a "substantial bar" to the implementation of LILCO's emergency response plan. App. Br. at 42; see PID, 21 NRC at 687. The Licensing Board concluded:

Both Applicant's and Intervenor's surveys indicate that the public, if simply asked about the credibility of LILCO concerning things nuclear, does not give the utility very high marks. We must, however, agree with LILCO's witnesses that in an emergency, people will seek information from many sources, and will likely credit most the information and recommendations received from many sources, especially if they view the sources as relying on trained specialists. Applying the principles Dr. Mileti outlined above should provide the greatest probability that sensible recommendations sensibly made will be followed. Further, we agree with Applicant that, from an overall standpoint, once the majority of the people have been properly instructed, disbelief by a small fraction will not have serious results. We find that the public's general reluctance to believe the utility will not be a substantial bar to the working of the LILCO Plan.

PID, 21 NRC at 691.

The evidence established that the key to emergency response is the emergency information given to the public at the time of the emergency. Cordaro et al., ff. Tr. 10,396, at 43-45, 55-56; Tr. 10,549-53, 10,565-66, 10,684, 10,700 (Mileti). People's behavior is determined at the time of the emergency not before. Id. People's readiness to believe a warning is largely determined by the information supplied at the time of the emergency. Id. Thus, there is a difference between the credibility of a warning source before an emergency and whether the information it supplies

at the time of an emergency will be followed. Tr. 10,565-66, 10,597-98 (Mileti).

The key to having people act on information supplied at the time of an emergency, no matter what their preexisting view on the "credibility" of the source of the warning, is the quality of the information supplied at the time of the emergency. Cordaro et al., ff. Tr. 10,396 at 53-55; Tr. 10,556-57, 10,595-98 (Mileti). The evidence showed that references to scientists and engineers would be contained in the emergency information given by LILCO, as well as references to the NRC and the Department of Energy. Cordaro et al., ff. Tr. 10,396 at 38-39, 49-50; Tr. 10,460-64 (Sorensen, Mileti); Tr. 10,501-2 (Cordaro); Tr. 10,454-60 (Weismantle). Scientists and technical people are perceived to be most trustworthy by the public. Cordaro et al., id. at 31-33. In this manner, and by public education before an emergency, problems associated with LILCO's initial low credibility, can be reduced to unimportance. Tr. 10,556-57 (Mileti). Ample evidence supported the Licensing Board findings that it could not conclude "that the lack of credibility on LILCO's part is such that 'the LILCO Plan cannot be implemented and there can be no finding of compliance with 10 C.F.R. § 50.47.'" PID, 21 NRC at 701.

Appellants' brief only deals with two subparts of Contention 51, i.e., Subcontention 15.C (dealing with LILCO's lack of credibility and whether schools would follow LILCO's protective action recommendations), and Subcontention 15.F (dealing with LILCO's lack of credibility and the effectiveness of LILCO's "rumor control procedures"). App. Br. at 45-46. With respect to Subcontention 15.C, LILCO will inform school officials or the appropriate government officials to contact in order to confirm any protective action recommendation in an emergency. Cordaro et al., ff.

Tr. 10,396, 93-97. Although school officials may not follow protective action messages received from LILCO alone, it is not credible that they will fail to follow confirmed protective action messages they will receive in an emergency and take action to protect schoolchildren, no matter what the credibility of LILCO. PID, 21 NRC at 696-97.

With respect to Subcontention 15.F, Appellants here maintain that LILCO's lack of credibility makes it unreasonable to believe that people will call LILCO for information should an accident happen at Shoreham. App. Br. at 46. NUREG-0654, Section II.G.3.c. states that emergency response organizations "shall establish coordinated arrangements for dealing with rumors." LILCO did so. Cordaro et al., ff. Tr. 10,396 at 107-116. The Appellants have pointed to no fault with the arrangements made by LILCO to deal with rumors at Shoreham. PID, 21 NRC at 700.

2. The Likelihood of "Evacuation Shadow" (Contention 23)
PID, 21 NRC at 655-71

Two issues were involved "in the controversy on Contention 23: the likely magnitude of the evacuation shadow in a Shoreham emergency, and the consequences of that shadow." App. Br. at 47; PID, 21 NRC at 656. As we detail in Section III.F. of this brief "evacuation shadow", that is evacuation by those who were not told to evacuate, ^{35/} would have little effect on a recommended evacuation in the EPZ. See also, PID, 21 NRC at 664, 801-04. Appellants do not deal with the consequences of shadow evacuation in this part of their brief, but only whether "substantial numbers of people are likely to evacuate regardless of LILCO's

^{35/} See PID, 21 NRC at 656.

recommendations." App. Br. at 47. Appellants maintain that the Board's conclusion that the LILCO emergency response plan is technically adequate ^{36/} is in error for two reasons: first, that the experience at Three Mile Island shows that there will be a substantial shadow evacuation and, second, that public opinion polls indicated that many people on Long Island intend to evacuate if there is an emergency at Shoreham. App. Br. at 48, 50.

The Licensing Board did not disregard events at TMI in judging the "technical adequacy" of the LILCO emergency response plan. The Board concluded that events at TMI were not germane to a plan which provides for clear non-conflicting notice and instructions to the public at the time of an accident. PID, 21 NRC at 670. The situation at TMI did not provide for such notice or instructions. As the Board stated:

Information given to the public during the accident at TMI supports a conclusion that reasonable people would think that confusing information was being disseminated to the public. At various times the public was told that the crisis was over, or that it was not over; that general evacuation might be needed, or that evacuation was unnecessary; that the hydrogen bubble might explode, or that there was no danger of explosion. Such contradictory messages are sufficient for us to conclude that confusing information was disseminated to the public during the accident. [Cordaro et al., ff. Tr. 1470, Att. 9, 10.]

The responses of the TMI residents about their perception of danger and the quality of public information clearly relate to perceptions they had at the time of the accident. There is no evidence that respondents said that their preexisting fear of radiation was their principal reason for evacuating. Id. at 58.

^{36/} As we have indicated, the Board did not find assurance that the plan would be implemented in the manner provided in the plan. See PID, 21 NRC at 670-71; Shoreham, LBP-85-31, 22 NRC at 431.

PID, 21 NRC at 658.

Consideration of these circumstances have been taken into account in the LILCO Plan by the design of Emergency Broadcast System messages and the public information program. Cordaro et al. ff. Tr. 1470 at 49-52. The Licensing Board was correct in its determination that what is important about the events at TMI is not the occurrence of public overreaction but why it happened, and that the results of such analysis must be applied in the development of a plan. As the Licensing Board in the Indian Point case noted, ". . . it is the lack of a plan or clear instructions that may present a problem. The spontaneous evacuation at TMI may well have been the result of such lack or ambiguity of direction."

Consolidated Edison Co. (Indian Point, Unit No. 2), LBP-83-68, 18 NRC at 959. In Louisiana Power and Light Co. (Waterford Steam Electric Station, Unit 2), LBP-82-100, 16 NPC 1550, 1562 (1982), the Licensing Board concluded that although some spontaneous evacuation may occur, public overreaction to a nuclear accident is likely to be minimized where the guidance in NUREG-0654 is followed. The TMI Board itself concluded that appropriate public education reduces fear and mistrust in authority, and increases the likelihood that people will do as instructed during an emergency. Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1), LBP-81-59, 14 NRC at 1567. That Board went on to say that:

. . . these provisions for pre-emergency public education and for emergency information and instructions will, we believe, tend to reduce the tendency for overreaction and a refusal to follow instructions during an emergency.

Id. at 1568.

The experience at TMI does not show any error in the Board's finding that the LILCO plan was "technically adequate."

The second basis for Appellants' argument regarding the Licensing Board's conclusions on the shadow evacuation phenomenon is the Board's failure to rely upon opinion polls of the residents of Long Island. While the polls showed a large number of people who were queried said they feared radiation and would evacuate in the event of an accident at Shoreham, the Licensing Board correctly placed little weight on the predictive findings of these polls. See PID, 21 NRC at 663-66. The record supports the conclusion that such polls are inaccurate in predicting future human conduct and there are frequently discrepancies between what people say they will do and how people actually behave. See, e.g. Cole, Tr. 2789 and Cordaro et al. ff. Tr. 1470 at 71. One of the surveys specifically showed that the results could change drastically if additional information were given. ^{37/} Thus, contrary to Appellants' assertion, the Board was correct in finding that "the most the polls could show was that the projected response is likely if there was no information disseminated." 21 NRC at 666-67. Given the specific information which would be available at the time of an emergency, it is the quality of the information itself and not the

^{37/} The survey showed that initially 43% of the population said they would evacuate, but when provided with further information only 29% said they would evacuate. Cordaro, et al., ff. Tr. 1470, Attach. 13 at 31.

results of polls which would determine the public response to protective action recommendations. ^{38/} PID, 21 NRC at 666-67. ^{39/}

In connection with the ability of opinion polls to predict the likely behavior of people in response to an accident at a nuclear power plant, the evidence from Ginna was properly considered by the Licensing Board. See 21 NRC at 659. The public did not evacuate as the result of a nuclear incident at Ginna which caused a small release of radiation and evacuation of some on-site workers, but responded to specific information received at the time of the incident. As shown by the Ginna experience, if pre-accident fear of radiation were the overriding factor in public response to a nuclear plant accident, the public would have evacuated at Ginna regardless of the lack of protective action recommendations. However, no spontaneous public evacuation occurred at Ginna. Cordaro et al. ff. Tr. 1270 at 62.

The Board's finding that the lessons of TMI are not that spontaneous evacuation will occur, but that such a phenomenon can be controlled and mitigated by proper planning and the control of information should be affirmed. PID, 21 NRC at 657-59. Similarly, the Board's refusal to rely

^{38/} This finding is not inconsistent with the Licensing Board's acceptance of public opinion poll findings in Duke Power Co. (Catawba Nuclear Station, Unit 1 and 2), LBP-84-37, 20 NRC 933, 951 (1984). In Catawba a poll showed EPZ residents less concerned about radiation effects and the possibility of a radiological accident than the general population as a whole because the EPZ residents had received sufficient pre-emergency information to be assured that the public would be protected. This went to the adequacy of the public education program in the Catawba EPZ. This evidence served to confirm that a good information program can serve to mitigate a pre-accident fear of radiation which the Appellants claim is the key factor in spontaneous evacuation. See PID, 21 NRC at 670.

^{39/} App. Br at 52, footnote 60.

on predictive findings of public opinion polls is supported by the evidence that such polls cannot be reliably used to predict future behavior.

3. The Licensing Board Did Not Ignore the Regulatory Standards in Ruling on Contentions 15 and 23

As we detailed, no error is shown in the Licensing Board's conclusion that LILCO has given adequate consideration to the evacuation shadow phenomenon in its emergency planning process so that the LILCO evacuation plan for Shoreham is technically adequate, if implemented as LILCO has outlined. Shoreham, LBP-85-31, 22 NRC at 429.

As the Board concluded, "People are not stupid." PID, 21 NRC 668. The number of people who would disregard LILCO sheltering recommendations and receive substantial doses would indeed be small. On the record before it, the Licensing Board properly found that an affirmative reasonable assurance finding required by the regulations could be made if the steps set out in LILCO's plan to provide clear non-conflicting information to the public at the time of an accident were carried out. Accordingly, the Licensing Board's finding on Contentions 15 and 23 should be affirmed.

D. "Role Conflict" (Contention 25) PID, 21 NRC at 671-79.

Contention 25 raised the concept of "role conflict". Role conflict refers to the thesis advanced by Appellants that emergency workers and others relied on in the LILCO plan would attend to their families prior to

or in lieu of performing their assigned emergency duties. See 21 NRC 671-72. 40/

1. "Role Conflict" Will Not Interfere With an Emergency Response

Appellants assert that the Licensing Board committed reversible error by finding, at 21 NRC 679, that "trained" emergency workers with a "clear notion" of their roles will perform that role despite conflicting family obligations and that role conflict "will not be a significant problem at Shoreham and that a sufficient number of emergency workers will respond in a timely fashion to perform their assigned duties." PID, 21 NRC at 679. In support of their assertion of error, Appellants argue that there is no factual support in the record or in the research literature for these findings. See App. Br. at 54-62.

The record below shows there is a large body of empirical research based on actual behavior of people which shows that those who have definite organizational responsibilities in an emergency and who have a clear idea of their emergency roles do, in fact, perform their emergency jobs although they may also be concerned about their families. Dynes, ff. Tr. 831 at 16-17, Tr. 857, 1012-53 (Dynes). The Disaster Research Center (DRC) of Ohio State University has conducted over 6000 interviews with personnel in emergency organizations who participated in a variety of emergency

40/ The contention addresses six discrete groups of people: (1) LILCO employees in LEPO (Contention 25.A); (2) members of the DOE Radiological Assessment Plan (RAP) Team (Contention 25.B); (3) school bus drivers (Contention 25.C); (4) teachers, other school employees, and crossing guards (Contention 25.D); (5) ambulance drivers and medical personnel (Contention 25.E); and (6) American Red Cross volunteers (Contention 25.F).

situations which occurred over many years. Id. These interviews were not just with top officials but also with police sergeants and patrolmen, nurses and attendants, and public works supervisors and crew members. Id. The DRC did not come across even one example of emergency role abandonment or an instance where the functioning of an emergency organization was undercut by personnel not reporting for duty. Id. Indeed, the DRC research shows that there is often an oversupply of personnel which requires effective procedures to assure the efficient use of available personnel. Dynes, ff. Tr. 831, at 16-17, 69-71; Tr. 857, 1012-53 (Dynes). This research was also in accord with the 15 years' experience of a FEMA witness who testified that he had not seen "role conflict" adversely affect emergency activities. McIntire, ff. Tr. 2086, at 3; Tr. 2101 (McIntire). See also PID, 21 NRC 672-74.

There is no dispute that emergency workers may experience anxiety while they are separated from their families. For example, they may engage in on-the-job phone checking to see that their families are safe, they may leave the job temporarily at a time when they are not essential to the group effort, or they may make arrangements regarding their families prior to reporting to work. Tr. 1034-35, 1048 (Dynes). However, emergency workers with assigned emergency roles will not abandon their positions or not report to work. To the contrary, the evidence below shows that emergency workers both check on their families and do their jobs. Tr. 1119 (Mileti). This scenario of emergency response worker behavior is even consistent with the experiences recounted by the County's own witnesses. Tr. 3111 (Smith); Tr. 3185-86 (Jeffers). See 21 NRC 674-75.

2. The Licensing Board Properly Excluded the Teachers' Testimony

The Licensing Board struck Suffolk County's proposed testimony by a panel of teachers and a librarian from school districts in the Shoreham EPZ purportedly on: (1) personnel requirements for implementing LILCO's proposed protective actions for schoolchildren, and (2) how some teachers would resolve role conflict in a Shoreham emergency. The Licensing Board struck this testimony either as not relevant or, to the extent it was relevant, because of "considerations of undue delay, waste of time, or needless presentation of cumulative evidence." Tr. 790-91. The Licensing Board ruled that the testimony was not relevant "because it [did] not have probative value to establish that the facts asserted therein are more probable than they would be without the evidence." Id. See also Order Confirming Changes in Schedule with Respect to "Group II" Contentions and Rulings on Motions to Strike, December 2, 1983 (the "December 2 Order").

The Licensing Board heard and considered extensive testimony on whether role conflict would cause teachers to abandon schoolchildren in favor of caring for their own families. See PID, 21 NRC at 677-78. Suffolk County presented five school administrators who theorized that teachers might abandon schoolchildren. Petrilak, Muto et al., Jeffers, et al., ff. Tr. 3087. The Board instead credited the testimony of FEMA witnesses that in disasters teachers met their responsibilities to their pupils. PID, 21 NRC 677, see McIntire, ff. Tr. 2086, at 5; see also Miletì, ff. Tr. 831, at 36; Tr. 1347-48 (Erikson). It is difficult to perceive and Appellants have not articulated how the testimony of individual teachers, who were not shown to be either statistically representative of a larger group or technical experts, could have advanced the inquiry before the Board with respect to Contention 25. See

Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1), ALAB-824, 22 NRC ____, slip op. at 10 (November 21, 1985) (a Licensing Board may exclude testimony of little probative value); Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 & 3), ALAB-673, 15 NRC 688, 697 (1982) (the exclusion of evidence must affect substantive rights in order to constitute reversible error). The Licensing Board's ruling which excluded the teachers' testimony was proper.

3. The Licensing Board also Properly Excluded a Survey of Volunteer Firemen

The second disputed evidentiary ruling in regard to Contention 25 concerns the Licensing Board's ruling which excluded testimony discussing the results of a survey of a portion of the volunteer firemen in the EPZ of how they would resolve role conflicts in a Shoreham emergency and how such action would affect the implementability of the LILCO Plan. Tr. 792; December 2 Order at 4. The Licensing Board properly ruled that the proffered testimony was "irrelevant" since the LILCO Plan does not rely on volunteer firemen. Appellants acknowledge that the LILCO Plan does not rely upon volunteer firemen, but claim the survey would be probative of how trained emergency workers would react in an emergency. It is difficult to perceive how a survey of these particular volunteer firemen would advance the issues raised in Contention 25. Ample evidence supported the fact that emergency workers with defined emergency roles do not abandon their posts in an emergency. See PID, 21 NRC at 672-74, 679. The Board correctly

excluded the tangential evidence of a survey of volunteer firemen, and questions that would be raised concerning its statistical validity, ^{41/} when volunteer firemen were not relied upon in LILCO's emergency plan. ^{42/}

4. The Licensing Board's Findings on Role Conflict Have Ample Record Support

Finally, Appellants urge that the Licensing Board erred in connection with Contention 25 by refusing to credit the factual and opinion testimony submitted by Appellants rather than the witnesses for LILCO, FEMA and the Staff. ^{43/}

Appellants' assertions highlight the basic evidentiary dispute among the parties. LILCO witnesses and FEMA witnesses believe that the best evidence of how people behave is to examine the actual record of how people have behaved in real emergencies. Appellants' witnesses stated that the best evidence is public opinion polls which ask what emergency workers might do in an unfamiliar hypothetical emergency situation. They discount not only historic experience, but actual intent as shown by emergency

^{41/} It is noted that the proffered "survey" did not include members of the Wading River Fire Department, which is the fire department closest to the Shoreham plant. See NRC Motion to Strike Certain Prefiled Testimony of Suffolk County, November 23, 1983, at 2.

^{42/} A survey of emergency workers to assess "role conflict" was rejected as of little value in emergency planning in Pacific Gas and Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-82-70, 16 NRC 756, 768 (1982), aff'd, ALAB-781, 20 NRC 819 (1984); see also Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit 1), LBP-81-59, 14 NRC at 1632-35.

^{43/} Appellants also conclude that the Licensing Board never found compliance with 10 C.F.R. §§ 50.47(b) or (b)(3), and never made the reasonable assurance finding required by 10 C.F.R. 50.47(a)(1). In the context of Contention 25, the Board's findings implicitly make the requisite regulatory findings.

personnel volunteering to serve, undergoing training, and participating in drills which has been done under the LILCO plan.

Appellants' argument regarding role conflict and the unreliability of emergency workers was rejected in Diablo Canyon, LBP-82-70, 16 NRC at 768, and Indian Point, LBP-83-68, 18 NRC at 958-60. It is not disputed that people in emergency organizations, at the time of an emergency, may check on their families. Tr. 946-47 (Mileti). If they are not already in place when an emergency strikes, they may see to their families' welfare before reporting for emergency work. Tr. 2173-74 (McIntire). Similarly, some individuals might not show up promptly at the time of an emergency, be it due to "role conflict" of various kinds or because of illness, family illness, vacation or other circumstances beyond their control. However, the record below shows that one of the purposes of emergency planning is to provide flexibility to cover for such unexpected absences and to provide adjustments, and the LILCO emergency plan provides an organization for flexibility. Tr. 1173-74 9275 (Weismantle); Tr. 111, 1149-50 (Dynes), 1173-74 (Dynes). For example, the LILCO plan provides for LERO positions to be overstaffed. Tr. 927-28, 934, 958, 1143, 1179 (Weismantle), 933-34 (Mileti). Bus companies are to provide extra drivers. Tr. 9315 (Robinson). In some school districts teachers and other school personnel are qualified to drive buses. Tr. 9315-16 (Cordaro). Additionally schools can cover for missing personnel by, for example, consolidating classes. Tr. 966 (Weismantle), 3158-59 (Jeffers). The evidence that emergency workers actually show up in an emergency and that sufficient personnel are available, outweighed the hypothetical testimony that "role conflict" would cause the LILCO emergency plan to fail. PID, 21 NRC at 679; see also

Diablo Canyon, LBP-82-70, 16 NRC at 768; Indian Point, LBP-83-68, 18 NRC at 959; Three Mile Island, LBP-81-59, 14 NRC at 1489, 1629. ^{44/}

E. Sheltering (Contention 61) PID, 21 NRC at 770-75

Appellants argue that the Licensing Board committed error by never addressing the merits of Contention 61, which they maintain is whether sheltering is an adequate protective measure. App. Br. at 62-63. The Contention itself alleged that sheltering as a protective action recommendation would not or could not be implemented. See PID, 21 NRC at 1003-04.

As Appellants recognize in their brief, at 63, the purpose of the emergency planning regulations is to assure that plans have been made to take prudent risk reduction measures in the case of a serious accident and not to assure that protective action guideline dose levels will never be exceeded. ^{45/} See Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 & 3), CLI-83-10, 17 NRC at 533. Thus emergency planning should provide for a variety of protective measures including evacuation and sheltering. Zimmer, ALAB-727, 17 NRC at 765. Extraordinary measures such as substantial construction of hospitals is not required. San Onofre, CLI-83-10, 17 NRC at 533. It has been held that emergency response plans do not require that specific sheltering facilities be

^{44/} Moreover, where conflicting testimony is involved a Board is free to determine what weight it will assign to a witnesses' testimony based on demeanor and qualifications. See Diablo Canyon, ALAB-781, 20 NRC at 834.

^{45/} Environmental Protection Agency Protective Action Guidelines, EPA 520/1-75-001 (September 1975).

constructed even if present shelters have limited value. Indian Point, LBP-83-68, 18 NRC at 1008-10; see also San Onofre, LBP-82-39, 15 NRC at 1188; Limerick, LBP-85-14, 21 NRC at 1303-04.

The evidence in this proceeding established that sheltering would provide a measure of radiation dose reduction, although in some cases these reductions may be quite small. See PID, 21 NRC at 770-75. It is a proper protective action to be considered as a recommendation in particular accident scenarios. See PID, 21 NRC at 771. The test is not whether sheltering, qua sheltering, is adequate to protect the public in all accident situations. See App. Br. at 62-63. The LILCO plan sets out situations where sheltering should be recommended, and thus meets the requirements of the Commission's regulations. PID, 21 NRC at 771-72, 775. The consideration of sheltering as a protective measure has been adequate, and no cause exists to reverse the findings of the Licensing Board.

F. Evacuation (Contentions 65, 23.D & H, 66, 67.C, 72.A & 73.B.4)
PID, 21 NRC at 781-809

The issue raised in these contentions is whether the evacuation time estimates provided by KLD Associates for LILCO are accurate or whether, as asserted by Appellants, they are flawed by faulty assumptions and incomplete data. App. Br. at 64-67. Specifically, Appellants argue that the time estimates are flawed by an inadequate consideration of the evacuation shadow phenomenon (Contention 23.D and H), by ignoring Appellants' evidence on road obstacles (Contention 66), and by ignoring their assumptions regarding human behavior (Contention 65). Appellants also assert that the time estimates for the transit dependent population (Contention 67.C), for those in special facilities (Contention 72.A), and for the homebound

handicapped (Contention 73.B.4), are flawed for the same reasons. App. Br. at 74-79.

1. The Licensing Board Properly Excluded the Testimony of Finlayson et al.

Appellants argue that the Licensing Board erred in striking the testimony of Finlayson, et al., on Contentions 65, 23.D and 23.H on alleged deficiencies in LILCO's evacuation time estimates (ETE's). ^{46/} App. Br. at 64-66. This testimony dealt not with evacuation times but with the health effects of exposure to radiation. It was properly rejected by the Licensing Board as irrelevant to the admitted contentions. Id. The contentions for which this testimony was offered alleged that there were deficiencies in LILCO's ETE's in regard to the time required to mobilize the population (Contention 65), assumptions concerning driver compliance with LILCO's traffic control scheme (id.) the effect of accidents and vehicle breakdowns (id.); and the effect of shadow evacuation. (Contention 23.D and H). 21 NRC at 781. ^{47/} The Finlayson testimony addressed the issue of health effects caused by radiation in the event evacuees were stuck in traffic within the Shoreham EPZ. ^{48/}

^{46/} Order Granting Motions to Strike the Testimony of Fred C. Finlayson, Gregory C. Minor and Edward P. Radford, unpublished, January 11, 1984 (January 11 Order).

^{47/} The Board, in admitting Contention 65, had explicitly struck all references to "health effects." January 11 Order, at 4-5. Nor was health effects the subject of Contentions 23.D and 23.H. The thrust of those contentions concerned the shadow evacuation phenomenon, and not radiation effects. Id. at 5-7.

^{48/} Id. at 5.

The Licensing Board properly focused on the question of whether or not the proffered evidence was relevant to the matters sought to be proved. ^{49/} See 10 C.F.R. §2.743(c); Federal Rules of Evidence, Rule 401. The proffered testimony offered nothing whatever in the nature of proof for any of the issues raised in the contentions. The testimony itself recognized, at 5-6, that it was submitted to postulate radiation doses that would result from a severe accident at Shoreham. ^{50/} These matters are, of course, foreclosed from being litigated in individual licensing proceedings by the Commission's regulations. See Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 & 3), CLI-83-10, 17 NRC at 533. See also Detroit Edison Co. (Enrico Fermi Atomic Power Plant, Unit 2), ALAB-730, 17 NRC 1057, 1069 n. 13 (1983); Cincinnati Gas & Electric Co. (Wm. H. Zimmer Nuclear Power Station, Unit No. 1), 17 NRC at 770-771; PID, 21 NRC at 782, and Section II, A.1, supra. Appellants' assertion that the Board was required to consider the health consequences of radiation exposure as part of the evacuation time estimates is incorrect. ^{51/}

^{49/} Id. at 3.

^{50/} Proposed Testimony of Finlayson, et al. at 5.

^{51/} The criteria for judging the acceptability of evacuation time estimates which are required by 10 CFR Part 50, Appendix E.IV is set forth in NUREG-0654/FEMA-REP-1, Rev. 1, Appendix 4. A consideration of health effects is not mentioned. The elements which should be included in evacuation time studies are: (a) an accounting for permanent, transient, and special facility populations in the plume exposure emergency planning zone (EPZ); (b) an indication of the traffic analysis method and the method of arriving at road capacities; (c) a consideration of a range of evacuation scenarios generally representative of a range of normal through adverse evacuation conditions; (d) a consideration of confirmation of evacuation; (e) an identification of critical links and need for traffic control; and

None of the proposed testimony was arguably relevant to whether or not the population would be stuck in traffic, or whether or not the time estimates used were wrong. The Licensing Board was correct in ruling that this testimony would not have advanced the inquiry into the merits of the evacuation time contentions. See Long Island Lighting Company (Shoreham Nuclear Power Station, Unit 1, ALAB-824, 22 NRC ___, slip op. at 10 (testimony of little probative value need not be admitted)).

2. The Licensing Board Correctly Accepted Testimony Which Quantified Evacuation Times Rather Than Testimony Which Did Not Do So. PID, 21 NRC at 794-5, 805-09

Appellants next assert that the Licensing Board erred in rejecting proposed testimony on the grounds that it was qualitative rather than quantitative. App. Br. at 66-67. The criteria for judging the acceptability of evacuation time estimates is set forth in NUREG-0654, Appendix 4. This includes calculations of road capacities and traffic flow modeling techniques. See Fermi, ALAB-730, 17 NRC at 1069; PID, 21 NRC at 784; Urbanik ff. Tr. 3430, at 5-6. Appellants complain that this represents "sterile mathematical analysis" and that the Board improperly refused to consider" the impact of . . . real-world conditions on the roadways. . . ." App. Br. at 68. However, it is just this sort of

(FOOTNOTE CONTINUED FROM PREVIOUS PAGE)

(f) the use of methodology and traffic flow modeling techniques for various time estimates consistent with the guidance of NUREG-0654, Appendix 4. Urbanik, ff. Tr. 3430, at 5-6.

modeling which is required by the Commission's scheme of regulation.

Zimmer, ALAB-727, 17 NRC at 770. ^{52/}

Moreover, the record below demonstrates that the impact of such "real-world conditions" as those advanced by Appellants were considered in the modeling and the sensitivity studies performed to validate LILCO's traffic analysis. Cordaro et al., ff. Tr. 2336, Att. 6, Cordaro et al., ff. Tr. 2337 at 43-44. The Licensing Board thus found:

LILCO's analyses confirm the police's subjective conclusion that evacuation times will be lengthened if traffic guides are disobeyed or if motorists do not conform to preselected routes. The mathematical analysis, however, tells how big the effect is likely to be. The police panel has proved that uncertainty exists in predicting future traffic flow but LILCO has estimated the magnitude of uncertainty.

PID, 21 NRC at 806.

Appellants argue that LILCO's ETE's are mathematical and do not sufficiently account for the impact of various possible impediments which may affect traffic flows. App. Br. at 67-69. Appellants point to testimony provided by their witness, Dr. Pigozzi, which asserts that the ETE's should be longer for a variety of reasons. See Pigozzi ff. Tr. 2909 at 9-49. As the Licensing Board noted, this testimony, "in large part was not helpful beyond tabulating possible sources of predictive uncertainty." 21 NRC at 807. More importantly, the various possible impediments to traffic flow were considered and utilized to produce LILCO's analytical

^{52/} The modeling techniques described in NUREG-0654 have been approved in many prior NRC proceedings. See e.g.: Philadelphia Electric Co. (Limerick Generating Station, Units 1 & 2), LBP-85-14, 21 NRC at 1236-1240; Duke Power Co. (Catawba Nuclear Station, Units 1 & 2), LBP-84-37, 20 NRC at 989-1003; Consolidated Edison Co. of New York, (Indian Point, Unit No. 2), LBP-83-68, 18 NRC at 960-972.

data which demonstrated their affects on the time estimates. As the Board stated: "The mathematical quantity 'capacity' is the surrogate in the model for many of Intervenor's concerns about traffic delays in the real world." PID, 21 NRC at 784. See also id. at 794-95, 805-09. The Board did not require Appellants to quantify the magnitude of the unreliability of the KLD estimates as asserted at 69-70 of Appellants' brief, but found that LILCO's ETE's were based upon a model which dealt with these uncertainties. PID, 21 NRC at 795, 808.

In sum, the Board did not reject Appellants' evidence merely because it was not quantitative. On the contrary, the Board carefully considered all the testimony presented by Appellants below. See PID, 21 NRC at 784-85, 794-95, and 801-04. The Board properly determined that the reliability of LILCO's ETE's lies in the application of various assumptions in traffic flow modeling, which by its nature produces a quantitative result. These include impediments to traffic flow as well as roadway capacity and volumes. Appellants failed to demonstrate that the assumptions utilized by KLD in the modeling of time estimates were flawed. ^{53/}

3. The Licensing Board Properly Considered and Weighed Evidence on Route Deviation PID, 21 NRC at 790-92

Appellants argue that the Licensing Board erred in accepting a sensitivity study done by KLD associates for LILCO (KLD TM-140) as a basis

^{53/} Further evidence of the Licensing Board's recognition that impediments to traffic flow could create uncertainties in the modeled evacuation time estimates was reflected in its order that the plan be amended to

for finding that evacuee deviation from prescribed evacuation routes would have little impact on the evacuation time estimates, rather than Appellants' evidence that the KLD study was flawed. App. Br. at 70-71.

Appellants are incorrect. The Board was aware of the concerns expressed by Appellants' witnesses. See PID, 21 NRC at 790. The Board found ample evidence in the record below to support its finding that the study properly showed that "overall evacuation time is not sensitive to deviations in route compliance. . . ." *Id.* at 792. The Appellants assert that KLD TM-140 is "misleading because it failed to include a realistic range of options for evacuees taking other routes. . . ." (App. Br. at 71). However, these matters were expressly considered. Alternative destinations were limited because of practical considerations involving the proximity and the minimum circuitry of the associated travel paths. Cordaro et al. ff. Tr. 2337, Att. 12 at 2. ^{54/} Nor did KLD TM-140 assume that "drivers would elect to deviate from prescribed routes only when confronted with

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"contain bounded estimates of uncertainty in evacuation times", derived from LILCO's sensitivity analyses of the effects of impediments on traffic flow. PID, 21 NRC at 808.

^{54/} The Board was also correct in its ruling denying admission of New York State's rebuttal testimony on Contention 65. Memorandum and Order denying Motion of Governor Cuomo, Representing the State of New York, for Leave to File Rebuttal Testimony on Contention 65, March 16, 1984 (unpublished). Contrary to Appellants' assertion, this ruling was based on the fact that this testimony was "neither relevant to an important point in the direct testimony, nor had the State established that this evidence was incapable of being filed at the time it filed its direct testimony on this contention." *Id.* at 6. While LILCO's witness, Mr. Lieberman, agreed that the roadways listed in this testimony (Appendix C) were not explicitly included in KLD's evacuation network, Appellants were afforded the opportunity to pursue this matter during cross-examination, see e.g. Tr. 3841-42, 3845-46, 3853. Hence, the adequacy of the roadway network was thoroughly aired below.

traffic congestion" See App. Br. at 71. The KLD analysis particularly accounted for deviations and assigned alternate destinations which reflected not only primary deviation from assigned routes, but further allowed route deviations at points where lengthy queues were encountered (the "queue adjustment feature"). Cordaro et al. ff. Tr. 2337 at 66-68. ^{55/}

The Board fully explained its rejection of the testimony of Dr. Pigozzi and other of Appellants' witnesses. See PID, 21 NRC at 789, 791, and the discussion of Dr. Pigozzi's testimony at 806-807. As the Board said, "The Board is not aided in the assessment of LILCO's quantitative estimates by repeated assertions that each factor will lengthen evacuation times by some unspecified amount." Id. What the Board required was analytic data, but testimony provided by Appellants was "not helpful beyond tabulating possible sources of predictive uncertainty." Id. The Board went on to explain:

There is simply no evidence or basis for accepting that the frequency of occurrence and consequences to roadway capacity of adverse behavior are quantitatively large enough to significantly alter overall evacuation time estimates beyond the bounds already presented by LILCO." 21 NRC at 794.

The Board findings in this regard should be affirmed.

^{55/} It should also be noted that origin/destination assignments resulted from review of detailed EPZ maps in light of the practical considerations of proximity and likely destinations. Cordaro et al. ff. Tr. 2337 at 36-39. Further, Appellants have continually asserted that Long Island has a very limited East-West roadway network. Given the constraints asserted by Appellants, it is difficult to credit their argument here that evacuees would have a large choice of routes for purposes of route deviation, but not for evacuation generally. As the Board noted, "the routes recommended in Appendix A are already the shortest path out of the EPZ, and the majority of the population has few viable alternative routes from which to choose." PID, 21 NRC at 793.

4. The Licensing Board Properly Rejected Appellants' Evacuation Time Estimates (Contention 23.D) PID, 21 NRC at 801-04

The Licensing Board correctly rejected Appellants' PRC Voorhees evacuation time estimate study. The Appellants study assumed an extended EPZ providing for the evacuation of some people as far as 50 miles from Shoreham, hypothesized an over-simplified roadway network, treated areas bordering the EPZ as within the EPZ, and overestimated the number of evacuating motorists entering the EPZ. PID, 21 NRC at 803; Urbanik, ff. Tr. 3,420 at 6-7. It did not utilize the guidance in NUREG-0654, Appendix 4. Id. ^{56/}

The use of an extended EPZ is contrary to 10 C.F.R. § 50.47(c)(2) providing that the plume exposure zone for evacuation shall be approximately 10 miles in radius. The Appellants' evacuation time estimates included evacuation times of those up to 50 miles beyond Shoreham, who would never enter the EPZ. PID, 21 NRC at 802-03. This, of itself, prevents the acceptance of evacuation estimates based on a 20 mile zone in

^{56/} Appellants' reference to a Licensing Board acceptance of a PRC Voorhees time study in Catawba, LBP-84-37, 20 NRC at 933, is not relevant since the assumptions used in that study are not the same as those used by PRC Voorhees in the instant case. Staff witness, Dr. Urbanik, testified in Catawba that the methodology and assumptions used were consistent with Appendix A of NUREG-0654. Id. at 999. In this case he testified that the assumptions utilized in the Shoreham study by PRC Voorhees were not consistent with NUREG-0654. Urbanik, ff. Tr. 3430, at 6-7.

an NRC proceeding. See Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 & 2), ALAB-781 at 831-32. ^{57/}

LILCO's evacuation plan was based on a 10 mile EPZ and utilized the guidance in Appendix 4 of NUREG-0654. PID, 21 NRC at 783-84. It specifically accounted for the shadow evacuation phenomena and showed that unordered evacuations "from regions outside the EPZ [do] not pose a barrier to evacuation of the EPZ." PID, 21 NRC at 802; see also id. at 804.

Appellants assert that LILCO and the Licensing Board erred in failing to include the Sunrise Highway in its modeling of the evacuation network. App. Br. at 73-74. However, traffic on this road never enters the EPZ. Cordaro, et al., ff. Tr. 2,337 at 15. An analysis of PRC Voorhees' time estimates show that residents within the 10 mile EPZ using the Sunrise Highway would be outside the EPZ no later than 2 hours and 30 minutes after the start of the evacuation, and that those EPZ residents would pass the westernmost edge of the EPZ within 6 hours. Id. at 16-17. The congestion along the Sunrise Highway asserted by Appellants results solely from East End residents of Long Island who come from outside of the EPZ and who never enter the EPZ. Id. ^{58/}

What Appellants assert is not that residents of the 10 mile EPZ will be impacted by the shadow phenomenon and thus incur longer evacuation times, but that voluntary shadow evacuees travelling outside of the EPZ

^{57/} Note that Appellants model was based on a 20 mile evacuation zone that assumed the evacuation of all of the east end of Long Island. 21 NRC 803.

^{58/} If only EPZ residents are considered, both LILCO's study and that presented by Appellants show that all traffic that originates in the EPZ reaches the boundary within 7 hours, 30-35 minutes. Cordaro, et al., ff. Tr. 2,337, at 21-23.

will experience long delays. App. Br. at 74-75. The Licensing Board was correct in excluding consideration of these evacuees in the reported time estimates for evacuees from within the EPZ since these voluntary evacuees never enter the EPZ. PID, 21 NRC at 803.

5. The Licensing Board Did Not Err in its Consideration of Expert Testimony PID, 21 NRC at 783-84, 805-09

Appellants again argue that the Board failed to give appropriate weight to Appellants' witnesses, and relied unduly on the witnesses for LILCO and the NRC staff. App. Br. at 75-77. Appellants assert that their witnesses, Suffolk County Police Department (SCPD) officers and New York State Department of Transportation witnesses, have expertise in traffic management and vehicular traffic on Long Island, while the Staff witness, Dr. Urbanik, has no expertise in directing traffic or in the field of human behavior. Id.

The Board did not err in relying on the testimony of the Staff witness, Dr. Urbanik. The criteria for judging the acceptability of evacuation time estimates is contained in NUREG-0654, Appendix 4, and Dr. Urbanik is a traffic engineer who provided the input to the development of the guidance for the time studies which appear in Appendix 4. Urbanik, ff. Tr. 3,430 at 2. Furthermore, Dr. Urbanik was the principal author of NUREG/CR-1745 "Analysis of Techniques for Estimating Evacuation Times for Emergency Planning Zones" (November 1980), and he has reviewed the evacuation time estimate study submittal of some 52 operating and near term nuclear facilities for the NRC utilizing NUREG-0654. The results of these reviews are published in NUREG/CR-1856 "An Analysis of Evacuation Time Estimates Around 52 Nuclear Power Plant Sites" (May 1981). Id. See also

Urbanik, ff. Tr. 3430, att. 1. See Catawba, LBP-84-37, 20 NRC at 994. His testimony regarding the behavior of drivers is based on extensive study of traffic flow models and on research of the past behavior of evacuation traffic in actual emergency situations. Id., Tr. 3450-51, 3548.

The Licensing Board acknowledged that SCPD witnesses have extensive practical experience with routine traffic problems, but noted that their testimony focused on the proposition that successful implementation of the LILCO Plan requires rigid adherence to route compliance and the directions given by traffic guides. PID, 21 NRC at 805. ^{59/} The Board found that this testimony failed to fully consider the LILCO analyses which demonstrated the overriding effect of capacity-constrained flow, and studies which showed that rigid adherence to the conditions modeled is not necessary for a workable evacuation. Id. at 806.

The Board's acceptance of the LILCO evacuation time studies which quantify the magnitude of the uncertainty raised by Appellants' witnesses should be affirmed.

6. The Board Was Correct in its Ruling on Other Evacuation Issues

a. Appellants argue that the Board erred in accepting LILCO's estimate of the number of accidents which might occur, rather than the

^{59/} The Licensing Board stated:

Our skepticism of their conclusions arises first from the implicit suggestion that the range of contingencies observed over lengthy careers will somehow systematically and malevolently converge to plague an unknown and unknowable five or six hour evacuation period . . . nothing in the record tells us which

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estimates presented by their witness, Mr. Polk, and consequently was incorrect in its ruling that LILCO has provided for sufficient equipment to remove road obstacles (Contentions 65.D and 66). App. Br. at 77. As the Board found, Mr. Polk's interpretation of the Transportation and Traffic Engineering Handbook data was incorrect. PID, 21 NRC at 795-96; Cordaro et al. ff. Tr. 2337 at 24-27; Tr. 3447-49 (Urbanik). Mr. Polk interpreted the handbook to show more accidents occur at lower speeds than at higher speeds, whereas the manual showed that the frequency of accidents was a function of deviation from mean roadway speed. Id. Furthermore, the LILCO Plan provides for twelve road crews and the use of LILCO owned vehicles for removing obstacles from roadways. PID, 21 NRC 809-10; Cordaro et al. ff. Tr. 6685 at 6-7; Tr. 7862 (Weismantle). The Board's findings on these two contentions were correct.

b. Appellants argue that LILCO's plan to distribute fuel to cars out of gas would snarl traffic (Contention 66.F) and that the Board erred in dismissing this concern. See PID, 21 NRC at 797, 816. The Board correctly noted that there is no requirement for the distribution of fuel along evacuation routes. 21 NRC at 816. Furthermore, the Board pointed out that "there are common sense remedies for cars out of gas. By the County's own assertion some people will buy fuel before they evacuate . . . , tow trucks will be on the road to clear blockages . . . , stalled cars can be pushed off the road . . . drivers can coast off the road when they run out of

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assumptions and contingencies would actually come to pass in a real emergency and the Board rejects the notion of a malevolent convergence of all of them. PID, 21 NRC at 806.

gas." Id. at 797. Based on these considerations and the fact that there is no regulatory requirement for a fuel allocation plan, the Board's findings on this contention should be affirmed.

c. Appellants also assert that the Board erred in rejecting Contention 65.C.1, which alleges that traffic guides would add to evacuation congestion due to their lack of training and experience. App. Br. at 78. See PID, 21 NRC at 790-95. The record below demonstrates that consensus, not conflict, is created in a community emergency. Tr. 3450-51 (Urbanik); Cordaro et al. ff. Tr. 3857 at 25-27. Motorists will look to traffic guides for help, not treat them with hostility. Cordaro et al. ff. Tr. 1470 at 129, Cordaro et al. ff. Tr. 3857 at 27; Urbanik ff. Tr. 3430 at 11-12. Motorists will not be forced by traffic guides to travel in a particular direction and a cause of aggressive behavior is eliminated. Cordaro et al. ff. Tr. 1470 at 129; McIntire, ff. Tr. 2086 at 3; 21 NRC at 794. Moreover, the Board found that "to the extent that traffic guides would be disregarded, however, the overall evacuation time would tend toward the estimate for [the] uncontrolled scenario. . . ." PID, 21 NRC at 793. The Board went on to note that aggressive behavior toward traffic guides would need to occur with a high degree of frequency in order to affect time estimates that apply to a large complex network of routes and destinations. Id. at 794. The Board's findings on Contention 65.C.1 were correct.

d. Appellants next assert that the Board erred in its findings on Contention 66.D which alleged that the LILCO Plan does not adequately address the problem of snow removal in an evacuation. See PID, 21 NRC at 813-15. This assertion is without merit. Appellants fail to cite any basis for their assertion that LILCO must have a means for providing snow

removal. App. Br. at 79. There was no dispute in the record below that normal snowplowing operations by the State of New York and the County of Suffolk would continue until the time an emergency were declared. Gibbons, ff. Tr. 7005 at 2, Tr. 7011-13, 7021, 7034 (Gibbons). Further, there is no dispute that continued plowing of roads during an evacuation would likely impede rather than aid traffic flow. Tr. 6815 (Lieberman); Tr. 6898 (Monteith); Tr. 7008-09 (Gibbons). The LILCO Plan provides that if roads are passable, the adverse winter scenario time estimates would be used (Cordaro et al. ff. Tr. 6685 at 11 13-14), and if the roadways are impassable, a sheltering recommendation would be made. Id. at 14. No basis appears for a contention that snow must be cleared in a radiological emergency. See Consumers Power Company (Big Rock Point Plant) LBP-84-32, 20 NRC 601, 691-693 (1984).

e. Finally, Appellants assert without any detail that the Board's findings on evacuation time estimates for the transit-dependent population (Contention 67.C), special facilities (Contention 72.A) and the homebound handicapped (Contention 73.B.4) constitute error for the same reasons as it gave on the other evacuation contentions (65, 23 and 66). As discussed above, the Board's findings on Contention 65, 23 and 66 were correct. Therefore the finding on these contentions should be affirmed. See PID, 21 NRC 820-821, regarding evacuation time for buses; id. at 836-837, regarding special facilities; and id. at 852-853, regarding the homebound handicapped.

G. The Number of Buses For The Transit-Dependent Population is Sufficient (Contention 24.F.2) PID, 21 NRC at 817-827

Appellants maintain LILCO does not have commitments for a sufficient number of buses to evacuate the general transit-dependent population. App. Br. at 39-81. Appellants assert that the bus companies under contract to supply buses to LILCO have prior commitments to schools which would only allow them to supply 298 of the 333 buses LILCO needs in an emergency to transport the transit-dependent population. App. Br. at 80. Appellants further assert that the Board made unwarranted assumptions that buses would be made available after the school rounds have been completed, that buses outside the EPZ could be released in an emergency, and that bus companies have additional buses which could be used in an emergency. Id.

Appellants' assertions are without merit. First, LILCO has contracts with bus companies to provide a total of 1236 buses, although it only needs 333 buses. Cordaro et al. Tr. 4/6/84 Vol. II at 7. Two hundred ninety-eight of these buses are available immediately and the remainder are subject to commitments for prior use by schools both in and outside the EPZ. Cordaro et al. Tr. ff. Tr. 9154, Vol. II at 58-59. Over half of the buses subject to prior commitment are outside of the EPZ. Id.; Tr. 9307-08 (Weismantle). In an emergency, the school districts outside the EPZ would be asked to release some buses from their normal runs, and it is reasonable to expect them to be released in an emergency. Id.; see PID, 21 NRC at 827. Further, the LILCO Plan does not contemplate a simultaneous evacuation of school children and the general public, but provides for the early dismissal of school children except for fast breaking accidents. PID, 21 NRC at 827 and 856. The buses would be available after taking the children home. PID, 21 NRC at 827. In addition, the bus companies did not

commit their entire fleet of buses but had others available for use in an emergency. Cordaro et al., ff. Tr. 9154, Vol. II, at 57-59; PID, 21 NRC at 827. ^{60/}

Appellants fault the findings for being speculative and not being based upon an absolute commitment for the relatively small number of additional buses needed to evacuate of the non-automobile-owning public. App. Br. at 80-81. However, in view of the large number of buses LILCO has under commitment for use in an emergency situation (most of which were outside the EPZ), and the natural priority any request for buses would have in an emergency, there is reasonable assurance that the requisite number of buses would be available. ^{61/} See Diablo Canyon, ALAB-781, 20 NRC at 834; Limerick, LBP-85-14, 21 NRC at 1274. Cf. Zimmer, ALAB-727, 17 NRC at 770, 773, (where there was no contractual commitments to supply buses). The Licensing Board correctly found LILCO has adequately planned to provide for

^{60/} The testimony of Mr. Failla was rightly rejected by the Board as being based on the number of buses a company owned, and not on the number it controlled and could supply under contract. See PID, 21 NRC at 826; Tr. 9988-91, 10,006-07 (Robinson); Tr. 9953-54, 9959-60, 9975-76 (Failla).

^{61/} FEMA testified that the prior commitment of buses to schools is a common one in evacuation plans at other nuclear plants. Tr. 12,117 (Kowieski). The contractual agreements from the bus companies were not available to FEMA before it testified; and FEMA could not testify to whether the prior commitments of the buses would render the agreements inadequate. Tr. 12,799 (Keller); Tr. 12,796-97 (Kowieski, Keller). FEMA did not testify that the existence of these commitments would render the agreements unsatisfactory in regard to the transit-dependent general population. Cf. App. Br. at 80.

the evacuation of the non-automobile-owning public in an emergency. PID, 21 NRC at 827. ^{62/}

H. Mobilization of Emergency Workers (Contention 27) PID, 21 NRC 707-716

Contention 27 presents a number of factors which Appellants allege demonstrate that LERO workers cannot be mobilized in a timely manner to protect the public health and safety. As a result, say Appellants, the implementation of protective actions would be delayed. App. Br. at 82-84.

In Cincinnati Gas & Electric Co. (Wm. H. Zimmer Nuclear Power Station, Unit No. 1), ALAB-727, 17 NRC at 770-71, the Board stated:

The basic goal of emergency planning is . . . the achievement of maximum dose savings in a radiological emergency. . . . If the responsible government officials are to make an informed decision respecting what is the protective action in a given radiological emergency, there must be available to them realistic time estimates that are realistic of the minimum period in which, in light of existing local conditions, evacuation could reasonably be accomplished.

See also id. at 764-5. ^{63/} Extreme or unreasonable planning measures need not be taken. As we have detailed, the Commission in Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), CLI-83-10, 17 NRC at 533, in describing the emergency planning regulations, stated:

^{62/} Cf. PID, 21 NRC at 872-74; Shoreham, LBP-85-31, 22 NRC at 430, holding that in regard to the evacuation of schoolchildren from schools, that LILCO's plan must be corrected to eliminate the subordination of LILCO's right to use school buses in an emergency to bus companies' preexisting contracts for the normal use of the buses by schools outside the EPZ.

^{63/} See also NUREG-0654, at 5-7.

The emphasis is on prudent risk reduction measures. The regulation does not require the dedication of resources to handle every possible accident that can be imagined. The concept of the regulation is that there should be core planning with sufficient flexibility to develop a reasonable ad hoc response to those very serious low probability accidents which could affect the general public.

See also Duke Power Co. (Catawba Nuclear Station, Units 1 and 2), LBP-84-37, 20 NRC at 938-40.

The Licensing Board here concluded:

The Board finds Suffolk County's assertions in Contention 27 and all of its subparts to be without merit. LERO can mobilize its workers in a timely manner for a broad spectrum of accidents. A specific subset of accident scenarios exists that could progress so rapidly that it would be difficult or impossible to fully execute a prior mobilization. The consequence of an inability to mobilize for some fast-breaking accidents is to lengthen the time to evacuate the EPZ somewhat. This is acceptable.

The Board's finding of acceptability for this contention warrants no implication that we would accept excessively long evacuation times under any circumstances or that we would accept a plan that did not provide for substantial assistance to the public in an evacuation. The Board holds LILCO responsible to make a reasonable effort to achieve prompt and expeditious evacuation of the EPZ under all conditions. The Board cannot require what is impossible, however, and we do not do so here. In this contention, we are satisfied that the LILCO Plan to mobilize its emergency forces over a full spectrum of possible accidents is reasonable even though longer-than-normal public evacuation times might be required for the most extreme conditions in that spectrum.

PID, 21 NRC 725.

Appellants seek to fault the Board for finding LILCO's mobilization plans are sufficient even though there exists a subset of fast breaking accident scenarios where emergency workers could not be mobilized. As recognized in the cited cases, the test is whether the plan provides for

prudent risk reduction and not whether all protective actions can be taken for each imaginable accident. See Consumers Power Co. (Big Rock Point Plant), LBP-83-44, 18 NRC 201, 207 (1983); see also Union Electric Co. (Callaway Plant, Unit 1), LBP-83-71, 18 NRC 1105, 1111-12 (1983).

"[E]mergency planning must provide for a variety of protective measures including sheltering, evacuation and possible use of blocking such as potassium iodine - the overall objective being the avoidance of as much radiation exposure as possible." Zimmer, ALAB-727, 17 NRC at 765. ^{64/} In finding no defect in planning and that LILCO can organize its emergency workers in a timely manner, the Board correctly found that LILCO met the requirements of the regulation. ^{65/}

^{64/} Knowledge of mobilization times may lead to a recommendation to shelter in lieu of evacuation. The fact that the Licensing Board found the amount of time needed to evacuate without LILCO traffic guides, does not lessen the Board's conclusions that it "can find no defect in planning..." and that "LILCO has taken practical and reasonable steps to minimize the mobilization times of LERO workers." PID, 21 NRC at 724. The issue of whether provision must be made for traffic guides with legal authority to perform their tasks, as was determined in Long Island Lighting Co. (Shoreham Nuclear Power Station, Unit 1), ALAB-818, 22 NRC ___, is not germane to the issues in this contention.

^{65/} Appellants cite no fault in factual findings by the Board, but only dispute its conclusion that mobilization plans are sufficient where there are accidents that are so fast breaking that there is no time for mobilization. Appellants also fault the Board's conclusion on Contention 27 as being "dependent upon [unexplained] erroneous rulings on Contentions 65, 23.D and 23.H. The Staff responds to those alleged errors in Sec. III. F.1 of this brief.

- I. Notification of Emergency Personnel and the Public
(Contentions 26, 24.1, 55-59) PID, 21 NRC at 707-716, 757-763
 1. The Record Supports the Licensing Board's Findings on the Notification of Emergency Workers And The Public
(Contentions 55 and 56) PID, 21 NRC at 757-59

Appellants argue that the Licensing Board erred in finding the LILCO Plan in compliance with the regulations set forth in 10 CFR Part 50, Appendix E, Section IV.D.3, in regard to public notification in two respects: first, that notification to the Customer Service Office (CSO) is sufficient to meet the intent of the regulation; and second, that LILCO's Plan for route alert drivers is sufficient to meet the requirement that the public must be notified within 45 minutes in the event of a siren failure. App. Br. at 85-86.

In this case the Board found that the appropriate offsite authorities to respond are members of LERO, rather than State and local officials. PID, 21 at 708-09. Appellants assert that the CSO is "merely the vehicle for subsequent notification of key response personnel actually necessary and responsible for implementing the LILCO Plan." App. Br. at 86. This assertion is without merit. The CSO not only receives the initial notification and attempts to reach the Director of Local Response and other key personnel, but is also required to activate the public warning system within 15 minutes, whether or not the Director has been reached. Cordaro et al. ff. Tr. 4014 at 25-29 31-32, 34; Tr. 4423-25 (Daverio, Renz).

The intent of the regulation in question is to assure that key emergency response personnel are notified so that the public can be notified promptly after the declaration of an emergency by the utility. PID at 708-09. As the Board noted, this is so that offsite authorities can "make a prompt public notification decision and have the capability to carry out

that decision within 15 minutes of their receipt of a notification of an emergency at the plant." PID, 21 NRC at 708; see also Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 & 3), ALAB-680, 16 NRC 127, 131 (1982). The procedure whereby the CSO, the "offsite authority", receives notification and subsequently activates the public notification system within 15 minutes assures that the intent of the regulation is met. PID, 21 NRC at 711.

Appellants also assert that the Board erred in finding that Contention 56 was without merit because there is no regulatory requirement for a backup to the siren system which would assure that the general public would be notified of an emergency within 45 minutes. App. Br. at 86. NUREG-0654 does not require a backup for the siren system. See Kansas Gas & Electric Co. (Wolf Creek Generating Station, Unit 1), LBP-84-26, 20 NRC at 67; Metropolitan Edison Co. (Three Mile Island Nuclear Station, Unit No. 1) LBP-81-59, 14 NRC at 1542. The finding by the Board of the lack of need for a backup to the siren system to assure that the public was alerted within 45 minutes is consistent with NRC precedent and should be affirmed. See PID, 21 NRC at 759.

2. Notification to Boaters (Contentions 24.T and 59) PID, 21 NRC at 759.

Contentions 24.T and 59 deal with notification to boaters in Long Island Sound in the event of an accident at Shoreham. The Board found that the situation at Shoreham regarding the notification of boaters on Long Island Sound was similar to the situation in Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 & 3), ALAB-717, 17 NRC at 376, where a similar scheme for Coast Guard notification of boaters was

found sufficient. See PID at 762-63. The Coast Guard will broadcast a message to boaters in the EPZ on marine band radio. Cordaro et al. Tr. of 4/6/84, Vol. II, at 38-39, Att. 31; Cordaro et al., ff. Tr. 4842, at 21-23; Tr. 5101 (Renz). Larger boats have marine band radios. Small boats, which are generally within 2 miles of shore, will hear the sirens. Cordaro et al., ff. Tr. 4842, at 22-23; Tr. 5134-39 (Hobbs, Renz, Cordaro). Further, this radio and siren notification will be supplemented by helicopter notification of boaters. Tr. 5147-48, 5152-53 (Renz, Keismantle). The findings by the Board as regarding notification of boaters was supported in the record and should be affirmed.

J. Communications (Contentions 24.L and 28-34) PID, 21 NRC at 725-44

Contentions 24.L and 28-34 involve the adequacy of LILCO proposals for communications among response personnel during an emergency. ^{66/} As Appellants note, the major difference between the parties involved the propriety of LILCO's decision to construct its radio system to provide for verticle communications within a managment hierarchy (an administrative system), rather than one which provides for lateral communications among field personnel (an operational system). See PID, 21 NRC at 729-30. The LILCO Plan provides that virtually all decisions regarding the

^{66/} Specifically the contentions addressed communications between LILCO and federal agencies (Contention 28); need to provide for trained repair technicians (Contention 29); the asserted inadequacy of the proposed radio communications system (Contentions 30 and 31); the asserted lack of direct communications between emergency personnel in the field and the EOC (allegedly likely to result in delaying the implementation of protective actions) (Contentions 32 and 33); and the asserted inadequacy of communications with hospitals, ambulance personnel and dispatch locations (Contentions 34 and 24.L).

implementation of its Plan would be made before any evacuation takes place; for example, traffic guides would only have to implement LILCO's preset evacuation plan, See, e.g., Cordaro et al., ff. Tr. 5823, at 15, 22-23. Therefore no extensive lateral communications between traffic guides is necessary. Id.

The Licensing Board determined that the purpose of the radio system, as here relevant, is to assure a successful evacuation to achieve dose savings in an emergency, and that the communication must be judged in terms of its effectiveness in reaching that goal. PID, 21 NRC 735. Here, where the traffic guides are to facilitate traffic flow at assigned intersections and are not to alleviate traffic jams or deal with problems on an ad hoc basis, a hierarchical rather than a lateral communication system is appropriate. The Board concluded:

The Board agrees with LILCO that the traffic guides should not make decisions on their own initiative to alter traffic flow because evacuation routes are preplanned and that preplanning takes into account inevitable traffic congestion. LILCO's traffic models already yield a near optimum strategy that minimizes overall evacuation time within the EPZ. The Board concludes that traffic guides could not improve overall roadway network evacuation times by making isolated ad hoc decisions about traffic flow. Thus, there should be very little need for frequent communications among guides during an actual evacuation. It is useful for the traffic guides to be in possession of radios during the evacuation simply as a matter of prudence since the kind of messages they may be required to report to management is now unforeseeable. We conclude, however, that a timely evacuation of the EPZ could be accomplished even if there were no communication whatever among traffic guides. That being the case, we find that LILCO's administrative communications system is a useful provision for emergency response, even though there can be little doubt that the broadly versatile system the police advocate is in the final analysis a superior one.

PID, 21 NRC 736-37.

Appellants argue that the Licensing Board's conclusions must be reversed primarily because it claims that the Board's findings on Contention 65, dealing with evacuation time estimates were wrong. The Staff, as do the Appellants, refers the Appeal Board to that section of its brief dealing with the Licensing Board's conclusions on emergency evacuation times. See Section III.F.

The Appellants also argue that the Licensing Board's conclusions are contrary to the evidence presented by their witnesses who testified about traffic control and emergency response communications, and that the Licensing Board erred in asserting that an operational communications system is only "marginally better" than an administrative system for purposes of aiding in an evacuation of all or part of the EPZ. App. Br. at 88-90.

However, as the Licensing Board recognized, while the County's witnesses were qualified to give testimony relating to their experience with the type of communications used by the Suffolk County police, these witnesses demonstrated a lack of experience and of expertise with respect to communications for a large-scale evacuation where the plan calls for traffic controllers to facilitate traffic at fixed locations and not to make ad hoc decisions of the type made by police officers. PID, 21 NRC 734-37. The County's witnesses admitted having no experience with emergency planning or preplanned communications for the large-scale type of evacuation with fixed roles as is planned here. Tr. 5419, 6194 (Regensburg, Snow, Stile); see Tr. 6244-45, 6247-48 (Stile, Snow). Thus, the County's testimony was premised on an unsupported assumption that communications principles used by the County police in dealing with smaller emergencies on an ad hoc basis in their work must be applied here where ad

hoc decisions are not to be made and lateral communication is not needed. Compare the County's testimony with Applicant's testimony Tr. 5940-41 (Hobbs), Tr. 5961-64 (Cordaro). As the Board found, and the evidence supports, a large-scale evacuation is best handled by preplanning and applying different principles from those applied by a County police department in responding to smaller ad hoc emergencies. PID, 21 NRC 736-37.

The response is preplanned for Shoreham in the LILCO Plan. Traffic routes and directions are designated in advance by traffic professionals with expertise in large-scale evacuation issues. Persons directing traffic (presently traffic guides) are not permitted to make decisions regarding traffic flow on an ad hoc basis in the field. See PID, 21 NRC 781-808. Thus the type of communications system the County envisioned in its testimony, and the communications problems the County predicted, were based on different conditions than would be present here, and the Licensing Board was justified in essentially discounting such testimony. On the evidence before it, the Licensing Board properly found that LILCO's proposed communication system provides reasonable assurance that adequate protective actions could and would be taken in the event of a Shoreham emergency, as required by 10 C.F.R. § 50.47(a)(1). The Licensing Board's finding for LILCO on Contentions 30 and 31 should be affirmed.

Appellants also generally assert that the Licensing Board's rulings on other communications contentions (i.e., Contentions 28, 32-34, and 24.L) suffer from the same defects as those on Contentions 30 and 31. Although Appellants have set out in a footnote, n.112, p.91, some record citation, they have not briefed these matters to show why the Licensing Board's weighing of the evidence was wrong. Thus the exceptions to these findings

may be deemed abandoned. See Public Service Co. of Indiana (Marble Hill Nuclear Generating Station, Units 1&2), ALAB-461, 7 NRC 313, 315 (1978); Tennessee Valley Authority, (Hartsville Plant, Units 1A, 2A, 1B & 2B) ALAB-367, 5 NRC 92, 104 n.59 (1977). ^{67/}

K. Training (Contentions 24.S, 39-41, 44 and 98-100) PID, 21 NRC at 744-756

In Contentions 24.S, 39-41, 44, and 98-100 Appellants contested the adequacy of LILCO's emergency planning training program. ^{68/} On appeal Appellants have not raised any question concerning the adequacy of the training offered LERO workers or its adequacy to meet regulatory requirements. Appellants argue that Licensing Board erred in only two respects in regard to training: (1) in reaching only tentative "conclusions," on the training contentions "subject to confirmation" by FEMA after a graded exercise; and (2) in finding that the LILCO training program offering training to school, hospital, nursing home, and other special facility personnel was sufficient without any requirement that personnel of these facilities accept the training. App. Br. at 91-93.

^{67/} The Board's findings on these other communications contentions are supported by the evidence of record. See PID 21 NRC 737-44, Cordaro et al., ff. Tr. 3823, at 28-30; Baldwin et al. ff. Tr. 12174, at 36, 39-40; Tr. 14319 (Kowieski); Tr. 13959 (Renz); Cordaro, Tr. 6553-54; Cordaro et al. Tr. 6457, at 6-7, 20-21; Tr. 6429, 6534-35 (Robinson).

^{68/} Specifically these contentions challenged LILCO's provisions for training non-LILCO personnel (Contentions 24.S and 98), alleged that LILCO's training program cannot compensate for the lack of experience among LILCO's personnel (Contentions 40, 44.E, 44.F, 99 and 100) or provide proper instruction in the use of emergency equipment (Contentions 41 and 44.D), and challenged the adequacy of LILCO's proposal for dealing with attrition among its emergency response force (Contention 39).

First, it is firmly established that predictive findings on the adequacy of an emergency planning program, subject to confirmation in a FEMA exercise, provide a reasonable and proper basis for a Board to find that elements of an emergency plan are adequate. In Duke Power Co. (Catawba Nuclear Station, Units 1 & 2). ALAB-813, 22 NRC at 78-79, the Appeal Board stated:

It is now well-settled that the issuance of FEMA's findings on the adequacy of offsite emergency plans and preparedness is not a prerequisite to the authorization of a full-power operating license. Rather "preliminary FEMA reviews and interim findings presented by FEMA witnesses at licensing hearings are sufficient as long as such information permits the Licensing Board to conclude that offsite emergency preparedness provides 'reasonable assurance that adequate protective measures can and will be taken in the event of a radiological emergency.'" The recent decision of the Court of Appeals for the District of Columbia Circuit in Union of Concerned Scientists v. NRC [735. F.2d 1437 (1984)] relied upon by the intervenors, is not to the contrary. * * * the court neither held nor implied that a licensing board must invariably place in limbo an operating license proceeding in which emergency preparedness issues are contested to await the final FEMA finding. [Footnotes omitted]

The Licensing Board here concluded in regard to LILCO's training program:

The Board finds that contrary to the allegations contained in Contentions 24.S, 39-41, 44 and 98-100, the LILCO Plan training program meets the regulatory standards. This conclusion is made subject to confirmation by a finding, to be made by FEMA after a graded exercise, that the Plan can be satisfactorily implemented with the training program submitted and that LILCO possesses an adequate number of trained LERO workers.

PID, 21 NRC at 756. Thus no infirmity exists in the Licensing Board's conclusions that the training program meets regulatory standards, subject to latter FEMA confirmation after a graded exercise testing the Plan.

Moreover, there is no requirement that the personnel of schools, hospitals, nursing homes and other special facilities receive the emergency response training or that there be any agreements to train the personnel of those facilities. 10 C.F.R. § 50.47(b)(15) provides that "radiological emergency response training is provided to those who may be called upon to assist in an emergency," and NUREG-0654 II.0 provides that "each organization shall establish a training program for instructing and qualifying personnel who will implement radiological emergency response plans." NUREG-0654, §II.0, does not require that personnel of facilities such as schools, hospitals and nursing homes receive training, but only that training be given to the personnel of specialized response organizations. The Licensing Board properly found that, under the regulations and guidelines, training need only be provided to organizations providing essential support services. PID, 21 NRC 454-5. See Kansas Gas & Electric Co. (Wolf Creek Station, Unit 1) LBP-84-26, 20 NRC at 69-70; Pacific Gas & Elec. Co. (Diablo Canyon Nuclear Power Plant, Units 1 & 2), LBP-82-70, 16 NRC at 791-92, 846; ^{69/} see also Babb et al., ff. Tr. 11,140, at 78, Tr. 14,442-43; 14,523-24 (Keller).

^{69/} Appellants' reliance on Indian Point, LBP-83-68, 18 NRC at 952-53; Consumers Power Co. (Big Rock Point Plant), LBP-82-77, 16 NRC 1096, 1098-1100 (1982); Three Mile Island, LBP-81-59, 14 NRC at 1640-41, is misplaced. None of these cases faced the issue of whether those who might be called upon to evacuate or shelter their charges, in contrast to those who would be called upon to assist in an emergency, must be specifically trained for radiological emergencies. See 10 C.F.R. §50.47(b)(15); NUREG-0654, §II, 0.4. Licensing Boards which have faced this issue have decided special training is not needed. Wolf Creek, LBP-84-26, 20 NRC at 69-70; Diablo Canyon, LBP-82-70, 16 NRC at 791. Further the testimony cited below shows such training is not needed.

Further, the evidence here established that the personnel of these facilities do not have to be trained to perform any special role in a radiological emergency. See PID, 21 NRC 754-55. For example, school officials do not require special training to supervise children in implementing protective actions since their normal task is to supervise and protect school children in their care. See Babb et al., ff. Tr. 11,140, at 78-79; Tr. 1157-58, 1175 (Weismantle), 11,846-52 (Daverio, Cordaro, Mileti), 12,192-95 (Kowieski, McIntire), 14,442-44, 14,523-24 (Keller). As the Licensing Board found, the role of school personnel during a radiological emergency is not unique, but is similar to what they usually do. See Tr. 13,383-85 (Fakler), but see Tr. 13,122-23 (Cosgrove); Tr. 14443-44 (Keller). ^{70/} The Board's findings regarding training should be affirmed.

L. Ingestion Pathway Protective Actions (Contentions 81 and 24.R)

1. The Record Supports the Licensing Board's Findings that LILCO Can Implement Ingestion Pathway Protective Actions (Contention 81)
PID, 21 NRC 875-78

Contention 81, in general, alleges that the LILCO Plan does not provide adequate planning and procedures for the 50 mile ingestion pathway

^{70/} Moreover, LILCO will offer training and retraining annually to organizations (such as schools and special facilities) that are required to take actions similar to those of the general public in a radiological emergency. See LILCO Plan, at 5.1-6; Tr. 1172 (Weismantle), 13,223 (Lipsky). The LILCO Plan provides an adequate mechanism for initial training and retraining of these organizations. Tr. 14,523-26 (Keller). The Licensing Board was justified in finding that Appellants' testimony that there was no assurance these organizations would be trained was not persuasive and was contradictory. Compare Tr. 8412 (Cosgrove), 13,219 (Fakler) with Tr. 13,108-09 (Cosgrove).

EPZ and therefore does not comply with 10 C.F.R. §§ 50.47(a)(1) and 50.47(c)(2) and NUREG-0654, § II.J.11. Appellants do not dispute that the LILCO Plan describes several proposed protective actions, but assert that LILCO has not assured implementation of these protective actions. App. Br. at 93-95.

The Licensing Board considered this matter and concluded:

The Board finds no barriers to LILCO's ability to warn the public through EBS messages or indeed to telephone individual farmers and food processors with appropriate messages concerning the withholding of food products from the market. LILCO has compiled lists of producers and processors for this purpose. The Board finds it reasonable to assume that food producers and processors would comply voluntarily with warning notices. Further, we find that LILCO's offer to purchase contaminated or unsalvageable food in a situation where the consuming public is likely to resist purchase of fresh foods is a persuasive argument that LILCO's reliance on voluntary compliance will be effective. It seems to us altogether reasonable that milk producers or fresh fruit and vegetable producers, having as a practical matter no other outlet for possibly contaminated food, would welcome an opportunity to sell to LILCO. We therefore find that LILCO's lack of authority to impose the terms of its plan on food producers or processors is not a fatal flaw in its plan for the ingestion pathway zone.

Suffolk County is correct that §II.J.11 of NUREG-0654 uses mandatory language in its discussion of ingestion pathway requirements. However, it does so in the context of guidance to States for which such language would be appropriate. In this case, no State participation has been committed, but we have reasonable assurance that the LILCO Plan is workable. The Board rules in LILCO's favor on Contention 81.

PID, 21 NRC 877-78.

FEMA and LILCO witnesses testified, without contradiction, that the compensation policy set forth in LILCO's plan will effectively eliminate any incentive for farmers or merchants to sell or distribute contaminated food to anyone other than LILCO. Tr. 13,687-88, 13,729 (Cordaro), 14,252,

14,257-58 (Keller, McIntire). This is especially true since the public would not buy food that they think could be contaminated. See Tr. 14,257 (Keller). There is no evidence in the record to suggest that LILCO's compensation program would not be at least as effective as impoundment, imposition of embargoes, and confiscation or condemnation of contaminated foodstuffs by the State. The record further shows that LILCO's compensation program will be supplemented by the authority of the United States Food and Drug Administration to condemn contaminated food which could travel in interstate commerce. See Tr. 14,258 (Keller).

Appellants' implicit thesis is that since LILCO cannot "impose" its methods and procedures on the public as required of States in §II.J.11 of NUREG-0654, its plan can not be said to comply with the Commission's regulations. As recognized by the Licensing Board, that requirement is inappropriate here where a utility plan rather than a state plan is being considered. No substantial deficiency in the plan is shown, where LILCO can interdict contaminated food products, to cause a reversal of the Licensing Board's conclusion that the LILCO plan meets the regulatory standards and protects the food ingestion pathway. 71/

2. The Licensing Board's Findings that Connecticut Would Take Adequate Protective Measures (Contention 24.R)
PID, 2: NRC 885-87

Contention 24.R as presented upon appeal deals with "whether there is reasonable assurance that adequate protective measures can and will be taken in that portion of the [ingestion pathway] EPZ which lies in

71/ Cf. Shoreham, LBP-85-33, 22 NRC at 428-29.

Connecticut". App. Br. at 95. Appellants argue on appeal that it was not enough for the Licensing Board to find, as it did, that there exists an agreement by the State of Connecticut that it will implement protective actions for the portions of the 50 mile ingestion pathway that are in Connecticut, no matter who may make those recommendations. They argue that the Board should have reviewed the Connecticut plan. App. Br. at 95-97. Appellants' arguments should be rejected.

First, the argument that the Board should have reviewed the Connecticut plan was not made below. Thus, it is not appropriate for consideration on appeal. See Houston Lighting and Power Company (Allens Creek Nuclear Generating Station, Unit 1), ALAB-582, 11 NRC 239, 242 (1980).

Second, letters in the record from the State of Connecticut are clear agreements in which Connecticut indicates that it will institute an appropriate plume exposure response in Connecticut should an emergency occur at Shoreham. Cordaro et al., Tr. April 6, 1984, Vol. II, Att. 28; Cordaro and Renz ff. Tr. 13,858, at 3, Att. 2; Tr. 13,876, 13,880-881 (Renz). The letters from the State of Connecticut set forth the information which the Licensing Board needed for assurance that necessary actions would be taken, and indicate that Connecticut will protect its citizens by instituting the state emergency plans. Cordaro et al., ff. Tr. 13,858, at 3; Tr. 13,876 (Renz). For example, the December 15, 1983 Connecticut letter confirms that Connecticut will collect samples and interdict food, water, and milk in the state. Cordaro et al., Tr. April 6, 1984, Vol. II, at 2, Att. 28. The Connecticut letter of June 14, 1984 explicitly states that Connecticut will respond no matter what other parties do. Cordaro and Renz, ff. Tr. 13,858, Att. 2.

In addition, with three licensed nuclear plants within that State, the record shows that Connecticut has plans to deal with radiological emergencies. Tr. 13,881-882 (Renz). Actions to be taken by Connecticut include measures, outlined in their general response plans, designed to deal with any ingestion pathway impacts from a radiological accident. Tr. 13,881 (Renz). The Licensing Board's findings (21 NRC 885-87) on Contention 24.R were proper and should be affirmed.

M. The Recovery and Reentry Provisions are Adequate (Contention 85) PID, 21 NRC at 878-80

Contention 85 alleges that LILCO has no plan or procedures for recovery and reentry, as required by 10 C.F.R. § 50.47(b)(13) and NUREG-0654, § II.M. The Licensing Board concluded that the LILCO "plan to form an expert committee at the time of an accident" to deal with recovery and reentry satisfies the regulatory requirements. PID, 21 NRC at 880. This conclusion was based on the fact that LILCO's recovery and reentry activities would be undertaken after an evacuation had occurred. Accordingly, the Licensing Board was able to find that there is no basis to require LILCO to preplan for contingencies that could be resolved at the time of an accident. Id.

Appellants argue that the Licensing Board misconstrued the regulatory requirements in finding that LILCO's commitment to form a committee at the time of an emergency constitutes an acceptable "plan" for recovery and reentry. App. Br. at 92-99. This argument is contrary to regulatory requirements and Commission precedent. 10 C.F.R. § 50.47(b)(13) and NUREG-0654 II.M require only that "[g]eneral plans for recovery and reentry [be] developed." In Carolina Power & Light Co. (Shearon Harris Nuclear

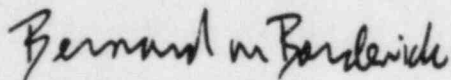
Plant, Units 1 & 2), LBP-84-29B, 20 NRC 389, 399-400 (1984), it was held that the emphasis in criterion II.M of NUREG-0654 is on "planning for the decision to reenter" and not on "the measures to be executed during reentry and recovery." See, e.g., The rationale for this holding is based in part on the fact that "since reentry and recovery would not take place under the same time pressures protective actions would, planning for measures to be executed during reentry and recovery needn't be more than general." Id. at 400. In Pacific Gas & Electric Co. (Diablo Canyon Nuclear Power Plant, Units 1 and 2), LBP-82-70, 16 NRC at 788, 839-41, the Board concluded general plans are adequate because recovery and reentry operations do not deal with immediate life-threatening situations and assistance from Federal agencies such as the EPA and DOE would be available. In Southern California Edison Co. (San Onofre Nuclear Generating Station, Units 2 and 3), LBP-82-39, 15 NRC at 1280-83, the Board concluded that only general plans for recovery and reentry are necessary since only a small amount of advance planning can be done in this area and time is not of the essence.

Appellants' arguments do not reflect the requirements of 10 C.F.R. § 50.47(b)(13) and NUREG-0654 II.M. The detail they claim must be included in an emergency plan for recovery and reentry is not needed. The Licensing Board's decision on Contention 85 should be affirmed. See PID, 21 NRC at 878-80.

CONCLUSION

For the reasons noted above, the Licensing Board rulings in the April 17, 1985, Partial Initial Decision should be affirmed.

Respectfully submitted,

A handwritten signature in cursive script, reading "Bernard M. Bordenick".

Bernard M. Bordenick
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 23rd day of December, 1985

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

DOCKETED
USNRC

BEFORE THE ATOMIC SAFETY AND LICENSING APPEAL BOARD A11 :06

In the Matter of)
LONG ISLAND LIGHTING COMPANY)
(Shoreham Nuclear Power Station,)
Unit 1))

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

Docket No. 50-322-OL-3
(Emergency Planning)

CERTIFICATE OF SERVICE

I hereby certify that copies of "NRC STAFF BRIEF IN OPPOSITION TO 'SUFFOLK COUNTY, STATE OF NEW YORK, AND TOWN OF SOUTHAMPTON BRIEF ON APPEAL OF LICENSING BOARD APRIL 17, 1985 PARTIAL INITIAL DECISION ON EMERGENCY PLANNING'" in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 23rd day of December, 1985.

Alan S. Rosenthal, Esq., Chairman*
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gary J. Edles, Esq.*
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Howard A. Wilber*
Atomic Safety and Licensing Appeal
Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gerald C. Crotty, Esq.
Ben Wiles, Esq.
Counsel to the Governor
Executive Chamber
State Capitol
Albany, NY 12224

Morton B. Margulies, Chairman*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Fabian G. Palomino, Esq.
Special Counsel to the Governor
Executive Chamber
State Capitol
Albany, NY 12224

Dr. Jerry R. Kline*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Jonathan D. Feinberg, Esq.
New York State Department of
Public Service
Three Empire State Plaza
Albany, NY 12223

Mr. Frederick J. Shon*
Administrative Judge
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Stephen B. Latham, Esq.
John F. Shea, III, Esq.
Twomey, Latham & Shea
Attorneys at Law
P.O. Box 398
33 West Second Street
Riverhead, NY 11901

Atomic Safety and Licensing
Board Panel*
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Atomic Safety and Licensing
Appeal Board Panel*
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Docketing and Service Section*
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Spence Perry, Esq.
Associate General Counsel
Federal Emergency Management Agency
Room 840
500 C Street, S.W.
Washington, D.C. 20472

Edward M. Barrett, Esq.
General Counsel
Long Island Lighting Company
250 Old County Road
Mineola, NY 11501

W. Taylor Reveley III, Esq.
Hunton & Williams
707 East Main Street
P.O. Box 1535
Richmond, VA 23212

Herbert H. Brown, Esq.
Lawrence Coe Lanpher, Esq.
Karla J. Letsche, Esq.
Kirkpatrick & Lockhart
1900 M Street, N.W.
8th Floor
Washington, D. C. 20036

Donna Duer, Esq.
Attorney
Atomic Safety and Licensing Board
Panel
U.S. Nuclear Regulatory Commission
Washington, DC 20555

Dr. Monroe Schneider
North Shore Committee
P.O. Box 231
Wading River, NY 11792

Stewart M. Glass, Esq.
Regional Counsel
Federal Emergency Management
Agency
26 Federal Plaza
Room 1349
New York, NY 10278

Robert Abrams, Esq.
Attorney General of the State
of New York
Attn: Peter Bienstock, Esq.
Department of Law
State of New York
Two World Trade Center
Room 46-14
New York, NY 10047

MHB Technical Associates
1723 Hamilton Avenue
Suite K
San Jose, CA 95125

Ms. Nora Bredes
Shoreham Opponents Coalition
195 East Main Street
Smithtown, NY 11787

Hon. Peter Cohalan
Suffolk County Executive
County Executive/Legislative Bldg.
Veteran's Memorial Highway
Hauppauge, NY 11788

Martin Bradley Ashare, Esq.
Suffolk County Attorney
H. Lee Dennison Building
Veteran's Memorial Highway
Hauppauge, NY 11788

Mr. Jay Dunkleberger
New York State Energy Office
Agency Building 2
Empire State Plaza
Albany, New York 12223

Chris Nolin
New York State Assembly
Energy Committee
626 Legislative Office Building
Albany, NY 12248

Mr. Robert Hoffman
Ms. Susan Rosenfeld
Ms. Sharlene Sherwin
P.O. Box 1355
Massapequa, NY 11758

Bernard M. Bordenick
Bernard M. Bordenick
Counsel for NRC Staff