

ORIGINAL

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of:

LONG ISLAND LIGHTING COMPANY

Docket No. 50-322-OL-3

(Shoreham Nuclear Power Station
Unit 1)

Location: Hauppauge, New York

Pages: 10,995-11,254

Date: Tuesday, June 12, 1984

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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 In the Matter of: :
 :
 LONG ISLAND LIGHTING COMPANY :Docket No. 50-322-OL-3
 :
 (Shoreham Nuclear Power Station, :(Emergency Planning)
 Unit 1) :
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Court of Claims
 State of New York
 State Office Building
 Room 3B46
 Veterans Memorial Highway
 Hauppauge, New York 11787

Tuesday, June 12, 1984

The hearing in the above-entitled matter convened
 at 10:10 a.m., pursuant to notice,

BEFORE:

JAMES A. LAURENSEN, ESQ., Chairman
 Atomic Safety and Licensing Board
 U.S. Nuclear Regulatory Commission
 Washington, D. C. 20555

DR. JERRY KLINE, Member
 Atomic Safety and Licensing Board
 U.S. Nuclear Regulatory Commission
 Washington, D. C. 20555

DR. FREDERICK SHON, Member
 Atomic Safety and Licensing Board
 U.S. Nuclear Regulatory Commission
 Washington, D. C. 20555

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25APPEARANCES:On Behalf of LILCO:

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JESSINE MONAGHAN, ESQ.
Hunton & Williams
Main Street
Richmond, Virginia

On Behalf of the NRC Staff:

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ORESTE RUSS PIRFO, ESQ.
Office of the Executive Legal Director
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Washington, D. C. 20555

On Behalf of Suffolk County:

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On Behalf of the State of New York:

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C-O-N-T-E-N-T-S

<u>Witnesses:</u>	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>	<u>Recross</u>	<u>Board</u>
George J. Fedders					
Anthony R. Rossi					
Nick F. Muto					
J. Thomas Smith	10,999	11,002	11,106	11,108	
Robert W. Petrilak					
Harry N. Babb					
Gary J. Berger					
Matthew C. Cordaro					
Charles A. Daverio	11,136	11,141			
Dennis S. Mileti					
William F. Renz					
Ronald A. Varley					

EXHIBITS

Introduced

LILCO EP-66	11,030
LILCO EP-67	11,140

LAY-INS

Testimony of: Jeffers, Rossi, Muto, Smith & Petrilak	Page 11,001
Testimony of: Babb, Berger, Cordaro, Daverio, Mileti, Renz, & Varley	Page 11,140

P R O C E E D I N G S

1
2 JUDGE LAURENSEN: We are on the record.

3 Before we begin with this morning's testimony,
4 I understand that Mr. Bordenick wishes to make an introduction.

5 MR. BORDENICK: Judge Laurenson, I would like
6 to introduce to the Board and the parties Oreste Russ Pirfo
7 who will be appearing in this proceeding for the NRC Staff.

8 Mr. Pirfo is a member of the New York Bar.

9 I might also add, he has filed a written notice
10 of appearance which I think was put in the mails yesterday.

11 JUDGE LAURENSEN: Thank you.

12 Anything further before we begin with the
13 county's school testimony?

14 (No response.)

15 JUDGE LAURENSEN: Mr. McMurray.

16 MR. MC MURRAY: Thank you, Judge Laurenson.

17 At this time, the county presents its panel of
18 school administrators regarding the school contentions
19 and contention 15.C.

20 Whereupon,

21 GEORGE J. JEFFERS

22 ANTHONY R. ROSSI

23 NICK F. MUTO

24 J. THOMAS SMITH

25 and

1/2

1 ROBERT W. PETRILAK

2 were called as witnesses by counsel for the County and,
3 having been previously duly sworn, were examined and testified
4 as follows:

XXXXXXX

5 DIRECT EXAMINATION

6 BY MR. MC MURRAY:

7 Q Let me direct this first question to Dr. Jeffers
8 and Mr. Rossi.

9 Do both of you gentlemen have in front of you
10 a document entitled Direct Testimony of Dr. George J. Jeffers
11 and Anthony R. Rossi on behalf of Suffolk County regarding
12 Contentions 24.E, 24.F, 61.C, 69, 70 and 71?

13 A (Witness Rossi) Yes, we do.

14 Q And do you also have in front of you a document
15 entitled Direct Testimony of Dr. George J. Jeffers and
16 Anthony R. Rossi on behalf of Suffolk County regarding
17 Contention 15.C?

18 A Yes, we do.

19 A (Witness Jeffers) Yes, we do.

20 Q These questions are directed to Mr. Muto and
21 Mr. Smith.

22 Do you have in front of you a document entitled
23 Direct Testimony of Nick J. Muto and J. Thomas Smith
24 on behalf of Suffolk County regarding Contentions 24.E.,
25 24.F., 24.N, 61.C, 69, 70 and 71?

1 A (Witness Muto) Yes, we do.

2 A (Witness Smith) Yes, we do.

3 Q Do you also have a document in front of you
4 entitled Direct Testimony of Nick J. Muto and J. Thomas Smith
5 on behalf of Suffolk County regarding Contention 15.C?

6 A Yes.

7 A (Witness Muto) Yes, we do.

8 Q This question is directed to Mr. Petrilak.

9 Do you have a document in front of you
10 entitled Direct Testimony of Robert W. Petrilak on behalf
11 of Suffolk County regarding Contentions 24.E, 24.N, 61.C,
12 69, 70 and 71?

13 A (Witness Petrilak) Yes, I do.

14 Q Do you also have a document in front of you
15 entitled Direct Testimony of Robert W. Petrilak on behalf of
16 Suffolk County regarding Contention 15.C?

17 A Yes, I do.

18 Q These questions are directed to the whole
19 panel.

20 Was this testimony prepared by you or under
21 your direct control and supervision?

22 A (Witness Rossi) Yes.

23 A (Witness Jeffers) Yes.

24 A (Witness Petrilak) Yes.

25 A (Witness Muto) Yes.

1 A (Witness Smith) Yes.

2 Q And to the best of your knowledge, is it true and
3 accurate?

4 A (Witness Rossi) Yes.

5 A (Witness Jeffers) Yes.

6 A (Witness Petrilak) Yes.

7 A (Witness Muto) Yes.

8 A (Witness Smith) Yes.

9 MR. MC MURRAY: Judge Laurenson, I believe that
10 these witnesses have previously been sworn.

11 JUDGE LAURENSON: That is correct. You are still
12 under oath.

13 MR. MC MURRAY: Judge Laurenson, at this time
14 I would like to move that the direct testimony about
15 which I have just asked be admitted into evidence.

16 JUDGE LAURENSON: Are there any objections that
17 we haven't already ruled on?

18 MR. CHRISTMAN: No, sir.

19 JUDGE LAURENSON: The testimony offered will be
20 received in evidence and bound in the transcript following
21 this page.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,)
Unit 1))

) Docket No. 50-322-OL-3

) (Emergency Planning)

DIRECT TESTIMONY OF DR. GEORGE J. JEFFERS AND
ANTHONY R. ROSSI ON BEHALF OF SUFFOLK COUNTY
REGARDING CONTENTIONS 24.E, 24.F, 61.C, 69, 70 AND 71

INTRODUCTION

Q. Please state your names and positions.

A. I am Dr. George Jeffers, Superintendent of the Middle
Country Central School District.

I am Anthony R. Rossi, Director of Transportation for the
Middle Country Central School District.

We are submitting this testimony to express the concerns
of the Middle Country Central Board of Education.^{1/}

^{1/} See Attachment 1 to our previous testimony (ff. ff. 3087)
for the official statement by the District Board of

(Footnote cont'd next page)

Q. What is the purpose of this testimony?

A. The purpose of this testimony is to address Contentions 24.E, 24.F, 61.C, 69, 70 and 71 and state our conclusion that the LILCO Plan provides inadequate protection to school children.

Q. Are you familiar with the LILCO Plan?

A. We have reviewed those portions of the LILCO Plan that contain LILCO's proposals for protecting school children in the event of a radiological accident at Shoreham.

CONTENTION 24.E - AGREEMENTS WITH SCHOOLS

Q. Are you familiar with Contention 24.E?

A. Yes, and we agree with the assertion in Contention 24.E that LILCO's proposed protective actions for schools are unlikely to be implemented because LILCO has obtained no agreements from schools or school districts to implement the LILCO proposals in the event of a Shoreham emergency.

(Footnote cont'd from previous page)

Education or its opposition to the LILCO Plan and its authorization for us to present the District's position in this proceeding.

To our knowledge, LILCO has no such agreements. The Middle Country Central School District has not entered into an agreement with LILCO concerning implementation of the LILCO proposals for schools, nor does it intend to. Indeed, many districts, including ours, have stated that they do not believe LILCO's proposals could be implemented in a way that would provide adequate protection for children.

CONTENTION 24.F - AGREEMENTS TO PROVIDE SCHOOL BUSES

Q. Have you reviewed Contention 24.F?

A. Yes, we have. The portions of Contention 24.F that concern schools are 24.F.2 and 24.F.3. They assert that most full-size buses in the vicinity of the 10-mile EPZ would be unavailable to LILCO in the event of an emergency, despite LILCO's agreements with various bus companies.

Q. Do you agree with subparts 2 and 3 of Contention 24.F?

A. Yes, we do. LILCO proposes to use buses to evacuate persons without access to cars, nursery school children, many special facility patients and most of the handicapped residents of the EPZ. (See Appendix A at IV-14b, IV-171, IV-175; OPIP 3.6.5.) LILCO apparently has entered into contracts with several bus companies to obtain buses. 24.F.2 is correct in

its assertion that LILCO would have access to only a small fraction of the number of buses nominally provided by those agreements. It is our understanding that LILCO's agreements with bus companies state that the bus company's provision of buses to LILCO is subject to the prior rights of the local school districts with which the company has contracts. One of the bus companies with which LILCO has contracted is United Bus Corp. ("United"). The Middle Country Central School District has a contract with United which obligates United to provide us with 32 buses during the period September 1 to June 30. During school sessions it appears that most of United's other buses are also in use because there have been occasions in our experience when we have been unable to obtain extra buses for special purposes such as field trips. We have found on such occasions that the companies that provide buses to schools and school districts in the vicinity of our district had committed all their buses to various schools.

Further, as noted in Contention 24.F.3, the provisions of LILCO's Plan exacerbate the problem. If schools and school districts were to attempt to implement early dismissals or evacuations, as proposed by LILCO, they would need all the buses they could get. It would be especially bad in an evacuation, because most schools and school districts do not provide

bus transportation* for all their school children. Therefore, they do not have enough buses to carry all their school children, and in an evacuation they would have to obtain even more than they normally use.

CONTENTION 61.C - SHELTERING

Q. Are you familiar with Contention 61.C.1?

A. Yes. Contention 61.C.1 asserts that LILCO's proposals to protect school children by keeping them in their schools would not work. We agree with Contention 61.C.1.

Because our district does not have any schools inside the EPZ, according to the LILCO Plan, if sheltering is recommended for any portion of the population in the EPZ, the Middle Country Central School District is expected to retain those students who live in the EPZ at school beyond the end of the school day. We have approximately 1100 school children who live inside the 10-mile EPZ.^{2/} Our district likely would not

^{2/} In addition, although none of the schools in our district are within the EPZ, some are very close to the EPZ boundary. When one looks at the irregular path followed by the EPZ boundary through the Middle Country Central School District, it looks as if the boundary were drawn intentionally to keep some of our school buildings outside the EPZ. Accordingly, it is not clear to us that a sheltering order for persons "in the EPZ" should not also apply to the children in our schools that are very close to the EPZ boundary.

be able to implement the LILCO proposals for keeping children in schools during a Shoreham emergency.

First, LILCO's apparent assumption that school officials have performed "preplanning" of actions that would protect children in the event of a Shoreham emergency is incorrect with respect to our district, and in our opinion, with respect to most, if not all, other districts in the vicinity of the EPZ. Our district has expressly determined that planning for the actions contemplated in the LILCO proposals would be futile and misleading to parents, because such a "plan" could not be implemented in a manner that would assure adequate protection to our students.

Second, LILCO appears to ignore the fact that children simply could not be kept in schools and given adequate supervision and care, unless the schools had sufficient personnel, food and other necessary supplies. Schools do not have the supplies, facilities or personnel to care for children for hours beyond the end of the school day, to secure buildings to maintain accountability, or to keep order under such frightening circumstances. Schools do not feed their school children three meals per day; they are not designed to accommodate people overnight; and school personnel do not work around the clock.

In addition, assuming we were to begin an early dismissal of our children prior to LILCO's recommendation of sheltering or evacuation for persons in the EPZ as the Plan appears to contemplate, we would be sending at least 1100 children into the EPZ. If the severity of the emergency increased and a recommendation to shelter were made, we could do nothing for those children we had already sent into contaminated areas. As we will discuss below in connection with Contention 69, those children, whether in buses or on foot, would take a long time to reach home, and while en route would have no access to effective shelter. Under these circumstances, it is unlikely that school children would receive adequate protection.

CONTENTION 69 - EARLY DISMISSAL OF SCHOOL CHILDREN

Q. Are you familiar with Contention 69?

A. Yes, we are. It asserts that an early dismissal would not protect school children as LILCO seems to assume.

Q. Do you agree with Contention 69?

A. Yes. First, LILCO's apparent assumption that schools either have developed early dismissal plans for a Shoreham emergency or have determined that their "normal" early dismissal plans developed for use in snow and other situations are

appropriate for use in a Shoreham emergency, is unwarranted. The Middle Country Central School District has no early dismissal plan designed for use in the event of a Shoreham emergency, and our standard early dismissal plan would not work, as discussed below.

Q. Why would early dismissal not result in the timely arrival of children at their homes so they could be protected by their parents, as asserted in Contention 69.C?

A. Simply put, early dismissals take much longer to complete than LILCO's planners seem to have realized. In a normal early dismissal, the last student would not leave his or her school until approximately 2 1/2 hours after the start of the dismissal. And a dismissal could occur that quickly only if everything went smoothly and no problems arose. It is not unusual in early dismissals in our district for the last children to leave school 4 to 5 hours after the start of the dismissal, and of course, they arrive home even later. In light of the serious difficulties likely to occur in the event of an accident at Shoreham (which we discuss below), we believe it is very likely that early dismissals would take even longer than 4 to 5 hours.

The take home process would likely be slowed still more by both the heavy evacuation traffic expected by other witnesses for the County and New York State, and the staffing shortages which would probably result from role conflict among school personnel. (See Direct Testimony and Supplemental Direct Testimony of Dr. George Jeffers and Anthony R. Rossi on Behalf of Middle Country Central School District and Suffolk County Regarding Contentions 25.C and 25.D, ff. Tr. 3087).

Moreover, in more usual but nonetheless serious circumstances, such as severe storms, the degree of confusion in and around schools during an early dismissal is always high. Many parents arrive to pick up their children. Children do not find their buses or their parents. Traffic congestion around the schools impedes the arrival and departure of buses. Telephone calls from concerned parents, and locating and singling out children, tie up large numbers of school personnel. All these factors slow an early dismissal under "normal" conditions. In the event of an accident at Shoreham, these problems are likely to be substantially greater and more significant.

Furthermore, our district provides bus transportation for approximately 125 private school children who either reside or

attend private schools in the EPZ. In the event of an early dismissal of those schools, Middle Country Central School District bus drivers would have to travel into, and in some cases, through almost the entire EPZ, to reach the private schools, cope with the confusion likely to exist at those schools, and then return to our district through the traffic congestion before they could even begin the take home process.

When you add up all these factors, an early dismissal in the event of a Shoreham emergency would take a very long time.

Q. Do you have any other concerns relating to LILCO's proposal for an early dismissal in the event of a Shoreham emergency?

A. Yes. One of our more serious problems in early dismissals is looking out for those children who have no one to return to during the day, for example those children with working parents. Many working parents make arrangements for friends or relatives to care for their children in case of early dismissals or other emergencies. At the start of the school year, these parents inform the schools of the telephone numbers of the persons who will care for the children if they cannot be reached. However, all we can do is attempt to contact these friends or relatives. Under State law, we cannot deliver the children to any homes other than their own. Therefore, if we

cannot reach the person designated to watch after a child, or that person is unable to get to the child's home, the child could be left unattended at his or her home. These children would be without adults to care for them, and in the event of an emergency at Shoreham there would be no assurance that they would be protected.

Moreover, we believe that in the event of a Shoreham emergency, most parents would go to schools to pick up their children. We base this belief on our own experience as school administrators, and on our contacts with the parents organization in our district. As a result, we would probably be unable to contact very many parents or other responsible adults.

Q. Do you agree with Contention 69.E?

A. Yes, we do. That contention asserts that because the LILCO Plan does not provide a means of dealing with an escalation of an emergency, it is likely that many children would be stranded in schools or caught en route to their homes without available means of shelter or evacuation, even if sheltering or evacuation were being recommended for persons in the EPZ.

Once an early dismissal has begun, some children would be in buses or on foot, and would have no access to shelter or to a means of evacuating from the area until they arrived home. As we have discussed above, the trip home could take a very long time. This is a serious problem for our district, because if we started an early dismissal, and then LILCO recommended protective actions for the EPZ, many of those children in our schools who live in the EPZ would be on their way out of a presumably safe area and into potential danger, and we could do nothing at that point to help them. Our school buses are not equipped with radios and we have no means of contacting the vast majority of our drivers once they leave the school or garage.

CONTENTIONS 70 AND 71 - EVACUATION OF SCHOOL CHILDREN

Q. Are you familiar with Contentions 70 and 71?

A. Yes. They assert that LILCO's proposal to protect school children by evacuating them would not work. We agree with Contentions 70 and 71. Even though the LILCO Plan does not contemplate that our District would evacuate its students, because of the location of some of our schools and our evaluation of the dangers involved in a Shoreham accident, we have considered the problems that would be involved if an evacuation were

attempted in our district or other districts. Moreover, even under the LILCO Plan, we would have to evacuate those of our students who attend private schools in the EPZ.

First, as stated, in Contention 70, as far as we know LILCO has not arranged for relocation centers, or developed procedures necessary for an evacuation of schools to succeed. To our knowledge there are no facilities which have agreed to accept the children who would have to be evacuated. We could not and would not transport school children without knowing where to take them. And, we could not agree to transport the school children we would have to evacuate to any relocation center, unless we were sure beforehand that the center was adequately staffed and equipped to care for the children, and that workable arrangements had been made to allow children to be quickly reunited with their parents. To our knowledge, the assertions of Contention 70 are correct in that neither of those conditions has been met in the LILCO Plan. Moreover, even if these conditions had been met, it would be unlikely that our district could relocate students until parental approval had been obtained, and until responsibility for supervising the children at relocation centers had been assigned. The LILCO Plan makes neither of these arrangements.

Moreover, relocation centers for children would need extensive telephone equipment and staff to handle calls from parents asking about their children. We believe that the LILCO proposal would result in confusion. Parents would not know their children's whereabouts. They would call schools, LILCO, and anybody else who might know. Then, if they did learn their children's locations, they would have to fight heavy traffic to travel to the relocation centers. In the meantime, the children might easily become extremely anxious. They likely would be frightened to start with, and the lengthy delay could only worsen their emotional states.

Q. Is LILCO's apparent assumption that school districts have performed "preplanning" for a Shoreham evacuation correct?

A. That LILCO assumption, in our opinion, is unfounded. Our district has conducted no Shoreham-related "preplanning," either for evacuation or the safe reuniting of school children with their parents, and based upon our conversations with other administrators, we do not believe that many other districts have either.

Furthermore, we believe that such an evacuation would be very difficult, if not impossible. First, as stated in Contention 71.A, the LILCO Plan contains no provisions for

supervising school children during an evacuation. The children would have to be cared for during an evacuation. They would have to be supervised at schools and on buses, and then at relocation centers until their parents arrived and found them. And, staff would have to be available to provide information to parents. There are no provisions in the LILCO Plan relating to such necessary staffing, such staffing is beyond our district's present resources, and we do not believe such staffing could be obtained on an ad hoc basis during an emergency. Most districts do not normally send teachers or other staff with children on buses, nor are teachers or other school staff normally expected, or required, to remain with children (or accompany them to a new location) for extended periods beyond the end of the school day, which would be necessary if evacuation were to take place.

Q. Do you agree with Contention 71.B that evacuating school children by bus could not be accomplished in a timely manner?

A. Yes. Other witnesses have testified about the likelihood of heavy traffic in the event of an evacuation. It is our experience that regular early dismissals take the longest when traffic conditions are bad, and there is no reason to believe that congestion would have any less an effect on an evacuation.

Indeed, in our opinion, an evacuation would almost certainly take much longer than an early dismissal. Most school districts would not have enough buses to accomplish a timely evacuation. Normally, school districts do not transport all their school children. Many walk, or are driven to school by parents in carpools. If the schools were required to conduct an evacuation, they presumably would have to provide transportation even for those children who normally do not ride school buses. Therefore, an evacuation would require even more bus runs than would an early dismissal, which would mean even more delay.

Q. Does that conclude your testimony?

A. Yes.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before The Atomic Safety And Licensing Board

In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,
Unit 1))

) Docket No. 50-322-OL-3

) (Emergency Planning)
)
_____)

DIRECT TESTIMONY OF ROBERT W. PETRILAK
ON BEHALF OF SUFFOLK COUNTY REGARDING
CONTENTIONS 24.E, 24.N, 61.C, 69, 70 AND 71.

Q. Please state your name and position.

A. My name is Robert W. Petrilak. I am Vice President of the Mt. Sinai Board of Education. The schools in the Mt. Sinai Union Free School District are located in the Shoreham 10-mile EPZ. A description of the Mt. Sinai Union Free School District, its schools and its student population is contained in my previous testimony concerning Contentions 25.C and 25.D. (ff. Tr. 3087)

Q. What is the purpose of this testimony?

A. The purpose of this testimony is to address the concerns stated in Contentions 24.E, 24.N, 61.C, 69, 70 and 71. I am authorized to state that the views expressed herein are not just my personal opinions but also represent the position of the Mt. Sinai Board of Education that the provisions of the LILCO Plan concerning schools are deficient and would not protect the school children of the Mt. Sinai School District.

Q. Are you familiar with the provisions of the LILCO Plan?

A. I have reviewed those portions of the LILCO Plan that contain LILCO's proposed protective actions for school children in the event of a radiological accident emergency at Shoreham.

CONTENTION 24.E - LACK OF AGREEMENTS
WITH SCHOOL DISTRICTS

Q. Have you reviewed Contention 24.E?

A. Yes. It asserts that it is unlikely that LILCO's protective action recommendations for schools would be implemented, because LILCO has no agreements with the schools or school districts on which it relies to implement its recommendations, or with the nursery schools or parents of nursery school children who are expected to permit those children to be transported by LILCO employees.

Contention 24.E is correct. Schools, school districts, nursery schools and parents are under no obligation to participate in or to implement whatever response to a Shoreham emergency may be proposed by LILCO. To my knowledge, LILCO has no agreements with schools, school districts, nursery schools or parents to implement LILCO's recommendations, despite the fact that implementation of the LILCO Plan depends on the cooperation of these groups and individuals. The Mt. Sinai School District has not entered into and does not intend to enter into any agreements with LILCO regarding implementation of protective actions that would be recommended by LILCO. As a result, it is unlikely that LILCO's protective action recommendations for schools would be implemented.

CONTENTION 24.N - LACK OF AGREEMENTS WITH RELOCATION CENTERS

Q. Do you agree with Contention 24.N?

A. As it applies to school children, yes. That contention asserts that because LILCO does not have agreements with facilities to serve as relocation centers for school children and other evacuees, LILCO's evacuation proposals would not and could not be implemented. The administration of the Mt. Sinai School District is not aware of any facilities that have agreed to act as relocation centers for our children if an evacuation

were to occur. LILCO's failure to arrange for relocation centers is one reason that LILCO's evacuation proposal for schools would not and could not be implemented, as stated in Contention 70. The Mt. Sinai School District could not agree to conduct an evacuation without prior knowledge and approval of the location and conditions to be expected at a relocation center.

CONTENTION 61.C.1 - SHELTERING

Q. Are you familiar with Contention 61.C.1?

A. Yes. It asserts that a sheltering recommendation for schools could not be implemented. I agree with this assertion.

First, LILCO is wrong when it assumes in its Plan that school officials have conducted planning for implementing a sheltering recommendation, or any other recommendation in the event of a radiological emergency. (OPIP 3.6.5 at 10a) The Mt. Sinai School District has not made any plans that would enable us to implement a recommendation of sheltering.

Moreover, if a school district attempted to shelter its students in the event of a radiological emergency, there would be many serious practical problems that would make it unlikely that sheltering could be effected. For example, it would be

essential that adequate staff be available to supervise the children. The job of supervising the children could be more difficult than usual because they will be more fearful in the event of a nuclear accident, which represents a threat as to which they will have had no experience, than they would be in the event of a more familiar emergency, such as a hurricane. Moreover, children will be frightened and distressed at being forced to stay at school away from their parents and families for even a few hours. Such fear would be magnified among children ages 5 through 14, which is the age group of almost all the students in the Mt. Sinai district. In addition, the district would have to have provisions of food, medical supplies and beds, as well as medical personnel. These practical needs would make it all but impossible to shelter school children.

In addition, the staff of the Mt. Sinai School District does not have any means of determining whether sheltering would be an adequate protective action. As I will discuss further in my testimony on Contention 15.C, we would not trust LILCO's advice on the subject, and we have no independent knowledge of how much protection from radioactive materials could be provided by our school buildings. Moreover, neither of the school buildings in the district have basements suitable for sheltering. The elementary school building has only a small

basement area that is used for storage, and the junior high building has no basement at all. Further, the school buildings in our district have very large windows in much of their space.

Finally, LILCO's proposals for notifying schools also make sheltering difficult, if not impossible, even assuming schools would follow a LILCO recommendation. LILCO plans to advise schools to begin early dismissals when an accident is first announced, (unless it is an accident whose great severity is immediately clear and thus sheltering or evacuation is ordered immediately). But if LILCO subsequently recommends that persons in all or part of the EPZ shelter, LILCO does not intend to advise the schools to shelter their students. (OPIF 3.8.2 at 5) This means that some schools might not learn of the subsequent need to stop sending children out into a health-threatening situation and, assuming they had begun an early dismissal in response to LILCO's recommendation, they would therefore continue their early dismissal routine of sending children home, either on foot or on buses that will travel long, slow routes through residential areas inside the EPZ. And, even if there were knowledge of the need to get children into an adequate shelter, there would be no way to recall those students who had already left school. They would all be exposed to risk.

CONTENTION 69 - EARLY DISMISSALS

Q. Are you familiar with Contention 69?

A. Yes. It asserts that, contrary to LILCO's apparent assumption, recommending early dismissals when an accident is first announced would not result in students being protected from health-threatening radiation doses for several reasons, which are listed in subparts B, C, D and E. I agree with the Contention.

Q. Please explain.

A. First, the LILCO Plan is incorrect in its apparent assumption that school districts in or near the EPZ have, or intend to implement, an early dismissal plan for use in the event of a Shoreham emergency. The Mt. Sinai School District has stated that the early dismissal plan it uses for snow and other such emergencies is not designed, nor would it be appropriate, for use in a Shoreham emergency. (See Attachment 1 to my testimony on Contention 25.C and 25.D, ff. Tr. 3067.)

Second, LILCO seems to assume that early dismissals, assuming they were implemented, would allow children to reunite quickly with their families. In fact, an early dismissal in the Mt. Sinai district would take several hours, for a number

of reasons. First, our district does not have a senior high school. Instead, we send our senior high students to schools in Port Jefferson. Consequently, in an early dismissal, eight district buses -- almost half of our district's fleet -- must travel from Mt. Sinai to Port Jefferson to pick up the high school students and then return them to one of the Mt. Sinai schools, where they can board separate buses that will take them home. In a normal early dismissal, this trip does not delay the Mt. Sinai early dismissal, because our district usually is able to coordinate with the Port Jefferson administrators, who agree to begin their early dismissal before ours. That way, our senior high students return to the Mt. Sinai schools as our early dismissal begins. In a Shoreham emergency that coordination would not be possible if both our district and the Port Jefferson district followed LILCO's advice and initiated an early dismissal as soon as the accident were announced. Moreover, in an early dismissal caused by a Shoreham accident, the round trip bus travel necessary to transport our high school students would be along two major evacuation arteries (Route 25A and North Country Road), where the buses would encounter the heavy evacuation traffic expected by other witnesses for the County. Therefore the trip would take longer than it normally does. The unavailability of those

eight buses for the amount of time necessary to get back and forth from Port Jefferson under these likely conditions or a Shoreham accident would delay the dismissal of the rest of our school children. Thus, it could be hours before early dismissal even began for many children in the Mt. Sinai School District.

Third, it is very likely that many parents would come to the schools to pick up their children, rather than waiting for several hours for them to be bussed home. Parents are well aware of how long early dismissals take even under normal conditions, and they are likely to believe that the dismissal will take longer in a radiological emergency. The conversion of concerned parents on the schools would create added traffic congestion and confusion around the schools. As a result, buses would be slowed in arriving and departing, and children could more easily miss their buses or their parents, which would cause even more concern and distress on the part of parents and children. Also, dealing with the parents and confusion their presence will create, would add substantially to the work required of the district's staff.

Fourth, the time necessary to initiate an early dismissal probably would take longer during a Shoreham-related accident

than during other emergencies such as a snowstorm, because as noted above, the District probably would not trust information provided by LILCO, and would have little independent means of deciding what action would be appropriate to protect our children. Accordingly, attempts to verify information provided by LILCO, and to obtain advice from more credible sources would be necessary before the District could decide whether to begin the early dismissal process.

In addition, when schools are dismissed early, problems always arise because some parents are not at home during the day. The LILCO Plan appears to ignore this problem. If such children were sent home as the LILCO Plan appears to contemplate, the children would be left unattended and, in some cases, unable to get into their homes. Consequently, they would not be protected. Moreover, the normal procedures in our District for identifying an alternate adult contact in the event of an early dismissal would not solve this problem in the event of a Shoreham emergency. In our opinion, it would be difficult to contact many parents, or other adults, at their homes or work places if there were an announcement on the radio that there had been an accident at Shoreham. Based on information we have received from parents, we believe that many parents would go to the schools to pick up their children, and

therefore they would not be at home to receive a phone call. For example, Attachment 1 hereto is, a resolution adopted by the Mt. Sinai Parent Teacher Organization, which states that LILCO's emergency plans do not offer adequate protection to the school children of the Mt. Sinai School District in part because in the event of an accident at Shoreham many parents would attempt to pick up their children at school and thereby increase confusion.

Q. What is the basis for your agreement with Contention 69.E?

A. As that contention asserts, LILCO's plans would not provide protection for school children in the event of an escalation of an emergency after early dismissals had begun. As I have noted before, early dismissals take a long time. Therefore, it is very possible that if LILCO advised the public to shelter or evacuate after early dismissals had begun, many of our school children would still be on their way home. Those children could not be protected. As a result, we believe LILCO's proposals for protecting school children are deficient.

CONTENTIONS 70 AND 71 - EVACUATION

Q. Do you agree with Contentions 70 and 71?

A. Yes. Those contentions assert that LILCO's proposal that schools be evacuated if evacuation were recommended for the public would not work and would not result in the protection of school children.

Q. Please explain the basis for your agreement with those contentions.

A. First, as I noted above with respect to Contention 24.N, LILCO's failure to arrange for relocation centers for evacuated children makes the LILCO proposal unworkable.

Second, the LILCO Plan is wrong in assuming that school officials have conducted "preplanning" for a Shoreham emergency. (OPIP 3.6.5 at 10a) The Mt. Sinai School District has conducted no planning for an evacuation of its children in the event of a Shoreham emergency, because it believes that such an action would be impossible and would not provide adequate protection for its students. (See Attachment 1 to my Testimony on Contentions 25.C and 25.D, ff. Tr. 3067.)

Third, the LILCO Plan does not contain any information or procedures as to how LILCO expects the schools to perform an evacuation. An evacuation would require a large number of additional school personnel to supervise and care for school

children at schools, on buses and at relocation centers. The LILCO Plan seems to ignore this practical need, and the District could not assure that adequate staffing would be available. Indeed, as stated in Attachment 2 hereto, a resolution adopted by the Mt. Sinai Teacher's Association, the teachers in our district believe LILCO's emergency plans do not offer adequate protection to the school children in the Mt. Sinai School District, in part because of their concern that teachers would not travel to or remain at relocation centers to supervise school children until their parents arrived.

Fourth, an evacuation would require more buses than the Mt. Sinai School District normally uses. In a normal dismissal, each bus in the Mt. Sinai School District makes three runs. But because the two schools in the Mt. Sinai School District are located directly between Route 25A and North Country Road, which are the only east/west arteries in the area and therefore likely to be very congested during a Shoreham-related evacuation, it might not be possible for buses to make more than one trip from Mt. Sinai schools to a location outside the EPZ in a short timeframe. As a result, to accomplish an evacuation the Mt. Sinai School District would need at least twice as many 60-passenger buses and drivers as it uses in a normal dismissal.

Fifth, Contention 71.B is correct in its assertion that evacuation of schools would take a very long time. Our District does not have the additional staff, drivers and buses that would be necessary to accomplish an evacuation. Indeed, as I noted in my testimony concerning Contention 25, we would have fewer personnel than normal available due to role conflict. The point is that without the assurance of an adequate relocation center, adequate staffing, and an adequate number of buses, an evacuation could not be accomplished in a reasonable amount of time.

Sixth, the LILCO Plan assumes that an evacuation of children to relocation centers will result in reuniting children with their families, but has no provision, or explanation, of how this reuniting is to be accomplished. In my opinion, expecting parents to go to relocation centers to meet their children, hours after they have left school, rather than expecting parents to find their children immediately in the event of a Shoreham emergency, is unrealistic.

Finally, as Contention 71.A asserts, it is unlikely that LILCO's proposal to use its own personnel to evacuate nursery schools could be implemented. For example, the Mt. Sinai School District is not authorized to, nor would it, permit

anyone to drive a bus containing our students unless that person was licensed and certified to drive a school bus. My understanding is that LILCO's employees are not properly certified. Consequently, it is unlikely that any nursery schools or parents of nursery school children, would permit their children to be evacuated by LILCO bus drivers.

Q. Does that conclude your testimony?

A. Yes.

ATTACHMENT 1

Mount Sinai Parents Teachers Organization

North Country Road
Mount Sinai, New York 11766

RECEIVED
JAN 31 3 28 PM '84

SCHOOL DISTRICT
MOUNT SINAI
NEW YORK

January 29, 1984

To Whom It May Concern:

Here is a resolution adopted by the Mt. Sinai P.T.O.
concerning the licensing of the Shoreham Nuclear Power Plant.

Yours truly
Alan Berger

Alan Berger
President

M.T. SINAI PARENT TEACHER ORGANIZATION--DRAFT RESOLUTION

WHEREAS, the Mt. Sinai Parent Teacher Organization, having discussed LILCO's emergency evacuation plan for schools in the event of a nuclear accident at the Shoreham plant, wishes to advise the Nuclear regulatory Commission's Shoreham licensing board of the plan's workability for its community; and

WHEREAS, LILCO's emergency evacuation plan is dependent on our schools' early dismissal procedures; and

WHEREAS, this PTC has considered the following weaknesses in the LILCO evacuation plan:

1. Transportation

We are certain that the required number of buses and drivers for successful early dismissal will not be available to the schools. Drivers may need to attend to the safety of their own families first and may refuse to drive school buses. Furthermore, because of the shortage of buses in our school district, transporting children from school to home normally necessitates three bus shifts. Consequently, there is no possibility of a quick evacuation.

2. Needs of School Personnel

We are certain that not all teaching and non-teaching personnel will stay in schools to supervise early dismissal. Many of the teaching and non-teaching staff will leave school to attend to the needs of their own families. Consequently, not enough school personnel will be available to attend to emergency-related jobs. A teacher survey conducted in the Mt. Sinai school district indicated that a majority of the teachers would not remain in school to supervise emergency procedures.

3. Lack of Parental Supervision

Should there be a nuclear accident at the Shoreham plant, the success of an early dismissal plan depends not only on prompt dismissal from the schools, but on prompt evacuation of children from their homes as well. It is probable, however, that many panic-stricken children will be locked out of their homes; or that even if these children can enter their homes their parents will not be present to carry out the necessary second part of an evacuation.

4. Parental Intercession

We cannot be assured that all parents will wait at home for their children to arrive. Many parents will attempt to retrieve their children at schools, thereby increasing confusion and chaos.

5. Panic

The announcement of a nuclear emergency at Shoreham will cause disorientation and panic in children, teachers, non-teaching staff, and parents. This will further hinder effective and safe dismissal from our schools.

6. Relocation

If an emergency at Shoreham requires evacuating our children from schools directly to a relocation center, our school district would be unable to handle this situation effectively. (See #1, Transportation)

7. Supervision at Relocation Centers

Once again we are certain that teaching and/or non-teaching school personnel will not all travel to and remain at relocation centers to supervise children for a possibly indefinite period of time. The Mt. Sinai teacher survey showed that over 70% of the teachers would have left for their own homes after the first hour, and that a majority of the teachers would refuse to accompany children to relocation centers.

8. Sheltering

The LILCO plan suggests that sheltering, rather than evacuating, may be the preferred protective action in schools in specific Shoreham emergencies. The Mt. Sinai school district has one basement in its elementary school. The size and function (for furnace and boiler facilities and the storage of extra furniture) of this basement preclude the sheltering of all but a small number of our school population.

9. Trust in Public Information

In the LILCO plan, the only source of public information during an emergency is LILCO itself. As a result of LILCO's past statements and actions with regard to Shoreham, many of us in our community are already skeptical of LILCO's words and intentions. The fact that LILCO might also be involved in a conflict of interest--being both operator of the plant and initiator of emergency actions--would tend to intensify doubts about the validity of LILCO's information during an emergency.

Now, be it therefore

RESOLVED, that the Mt. Sinai Parent Teacher Organization finds that LILCO's emergency plans for our schools do not offer us adequate protection or quick and effective evacuation for our children in the event of an accident at the Shoreham Nuclear Power Plant; and

p. 3--RESOLUTION

RESOLVED, that we agree with our Suffolk County legislators that in fact no safe evacuation of our community is possible; and

RESOLVED, that we believe that a full-power license should not be granted to the Shoreham Nuclear Power Plant.

ATTACHMENT 2

SERVED DEC 23 1983

DOCKETED
USNRC

'83 DEC 22 P4:16

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

MT. SINAI
TEACHERS' ASSOCIATION

DOCKET NUMBER 50-322-01-3
MT. SINAI, NEW YORK 11766

516-473-6321

RESOLUTION

- WHEREAS, federal regulations for full power operation of the Shoreham Nuclear Plant require an emergency plan for communities surrounding the plant which will assure those communities adequate protection in event of a nuclear emergency; and
- WHEREAS, the Long Island Lighting Company, in an effort to meet federal regulations, has prepared an emergency plan which LILCO, lacking coordination with local or state governments, will attempt to implement; and
- WHEREAS, the LILCO emergency plan includes protective actions to be taken by schools; and
- WHEREAS, this association has identified the following weaknesses in the LILCO emergency plan:
1. Early Dismissal
Our emergency early dismissal procedure, which LILCO's plan incorporates, wouldn't bring school children to an uncontaminated area quickly enough to protect their health and safety.
 2. Transportation
The requisite number of buses and drivers required for successful early dismissal are not available to the schools. This will prolong childrens' stay at schools in contaminated areas.
 3. Needs of Teachers
We cannot guarantee that the teachers will stay in schools to supervise early dismissal. Many of us may need to attend to the safety of our own families and, therefore, may not be available to perform emergency-related tasks.
 4. Lack of Parental Supervision
The success of an early dismissal plan depends not only on prompt dismissal from schools, but on prompt evacuation of children from their homes. In those cases in which parents will not be at home during the day, children will be sent to unsupervised homes from which they will not be able to evacuate promptly.
 5. Parental Intercession
We cannot be confident that parents will wait at home for their children to arrive. Many parents may attempt to retrieve their children at schools, perhaps causing increased confusion and chaos.
 6. Relocation
If a Shoreham emergency develops quickly and requires an evacuation of children from schools directly to relocation centers, this district does not have sufficient buses or drivers to transport all children to relocation centers in a timely, effective manner.

7. Supervision at Relocation Centers

We cannot guarantee that teachers will travel to and remain at relocation centers to supervise school children until parents arrive to retrieve them.

8. Trust in Public Information

In the LILCO plan, the only public information upon which to base decisions for protective actions will come from the utility. LILCO, through its Public Schools Coordinator and WALK-AM Radio, will both describe the extent of the emergency and recommend actions. Because LILCO would be both operator of the plant and initiator of emergency actions, potential for conflict of interest exists. School administrators, receiving information only from LILCO and not from any governmental agency, will be forced to decide upon actions with potentially serious consequences without the benefit of a directive from a responsible governmental source.

Now, be it therefore

RESOLVED, that the Mount Sinai Teachers Association finds that LILCO's emergency plans for schools do not offer children or school personnel of this district adequate protection in event of an accident at the Shoreham Nuclear Plant; and, be it further

RESOLVED, that this association believes that licensing of the Shoreham Nuclear Plant should not be permitted unless or until complete and reasonable resolution of these outstanding, critical emergency planning problems can be achieved.

M +
 TEACHERS' ASSOCIATION
M. Sinai
 MT. SINAI, NEW YORK 11766 516-473-6321

I have read the Mount Sinai Teachers' Association Resolution on the Shoreham Nuclear Plant. I support the Association's Resolution.

NAME

NAME

Johanna Stirling
 Jane Silbert
 P. Ellen J. Kastan
 Lynn M. Capobianco
 William F. Conway
 John R. Metzger
 Susan Sanicber
 Lahn Luch
 Lyn Clark
 Joseph F. Colton
 Linda Buffa
 Roger Conkle
 Barbara J. Quach
 Theresa Huber
 Lisa M. Morgan
 C. Coriade
 H. Nelson
 Anthony J. Finelli
 S. J. Christ
 Charlene M. Fullington
 Barbara Capwell
 Helen Tallac

Rose Marie M. Winkler
 Jane Scanlon
 Barbara Heron
 Kenneth H. Saibu
 Carmen H. H. H.
 Teresa A. Conner
 Carl Schipper
 Nancy A. Kline
 Gisela Lassez

MT. SINAI TEACHERS' ASSOCIATION

MT. SINAI, NEW YORK 11768

516-473-6321

I have read the Mount Sinai Teachers' Association Resolution on the Shoreham Nuclear Plant. I support the Association's Resolution.

name

- Sara W. Brush
- Bonnie Samuel
- Richard Tisman
- Mary A. Storey
- Nancy Soble
- Patricia McMillen
- Susan Donnelly
- Patricia Liano
- Kerry Mosk
- Lynn Greenman
- Barbara Palma
- Carol Wallace
- Andrea S. Faulkner
- Clyde Zuckerman
- Karen Hobson
- Johnnie (J.) P.
- Renee Ouz
- Barbara Stone
- Thomas Walker

name

- Carmela Vassallo
- Sandra Maritz
- Jacqueline M. Foster
- Susan Sturm
- Allen Schroeder
- Ann Finigan
- Judith
- Barbara Lutz
- Patricia Uienhart
- Naomi Balkan
- Ann Suda
- Anne Fliper
- Marion Burgess
- Barbara Rockoff
- Karen Connech
- Betty Weiner
- Blanche A. Leon
- Linda Sill

Harriet Ruth Kalishy
m. Speenberg
Celeste McKeaster
V

• UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

DIRECT TESTIMONY OF NICK J. MUTO AND J. THOMAS SMITH
ON BEHALF OF SUFFOLK COUNTY REGARDING CONTENTIONS
24.E, 24.F, 24.N. 61.C, 69, 70 AND 71

Q. Please state your names and positions.

A. My name is Nick J. Muto. I am the Superintendent of the Middle Island Central School District.

My name is J. Thomas Smith. I am the Transportation Coordinator of the Middle Island Central School District.

The entire Middle Island Central School District is located within the 10-mile EPZ for Shoreham. A description of the district is contained in our previous testimony concerning Contention 25. (ff. Tr. 3087)

Q. What is the purpose of this testimony?

A. The purpose of this testimony is to address the concerns expressed in Contentions 24.E, 24.F, 24.N, 61.C, 69, 70 and 71, and state our conclusion that LILCO's proposed protective actions for schools would not protect the health and safety of school children.

Q. Are you familiar with the provisions of the LILCO Plan?

A. We have reviewed those portions of the Plan that contain LILCO's proposals for protecting school children in the event of a radiological accident at Shoreham.

CONTENTION 24.E - LACK OF AGREEMENTS WITH SCHOOLS

Q. Are you familiar with Contention 24.E?

A. Yes, we are. Contention 24.E asserts that LILCO's protective action recommendations for schools would not be implemented, because LILCO has no agreements with the private schools, nursery schools, school districts or parents on whom LILCO's Plan depends. We agree with Contention 24.E. In the case of school districts such as ours, LILCO's only role under its plan is to recommend protective actions. Those recommendations could only be implemented by the personnel of the school

districts with the cooperation of the parents of children in the schools. Despite its reliance on schools and school districts, however, to our knowledge LILCO has not obtained the agreement of schools, nursery schools, school districts or parents to implement LILCO's proposals or recommendations in the event of an accident at Shoreham. The Middle Island Central School District has entered into no agreement with LILCO concerning implementation of LILCO's proposed protective actions, nor do we intend to do so.

CONTENTION 24.F - LACK OF SUFFICIENT
AGREEMENTS WITH BUS COMPANIES

Q. Are you familiar with Contention 24.F?

A. Yes. Those portions of Contention 24.F which relate to schools, that is, 24.F.2 and 24.F.3, assert that despite LILCO's agreements with various bus companies, in the event of a radiological accident LILCO would in fact have access to very few buses. We agree with Contentions 24.F.2 and 24.F.3.

It is our understanding that LILCO's agreements with bus companies provide that the companies' obligation to provide buses to LILCO is subject to the rights of school districts under prior agreements. The Middle Island Central School

District has an agreement with Suburbia Bus Corp., one of the 12 companies relied upon by LILCO. Our contract provides that Suburbia will assure our district of the availability of 91 sixty-passenger buses during the period September to June, from the approximate hours 6:00 a.m. to 6:00 p.m. This does not include extra late runs established on an as-needed basis for after school activities. If our district were to attempt implementation of an evacuation, we would need all those buses for a period of at least six hours. Consequently, they would not be available to LILCO under its agreement with Suburbia. In fact, in the case of an evacuation, we would need more buses than we normally use, because in normal situations we do not transport all our children, as we would have to do in an evacuation. Most of the remaining buses owned by Suburbia are committed to other school districts, as are most of the school buses owned by other companies in Suffolk and Nassau Counties. Therefore, LILCO's agreements with bus companies are unlikely to result in very many buses actually being available for LILCO's use if schools are in session.

CONTENTION 24.N - LACK OF AGREEMENTS WITH
RELOCATION CENTERS

Q. Are you familiar with Contention 24.N?

A. Yes. Contention 24.N asserts that LILCO does not have agreements that assure the availability of relocation centers for school children, as well as other evacuees, and that as a result LILCO's evacuation proposals would not and could not be implemented. We agree with Contention 24.N insofar as it concerns school children. We are aware of no facilities that have agreed to accept evacuating children from our district in the event of an accident at Shoreham. The fact that LILCO has not arranged for any such reception centers is a serious problem. The administration of the Middle Island Central School District would never agree to evacuate its school children without knowing in advance the locations to which they would be taken. We believe that other administrators share our concerns. As Contention 70 asserts, without the assurance of reception centers, LILCO's evacuation recommendations probably would not be implemented.

CONTENTION 61.C - SHELTERING

Q. Are you familiar with Contention 61.C.1?

A. Yes. Under the LILCO Plan, if sheltering were recommended for portions of the EPZ, the Middle Island Central School District would be advised to shelter its students. (Appendix A at II-20.) We agree with Contention 61.C.1 for the reasons discussed below.

First, LILCO's apparent assumption that school administrators have performed "preplanning" for actions necessary to implement sheltering or any of LILCO's other protective action recommendations is incorrect, both with regard to our district and in our opinion for most of the other school districts in or near the EPZ. (See OPIP 3.6.5 at 10a.) The Middle Island Central School District has not performed any planning that would make it capable of implementing a LILCO recommendation that its school children be sheltered in the event of a radiological emergency. In fact, our district has expressly stated its position that the LILCO Plan would not provide adequate protection for the school children of our district. (See Attachment 1 to our testimony on Contention 25 (ff. Tr. 3087)).

Second, LILCO's sheltering proposals for schools ignore the fact that we do not have the capability or resources necessary to shelter our students safely. None of the schools in the Middle Island Central School District has basements that could be used to shelter school children. There is limited interior space in our buildings that might be proper for sheltering. And, our schools do not have adequate staff or supplies to enable us to care for our school children for periods of several hours after the end of the school day, even assuming that our normal staffing were not reduced because of role conflict (see our previous testimony regarding Contentions 25.D and 25.C, ff. Tr. 3087).

Third, our emergency experience is limited to common types of events, such as storms. The administration of the Middle Island District does not have the knowledge or expertise necessary to make an informed decision as to whether our school buildings would provide adequate protection from radiation to our school children, and we would not be willing to risk the safety of our children by taking LILCO's word for it.

Fourth, LILCO has designed its Plan in such a way as to preclude sheltering for many students, even if all the other problems did not exist. Although LILCO expects schools to

begin early dismissals when an accident is first announced (Appendix A at II-20), LILCO does not plan to advise schools to shelter their students, if it subsequently recommends sheltering for the general public (OPIP 3.8.2 at 5). Therefore, some districts or schools might never learn of the need to shelter, and instead would continue to send their children on foot or by bus into potential danger. Moreover, even if schools did learn of the subsequent recommendation, it would be too late to shelter those students who had already left. Therefore, those students who had already left their schools for home could be exposed to risk after a protective action recommendation was made.

CONTENTION 69 - EARLY DISMISSAL

Q. Are you familiar with Contention 69?

A. Yes. It asserts that, contrary to LILCO's apparent assumption, initiating early dismissals when an accident is first announced to the public would not result in the protection of school children. We agree with Contention 69.

First, there is no basis for LILCO's assumption that schools and school districts in or near the EPZ have either developed early dismissal plans especially designed for

accidents at Shoreham, or that they have determined that their existing plans for use in snow emergencies would provide adequate protection to their school children in the event of a Shoreham emergency. Our district has taken neither of these two steps. Indeed, as discussed below, we believe that an early dismissal could not protect our school children in the event of an accident at Shoreham.

Second, it takes a long time for the early dismissal process to be completed once it is implemented, as noted in Contention 69.C. The administrators must decide whether to order a dismissal, the buses must be brought to the schools, and multiple runs must be made by most buses. It can take up to six hours to complete this task, not even considering the potential effects of role conflict and heavy evacuation traffic. Because of the likely effects of these two factors, it is possible that early dismissals could take even longer in a Shoreham emergency than they do under more "normal" conditions.

Third, it is likely that in an early dismissal many children would return to empty homes and be unprotected due to lack of adult supervision. LILCO appears to ignore this problem. In some cases of early dismissals, parents implement telephone chains to attempt to make sure that children are not alone when

they arrive at their homes; however, those chains do not always work properly. Indeed, it is likely that in the event of an accident at Shoreham many more children would arrive at empty homes, because many parents would travel to schools in an attempt to pick up their children. This would make it harder to contact those parents and easier for parent and child to miss each other while en route.

Finally, LILCO's Plan does not provide an adequate means for reacting to a quickly escalating emergency. Because once it has recommended an early dismissal LILCO does not intend to recommend that schools shelter or evacuate students even if it recommends sheltering or evacuation to the general public, it is possible that some schools would never learn of the need to stop their dismissal. And, as discussed above, sheltering could not be effected for those school children who had already started for home.

Likewise, children who were already on their way home could not be evacuated. They would be without protection for the long periods of time necessary to reach their homes. Further, many of the children who would still be at the schools could not be evacuated quickly, because the buses necessary to transport them would be out making early dismissal runs.

CONTENTIONS 70 AND 71 - EVACUATION

Q. Are you familiar with Contentions 70 and 71?

A. Yes. Those contentions state that LILCO's proposal that schools and school districts evacuate their children is unworkable and would not result in protection for school children. We agree with Contentions 70 and 71.

First, as we stated above with respect to Contention 24.N, LILCO's failure to arrange for reception centers renders its evacuation proposal unworkable. Moreover, it is unlikely that proposals to use schools outside the EPZ as relocation centers for school children could succeed, because it is unlikely that most schools could accommodate large numbers of evacuating students without first taking preparatory measures such as evacuation of the students attending the receiving schools prior to the arrival of the evacuating school children.

Second, as we discussed with respect to sheltering, LILCO is wrong in assuming that schools and school districts have preplanned for the implementation of LILCO's evacuation recommendations. Our district has not performed any planning concerning LILCO's proposed evacuation or the subsequent reuniting of our school children with their parents. We do not believe

we could safely or in a timely manner evacuate our schools during a Shoreham emergency.

Third, LILCO's Plan contains no procedures for reuniting school children with their parents after an evacuation.

Fourth, Contention 71.A is correct when it asserts that LILCO's proposed evacuation of nursery schools using its own personnel could not work. There are established criteria that individual bus drivers must meet before they can be certified as school bus drivers. And then the employment of the drivers must be approved by individual school districts. It is our understanding that LILCO's employees are licensed to drive buses but not certified to drive school buses. Therefore school administrators including, to our knowledge, the administrators of nursery schools, would not be authorized to permit their school children to be transported in buses driven by such persons.

Finally, as is asserted in Contention 71.B, evacuation would take a very long time. Indeed, in our opinion the time that would be necessary to perform an evacuation is the primary reason that LILCO's evacuation proposals could not work. An evacuation would take even longer than an early dismissal. Our district does not have enough buses to carry all of its school children in one trip. Moreover, we do not provide

transportation assistance to all of our students. Therefore, our buses would have to make more multiple runs than would be needed for an early dismissal if we attempted to implement an evacuation. In addition, evacuation runs would probably take longer than early dismissal runs. A typical early dismissal run takes approximately one hour, while a round trip, for example, to any of the relocation centers proposed in LILCO's Plan would take much more than one hour. The delay would be even greater when one considers the heavy evacuation traffic with which the buses would have to contend, especially on return trips.

Q. Does that conclude your testimony?

A. Yes.

• UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,)
Unit 1))

) Docket No. 50-322-OL-3

) (Emergency Planning)

DIRECT TESTIMONY OF NICK J. MUTO AND J. THOMAS SMITH
ON BEHALF OF SUFFOLK COUNTY REGARDING CONTENTION 15.C

Q. Please state your names and positions.

A. My name is Nick J. Muto. I am the Superintendent of
the Middle Island Central School District.

My name is J. Thomas Smith. I am the Transportation
Coordinator of the Middle Island Central School District.

Q. What is the purpose of this testimony?

A. The purpose of this testimony is to address Contention 15.C.

Q. Do you agree with Contention 15.C?

A. Yes. We would not trust information or advice provided by LILCO regarding an accident at the Shoreham plant, or what we should do to protect the children under our care. Based upon information already provided by LILCO regarding its proposals for protecting school children, and our general familiarity with LILCO's actions, we believe that any plan developed by LILCO for emergency response by schools would be ineffectual and could not safeguard the school children of our district in the event of a radiological accident at Shoreham. As a result, and in light of our responsibility for the children under our care, we would not make a determination as to what actions were necessary or appropriate to protect the children in the event of a Shoreham accident based solely on information or advice provided by LILCO.

Q. Does that conclude your testimony?

A. Yes.

* UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before The Atomic Safety And Licensing Board

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

DIRECT TESTIMONY OF ROBERT W. PETRILAK
ON BEHALF OF SUFFOLK COUNTY REGARDING
CONTENTION 15.C

Q. Please state your name and position.

A. My name is Robert W. Petrilak. I am the Vice President of the Mt. Sinai Board of Education.

Q. Are you familiar with Contention 15.C?

A. Yes. Contention 15 as a whole asserts that because the public does not perceive LILCO to be a credible source of information, the public would not believe LILCO's statements or follow LILCO's advice in the event of an emergency at Shoreham. In particular, Contention 15.C asserts that it is unlikely that LILCO's protective action recommendations for schools would be

implemented, because LILCO depends on school personnel to implement those recommendations, and because the administrators and staffs of schools and school districts are likely not to trust LILCO.

Q. Do you agree with Contention 15.C?

A. The assertion in Contention 15.C is correct. The Mt. Sinai School District would not implement protective actions solely based upon the recommendations of LILCO in the event of an emergency at Shoreham. ~~LILCO does not have the authority to direct the actions that would be expected of school districts.~~ Any decision to attempt to implement proposed protective actions recommended by LILCO would have to be made upon recommendations from the County and the State, not from LILCO which is a private corporation, or only after detailed verification of data which underlie LILCO's recommendations.

The administration of the Mt. Sinai School District does not regard LILCO as a reliable source of information. Recent actions taken by LILCO such as the problems with its backup diesel generators, its attempt to secure a low power license despite the opposition of the State of New York, Suffolk County and the Mt. Sinai Board of Education, LILCO's refusal to allow Suffolk County to perform an independent inspection and design

review of the Shoreham plant, and LILCO's apparent refusal to confront the extreme difficulties which would affect any emergency response to a Shoreham accident, all demonstrate to us that LILCO places its own financial interests above the safety of our school children, staff and residents. Consequently, the administration of the Mt. Sinai School District would not trust information or advice provided by LILCO, and it is unlikely that we would attempt to implement LILCO's protective action recommendations. Further, given our view that LILCO's credibility is very low, even if the District were convinced that an accident had occurred at Shoreham and that some sort of protective actions were required, it is unlikely that we would rely on a LILCO recommendation regarding the action(s) to be taken but rather would determine for ourselves what action(s) would be feasible and in the best interests of our children.

Q. Does you that conclude your testimony?

A. Yes.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

DIRECT TESTIMONY OF DR. GEORGE J. JEFFERS AND
ANTHONY R. ROSSI ON BEHALF OF SUFFOLK COUNTY
REGARDING CONTENTION 15.C

Q. Please state your names and positions.

A. My name is Dr. George Jeffers. I am the Superintendent of Middle Central School District.

My name is Anthony R. Rossi. I am Director of Transportation for the Middle County Central School District.

Q. Are you familiar with Contention 15.C?

A. Yes. Contention 15 states that the public, including school administrators, do not consider LILCO to be a credible source of information, and that as a result people are unlikely

to trust LILCO's advice or implement its recommendations. In particular, Contention 15.C asserts that because school personnel on whom LILCO would rely to implement its protective action recommendations for school children do not trust LILCO, LILCO's recommendations would not be followed. We agree with Contention 15.C.

In our opinion, school administrators are unlikely to trust LILCO or to follow LILCO's recommendations. This certainly is correct with respect to the Middle County Central School District. The Nuclear Regulatory Commission staff has expressed the concern that LILCO lacks experienced personnel to operate Shoreham; various studies have concluded that LILCO grossly mismanaged the construction of Shoreham; and LILCO is arguing for approval of an emergency plan that, insofar as it would affect school districts, is completely unworkable. Under these circumstances and in light of our responsibility for the children in our schools, we likely would not believe or trust protective action recommendations or any other information or advice that came from LILCO officers, employees or consultants. Accordingly, we would not base our determinations as to what should be done to protect the children in our charge solely upon information, recommendations or advice from LILCO; at the very least, we almost certainly would seek verification of the

accuracy and propriety of LILCO information or recommendations from more objective sources before we would act upon LILCO's suggestions.

Furthermore, based upon our contacts with other school administrators in and near the EPZ and our familiarity with the resolutions passed by other Boards of Education, we believe that distrust of LILCO and a lack of confidence in LILCO's proposals for school children are widespread among the school authorities upon whom LILCO relies for implementation of its Plan.

Q. Does that conclude your testimony?

A. Yes.

1 MR. MC MURRAY: Thank you, Judge Laurenson.
2 The panel is not ready to be cross-examined.

3 JUDGE LAURENSEN: Mr. Christman?

4 MR. CHRISTMAN: Thank you.

XXXXXXXXXX

5 CROSS-EXAMINATION

6 BY MR. CHRISTMAN:

7 Q Dr. Muto, would you pronounce your last name
8 for me, so I don't get it wrong?

9 A (Witness Muto) Muto, M-u-t-o. Incidentally,
10 the "J" is "F" as in Francis.

11 Q Right.

12 A That was corrected during the last time here.

13 Q We corrected that the last time you were here,
14 I think.

15 If I refer your anyone's written testimony on
16 24.E, I am referring to the thicker piece that covers
17 several contentions. The other one I suppose I will
18 refer to as your testimony on 15 or 15.C, so I don't have
19 to read off all of those contentions every time, just as a
20 short form.

21 If you look at your contention 24.E testimony,
22 Dr. Muto, on page 3 of it, you say that you don't intend
23 to enter any agreements with LILCO?

24 A On page 2 or 3?

25 Q Page 3, Muto testimony on 24.E., right above the

1 subhead, contention 24.F. :

2 A Okay.

3 Q You say you have entered into no agreement
4 with LILCO nor do you intend to do so.

5 A That's correct.

6 Q Does that mean you are not even willing to sit
7 down and discuss emergency planning with LILCO people?

8 A That's correct.

9 Q At this time?

10 A Yes, sir.

11 Q Why is that?

12 A Because that is not really my authority. My
13 authority rests with Suffolk County through the State
14 Education Department.

15 Q You lack the authority to even talk to LILCO?

16 A That is correct.

17 Q If Shoreham were to begin operating, would you
18 feel an obligation to do any additional emergency planning
19 for a radiological emergency?

20 MR. MC MURRAY: Objection. I think that that
21 question is vague and calls for the witness to speculate.

22 JUDGE LAURENSEN: Overruled.

23 BY MR. CHRISTMAN:

24 Q If Shoreham were to operate, would you feel an
25 obligation to do some additional planning for an accident

1 at that plant?

2 A I think my answer would be the same as the
3 previous answer. My direct authority is through the
4 county and through the State Education Department.

5 Q But would you feel any obligation to try to better
6 your emergency plan?

7 A I think I have an obligation to see that our
8 children are looked after in safety, and that is my job.
9 But I would have to gain my authority from, as I mentioned
10 earlier, the county and the state.

11 Q If Shoreham were to operate and there were an
12 accident, you would try to do what was best for your students,
13 wouldn't you, in that event?

14 A Yes, sir.

15 Q That would, I suppose, mean doing what would
16 result in the lowest exposure to radiation that you could
17 achieve, wouldn't it?

18 A Yes, sir.

19 Q Mr. Petrilak, if you will accept my hypothetical
20 that Shoreham were operating and there were an accident,
21 your school district would also try to do what was best
22 for the students, would it not?

23 A (Witness Petrilak) Yes, we would in any type of
24 an accident.

25 Q In a radiological emergency, I suppose that would

1 mean trying to minimize doses of radiation?

2 A Yes, it would.

3 Q Dr. Jeffers, would you answer the same way to that
4 last two questions?

5 A (Witness Jeffers) Yes, I would. But I would
6 like to suggest that a recent memo was received by
7 district superintendents and in turn by the, I would imagine,
8 everybody that's on the panel here this morning, from Mr.
9 Gerald Freeborne, who is the executive deputy commissioner,
10 which really doesn't shed very much light on what we are
11 supposed to do.

12 If you would like, we might read this for you
13 so you can see the quandary that we find ourselves in.

14 Q Why don't you --

15 A We would be happy to submit it in evidence, if
16 you like.

17 Q No.

18 MR. CHRISTMAN: I think I will move to strike
19 the last sentence after -- the last part of the answer
20 after, Yes, I do, as nonresponsive to the question.

21 I would like to see the document at the break,
22 if you don't mind.

23 WITNESS JEFFERS: I have no problem.

24 MR. MC MURRAY: Judge Laurenson, I believe that
25 the witness was going to respond to Mr. Christman's

1 question and elaborate on it. He has not been allowed
2 to do so, but I don't think what he said so far was
3 irrelevant to the question asked by Mr. Christman.

4 MR. CHRISTMAN: I didn't say it was irrelevant.
5 I said it was nonresponsive. The question was, would
6 you answer the same way to the questions that I asked
7 Mr. Petrilak last which were, if there were an accident
8 at Shoreham, would you try to do the best thing for the
9 students and would that involve minimizing radiation dose.

10 JUDGE LAURENSEN: I think the answer was
11 responsive to the extent that Dr. Jeffers indicated that
12 he was faced with a quandary or whatever. So the motion to
13 strike is denied.

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BY MR. CHRISTMAN: (Continuing)

Q Dr. Muto, on Page 5 of that same testimony on 24.E, you talk about relocation centers or reception centers for evacuating school children, and you point out that there are no such relocation centers, at least for your school children, designated as yet.

Now, you haven't attempted to locate or arrange for such reception centers yourself, have you?

A (Witness Muto) No, we have not.

Q By yourself, I included any of your staff or --

A Officials, no, sir.

Q If Shoreham were to operate, would you feel some obligation to at least investigate the possibility of designating relocation centers?

A Again, I guess I would have to go back to my previous plan. If that was part of the directives that I received from Suffolk County and the State of New York, I guess that's what I would have to do. But until I get that go ahead, I don't feel an obligation to do that.

Q Does Suffolk County ordinarily give you direction in operating your school district?

A Yes, as far as wide scale emergency, we do get directions from Suffolk County.

Q Let me give you another hypothetical. Suppose Shoreham were allowed to operate because, among other things,

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1 this emergency plan that we are litigating here were ap-
2 proved by the NRC, and suppose there were an accident at
3 Shoreham, in that case, suppose there were a general evacua-
4 tion order for the populace at large at a time when the
5 school kids were still in school, and so the recommendation
6 was that those school children in your schools should also
7 be evacuated, suppose further that for some reason, for
8 whatever reason, the process of designating relocation
9 centers for those students still hadn't been completed,
10 what would you do under those circumstances?

11 MR. MC MURRAY: I object, Judge Laurenson.
12 This hypothetical is vague and calls again for the witness
13 to speculate.

14 We are getting far afield from the LILCO plan.
15 Instead, Mr. Christman seems to be asking for these wit-
16 nesses to speculate on a vague accident that he has
17 hypothesized.

18 MR. CHRISTMAN: It's a hypothetical, and it was
19 not at all vague.

20 JUDGE LAURENSEN: Overruled.

21 BY MR. CHRISTMAN: (Continuing)

22 Q Can you answer the question?

23 A Yes. Would you succinctly try to restate that?

24 Q Well, it's hard to do succinctly --

25 A All right.

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1 Q -- but I will give you the parameters; how about
2 that?

3 A All right.

4 Q Okay. I guess we can all remember that the plant
5 is operating, has an accident, that's what everybody seems
6 to be thinking about.

7 A Right.

8 Q And the general evacuation is called for which,
9 in turn, implies an immediate evacuation of the school
10 children in school.

11 A Yes.

12 Q And I further proposed that you hypothesize that
13 you still don't have predesignated relocation centers for
14 the school children. And my question is, what would you
15 do?

16 A Well, if you are referring to an evacuation area,
17 or a center, or whatever you would have, I would have to
18 examine the situation at that time within my duties and
19 obligations as a school superintendent. I would do the
20 best job I can to look after the safety of the children.

21 And whether it's a directive from anyone, I would
22 have to have the information. But, again I have to refer
23 to my authority with Suffolk County and the State Education
24 Department.

25 But, given a set of circumstances, I would examine

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1 the variables before me and do the best job I can to look
2 after the safety of the children.

3 Q Do you think doing the best you could in the
4 case where the population was evacuating would involve
5 moving the pupils out of the ten mile EPZ?

6 A I'm sorry. Would you please repeat that?

7 Q Do you think doing the best thing for the pupils
8 in that circumstance where a general evacuation is ordered
9 would include moving pupils out of the ten mile EPZ?

10 A I think I would go on record as saying I would
11 rather not do that. My first obligation is to get the kids
12 together with their families as soon as possible. And
13 that would have to be in a situation that all my other
14 options were cut off before I would look forward to doing
15 something like that.

16 Q So, you believe it is a good idea, if at all
17 possible, to reunite the children with their families?

18 A Within reasonable limits. Yes, sir.

19 Q Dr. Muto, how does a bus driver get certified to
20 drive school buses in your district?

21 A Well, Tom Smith, may I ask him? He is our
22 Transportation Officer --

23 Q Sure.

24 A -- and he handles that process.

25 Q That would be fine. Mr. Smith?

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1 A (Witness Smith) Do you mean from initial
2 employment, a request to become a school bus driver?

3 Q Yes. What requirements must he meet?

4 A First, he has to meet the Motor Vehicle Depart-
5 ment, Article 19.A requirements, which is pretty extensive
6 in itself, a physical, a driving test, and he must be
7 licensed with a Class 2 license.

8 After qualifying with that procedure, he then
9 starts his training as far as the different involvements he
10 is going to have with children. It's a twenty hour course
11 that he must comply with within the first year driving.

12 He must participate in two two-hour courses per
13 year, refresher courses, that go over all the information
14 that he has.

15 Initially, he must have an interview with the
16 school district, with me in particular, where we go through
17 a two hour indoctrination into what driving a school bus is
18 really all about. There are written exams that our school
19 district applies.

20 After he has gone through -- I think that pretty
21 well covered the technical part of it. There is much more
22 evaluation that goes on. We have the driver on a temporary
23 basis. He is employed by the company. We do not have our
24 own bus fleet, as you know. And we survey the drivers and
25 their operation during the first couple of months to see

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1 how they are doing. And we really monitor to see if they
2 know the geography, if they learn the kids, if they have a
3 rapport with children. That's all very important to us.

4 That's basically it. There's more to it but
5 that's basically it.

6 Q Dr. Jeffers, if you look at Page 13 of your 24.E
7 testimony, you say you would be unlikely to relocate your
8 students -- that's near the bottom, it would be unlikely
9 that your district could relocate students until parental
10 approval had been obtained. And on the following page,
11 you say that parents wouldn't know their children's where-
12 abouts.

13 But, if there were relocation centers designated,
14 you could preassign children to them, couldn't you? Couldn't
15 the school district or school principal?

16 A (Witness Jeffers) Yes, we could. But, again I
17 don't believe that we would have within our ability legally
18 the ability to designate areas as relocation centers.

19 In the original discussions with the County, the
20 County wanted to use our New Lane School as a relocation
21 center. At that time, our counsel, Mr. Geoconni, indicated
22 that there were grave legal responsibilities associated with
23 our district serving as a relocation center, and he advised
24 our Boar against that. So, I would assume any place that
25 we might contact for the possibility of a relocation center

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1 would react in the same frame. It was his opinion at that
2 time that the only way relocation centers could be set up
3 anywhere would be through the aegis of the State in some
4 kind of a marshal law situation, which would relieve the
5 independent agency of any legal liability relative to the
6 use of their facility in that manner.

7 So, yes, we could. But I don't know that we
8 can.

9 Q Dr. Jeffers, on Page 15 of the same testimony,
10 you say the children will have to be supervised at schools
11 and on buses. I take it from the rest of the paragraph
12 that when you send children home in a snow emergency and on
13 an early dismissal, they are supervised by the bus driver?

14 A That's true.

15 Q Anybody else?

16 A No. Unless as a matter of course the bus that
17 they ride has an aide assigned for monitoring duties. There
18 are some buses because of the nature of the children that
19 require an additional monitor who rides the bus, generally
20 special ed children, handicapped.

21 end #2

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1 Q Doctor Muto, you say, on pages 8 and 9 of
2 your 24.E testimony, that there is no basis for the
3 assumption that schools have developed early dismissal
4 plans especially designed for accidents at Shoreham.

5 A (Witness Muto) That is correct.

6 Q How would you have to modify your existing
7 early dismissal plan to make it specially designed for
8 accidents at Shoreham?

9 A I think I was referring there to the -- it
10 is a plan in the case of an accident at Shoreham. It
11 is a plan that we have not developed in emergency,
12 such as snow emergency or any other emergency. We
13 simply take the facts at the time. Whether it is a
14 power failure, whether it -- whatever the storm
15 conditions are, and we make our decisions and judgments
16 at that time.

17 We do have early dismissal plans where they
18 are preplanned, i.e, would be a last day of school
19 when it is early dismissal, testing periods, parent
20 conference days and so on.

21 Those are preplanned, and we can time those,
22 and we assume that they will be normal conditions. The
23 conditions under which your question suggests that
24 we have to deal with are the conditions that prevail
25 at that time, whether it is snow, or whatever emergency,

1 and we take it from that point .

2 So, we simply implement our early dismissal
3 plan that has already been preplanned, and then we begin
4 to, -- I guess I will have to use the word, 'creative,' be
5 creative with the data we have at hand.

6 Q Dr. Muto, you say on page 6 of your testimony
7 that you have performed no preplanning that will allow you
8 to shelter the school kids.

9 A Yes, sir.

10 Q Are you aware that LILCO has offered to send
11 a health phycist to survey your school buildings?

12 A They have not contacted me.

13 Q So you aren't aware that they have offered --

14 A I have heard it I think in some other district,
15 but personally they have not contacted me at this time.

16 Q And it that why you have not taken advantage
17 of that offer?

18 MR. McMURRAY: Objection. The offer has not
19 been made, apparently.

20 JUDGE LAURENSEN: Objection is sustained as
21 to the form.

22 BY MR. CHRISTMAN (Continuing):

23 Q Let me make sure I understand your previous
24 answer, then. You understand that an offer has been made
25 by LILCO to send health physicist.

A I don't know what it entails. I just heard it

1 as last as yesterday that they had, and so --

2 Q If such an offer were made to you, would you
3 accept it?

4 A I would have to see what the conditions were.

5 Q If the conditions were that at LILCO's own
6 expense that they would send a qualified health physicist
7 to each of your school buildings in your district that you
8 wanted them to, and to advise you as to the best locations
9 for sheltering, would you accept that?

10 MR. McMURRAY: Objection. It calls for the
11 witness to speculate.

12 JUDGE LAURENSEN: Overruled.

13 WITNESS MUTO: Again, I would have to wait and
14 see what the conditions are on that request.

15 BY MR. CHRISTMAN: (Continuing)

16 Q Well, no conditions other than the ones I just
17 stated.

18 A Let me take a look at that again. You are saying
19 that if LILCO offered to send someone to survey the building
20 --

21 Q A qualified health physicist.

22 A And they would then give us --

23 Q They would write you a letter advising you as
24 to the best location of sheltering in a radiological
25 emergency. At no cost to you.

1 A Okay. I don't have that authority unless the
2 Board would --

3 Q You lack the authority to have a health physicist
4 come and look.

5 A I would have to take that as a policy decision
6 at the Board level, and I would take it to the Board of
7 Education.

8 JUDGE LAURENSEN: Would you keep your voice up,
9 Dr. Muto, or maybe move the microphone a little closer.

10 WITNESS SMITH: If I may add, as you know the
11 Board has made a resolution, or passed a resolution, we
12 would definitely have to go before the Board because of
13 that request of assistance from LILCO to see what their
14 opinion is. We couldn't just authorize it on our own.

15 MR. CHRISTMAN: You would have to get Board
16 approval.

17 WITNESS SMITH: Definitely.

18 BY MR. CHRISTMAN: (Continuing)

19 Q And if Shoreham were operating, do you think
20 the Board would give that approval?

21 MR. McMURRAY: Objection. That does call for
22 the witness to speculate.

23 JUDGE LAURENSEN: Sustained.

24 BY MR. CHRISTMAN: (Continuing)

25 Q Dr. Muto, suppose Shoreham were operating again,

1 and suppose there were an accident, and LERO advised
2 sheltering both the general public and the school children
3 right in the buildings where they were, under those
4 circumstances would you send those school children out
5 of the building?

6 A (Witness Muto) Again, my only authority would
7 be through the Suffolk County and the State Department, and
8 I would have to see what my authority would be through
9 those departments.

10 Q So you would call someone?

11 A Yes, sir.

12 Q Who would you call?

13 A In Suffolk County, it would have to be the Health
14 Officer or in terms of moving kids, the Highway Department.
15 County Executive Officer.

16 Q But the recommendation was to shelter the students.
17 So, you would call the County Government, and ask them what
18 to do.

19 A Yes, sir.

20 Q And you would do what they told you to do?

21 A Yes, sir, that is correct.

22 Q But you would keep the children inside the
23 building while you called?

24 A Yes, sir.

25 Q You say on page 7 of that same testimony that

1 you lack the knowledge -- the school district lacks the
2 knowledge to decide whether sheltering would provide
3 adequate protection. Do you see that?

4 A Yes, sir.

5 Q What exactly do you mean by, 'adequate protection?'

6 A What affects radiation would have. How fast
7 moving it is. What kind of sheltering.

8 Q How much protection would sheltering have to
9 provide to make it adequate in your view?

10 A That is the expertise I don't have.

11 Q So, you don't -- you not only don't have the
12 physical data about what would be adequate, you don't have
13 a criterion for adequacy in mind?

14 A Yes, sir.

15 Q On page 8, you say that LILCO does not plan to
16 advise you if it first recommends early dismissal, and
17 then recommends sheltering to the general public. You
18 would know if sheltering were recommended for the general
19 public if you were to listen to your tone alert radio,
20 would you not?

21 A I am not following what you are asking, sir.
22 Could you refer me specifically on page 8.

23 Q Yes.

24 A Okay. Where are you.

25 Q The second line.

1 MR. McMURRAY: Excuse me. Just a point of
2 clarification. The second line doesn't begin a sentence.

3 MR. CHRISTMAN: No, it doesn't.

4 WITNESS MUTO: Is that the sentence where it
5 says: LILCO does --

6 MR. CHRISTMAN: Does not plan.

7 MR. McMURRAY: So, the sentence begins on page
8 7.

9 MR. CHRISTMAN: The phrase I am interested in
10 begins on the second line on page 8.

11 WITNESS MUTO: Basically, LILCO does not plan
12 to advise schools to shelter their students, if subsequently
13 recommend sheltering for the general public.

14 BY MR. CHRISTMAN: (Continuing)

15 Q Now, let me ask you this. Do you have these
16 tone alert radios in your school district that LILCO
17 provides?

18 A Yes.

19 Q You do. Where are they located?

20 A (Witness Smith) Transportation office and each
21 principals office.

22 Q Now, if someone in the school were to simply
23 listen to the tone alert radio, he would hear the same
24 EBS message that the public were hearing, would he not?

25 A (Witness Muto) That's right.

1 Q Mr. Petrilak, on page 5 of your 24.E testimony,
2 you say that you have -- this is in the paragraph that
3 starts two-thirds of the way down, that you have no
4 independent knowledge of how much protection from radioactive
5 materials will be provided by your school buildings. Are
6 you aware that LILCO has offered to send a health physcist
7 to survey the school buildings.

8 A (Witness Petrilak) Yes, we are aware of that.

9 Q But you haven't taken them up on that offer?

10 A No, we have not taken them up on that offer.
11 We will, if necessary, determine whether or not such a
12 person should be brought in based on the recommendations
13 of County Government and State Government. At that time
14 we would use persons who are recommended to us by those
15 agencies.

16 Q So you do have a [redacted] getting that sort
17 of information.

18 A We believe that were the County and State involved
19 in the development of a plan, that they would be able to
20 provide us with those services, or with people with that
21 expertise.

22 Q But even if Shoreham were operating, you would
23 not make a move to have your building surveyed unless the
24 County Government told you it was all right, is that
25 correct?

1 A That is correct. That is the position of
2 the Board of Education.

3 Q Mr. Petrilak, on page 5 of the same testimony,
4 you say that children would be more fearful of a nuclear
5 accident than they would be of a hurricane. That is not
6 a conclusion that was based on any systematic study of
7 fear in children, is it?

8 A No. That is the -- that statement was based on
9 input that we received from our teaching staff, and also
10 from the Executive Board of our Parent Teachers Organization,
11 who was involved with parents and their children, and their
12 perception was that children would be more fearful of an
13 accident that they perceived was possibly life threatening
14 but there were no external sources, or visual sources that
15 they could actually see and be able to make some judgment
16 on the severity of that accident.

17 Q Did any of them ask the -- they asked the
18 students how they felt about this?

19 A There have been discussions between the teachers
20 and students and, of course, parents and their children.
21 I am not aware of any specific survey, or a document that
22 was written in regard to that type of a question.
23
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25

1 Q You say on page 5 of your same testimony --
2 same page, for that matter -- that for sheltering you
3 would have to supply food, beds, medical supplies, and
4 medical personnel.

5 What kind of medical supplies would you have to
6 stockpile?

7 A We would have to stockpile those types of
8 medical supplies to take care of emergency situations
9 with the students. That could range anywhere from
10 those medical supplies that would be available for broken
11 arms, any type of a, I will call, standard accident
12 rather than a radiological accident.

13 Any additional supplies that we may have to stock
14 for medical purposes, again, we would look to the
15 recommendations of the county and the state on those specific
16 supplies, specific training that we may have to put our
17 personnel through, our nursing personnel through to deal
18 with such an accident.

19 Q As to the conventional type of accident, a
20 broken arm or whatnot, what happens if that happens during
21 a school day now?

22 A Right now that would be taken care of by the
23 district nurse and would be handled out of our elementary
24 building.

25 Q And I take it you contemplate that all of the

1 supplies that you have in the elementary building would have
2 to be duplicated at the other school buildings as well;
3 is that --

4 A We have not been able to presume what duplication
5 would be necessary since we have not gone through a full
6 planning process on what materials would be necessary
7 in each building, what students would be sheltered in
8 what building, if we were to take on a sheltering plan.

9 Q You said something about the school nurses.
10 You have one full-time school nurse in the district?

11 A We have one school nurse, yes.

12 Q Any part timers?

13 A No part timers.

14 Q Dr. Muto, I want to ask you a little bit more
15 about the early dismissal process.

16 How quickly do you think it would have to work
17 to make it acceptable for you to use in a radiological
18 emergency at Shoreham?

19 A (Witness Muto) Are you asking from the time
20 there is an announcement made that there is an emergency, the
21 turnaround time when we can implement the plan and get the
22 last kid home? Is that what you are asking?

23 Q Yes.

24 A The only think I can base my opinion on is what
25

1 experience we have had with other kinds of emergencies.

2 Q I am not really asking --

3 A Sorry.

4 Q I am not really asking for experience. I asking
5 -- you say on page 9 of your testimony that early dismissal
6 takes a long time.

7 A Yes, sir.

8 Q And we heard a lot about -- I think we explored
9 that the last time you testified.

10 I am asking you how quickly you -- how much better
11 you would have to be able to do before it would be
12 acceptable in a radiological emergency?

13 MR. MC MURRAY: Judge Laurenson, I am going to
14 object until Mr. Christman defines the type of accident
15 and how long it would take before there was a release.
16 We are going to have to get into the specifics of the
17 accident if Mr. Muto is going to be asked to answer this
18 kind of vague question.

19 JUDGE LAURENSEN: That is a general question, but
20 I think that depends on whether the witness is able to
21 answer it or not.

22 The objection is overruled.

23 BY MR. CHRISTMAN:

24 Q The point is, the tenor of your testimony is that
25 this plan for early dismissal used in snow emergencies won't

1 work fast enough.

2 In order to draw that conclusion you have to have
3 in mind how fast it would have to work in a radiological
4 emergency to make it acceptable to you.

5 My question is, how fast would it have to work
6 to make it acceptable?

7 A You are asking something that is a conjecture
8 on that part. As I said, I can only base it on my experience
9 with early dismissals. And I think we have stated under
10 normal conditions, the traffic flow, whatever, it is roughly
11 a three-hour turnaround time.

12 Our early dismissal plan, when we have implemented
13 it, almost invariably comes out to five to six hours. I am
14 assuming that the announcement that there is an accident
15 at Shoreham will set up a set of circumstances that are
16 not, quote, normal.

17 And so you have compounded the traffic problem
18 because all the schools are going to be mobilizing,
19 parents and everyone else. So I certainly don't see it
20 less than six hours.

21 We have been on record as saying three hours
22 normal. And six hours is the ball park, I think, on almost
23 every emergency experience that we have had.

24 Q And the extra three hours or so, extra two or
25 three hours, what sorts of problems cause that extra time?

1 A (Witness Smith) You mean in our experience?

2 Q Yes.

3 A Many different things have caused the extra time.
4 Communications, for one thing. Not being able to communicate
5 with all drivers to get them to the different points on time.
6 If it is inclement weather, you have normal traffic delays,
7 road problems, accidents, people learning how to drive all
8 over again, that type of situation, traffic lights going
9 out, electrical failures, children excited, having to take
10 extra time with children because they are nervous about what
11 is taking place, whether their mother is coming to the
12 school or going home. There are a multitude of things that
13 take place that cause the delay in a normal departure.

14 We plan at best three hours; we say that, although
15 we instinctively know that we are going to be held down
16 to four, five, six, and even perhaps more. There are so
17 many different accidents. There is another problem that
18 is a strong possibility.

19 It's exposure factor. In a radiological type
20 situation -- this is conjecture on my part, of course,
21 we are going to go up against even broader circumstances
22 because the WALK is going to be over all of the island,
23 total broadcast to the total populace. Everybody is going
24 to be moving. They are going to be moving in different
25 directions, and I feel that we are going to have all kinds

1 of problems within that realm.

2 A (Witness Muto) May I elaborate on that? Are
3 you open for elaboration?

4 Q I would rather ask my next question, but if you
5 want to go ahead and answer, it is okay.

6 A Well, my major concern -- some background may be
7 of help to you. Making the decision is the most critical
8 factor that an emergency is in effect. And we hesitate
9 to call that, when there is a snow emergency is a good
10 example. Why we hesitate is, dealing with our population
11 there are several factors -- working mothers, latchkey
12 children, kids going to a home that is not supervised
13 where there is no adult present, kindergarten kids in
14 particular, the staggering of our school system so that
15 high school kids go home because there is a babysitting
16 problem, parents having to get home.

17 So it is an incredibly disruptive process. Before
18 we make that decision there is a great deal of conference
19 and a great deal of discussion before the -- the decision
20 is mine, by the way. And Mr. Smith and I get together on
21 that and lay out the conditions. And once that decision
22 is made, it is a very difficult one because of the lack
23 of supervision of, particularly, young children.

24 Now, I don't know if that helps or hurts.

25 Q Sure. How many children were sent home to an

1 empty house the last time you had to implement this?

2 A We don't have the statistic, and I think that
3 the Mt. Sinai has done a study how many kids are -- do go
4 home to an unsupervised home.

5 Q I mean during the last -- just specifically during
6 the last emergency, an actual case.

7 A I would have to -- what were your numbers?

8 A (Witness Petrilak) We don't have also the
9 statistics on the last early dismissal that we sent home,
10 but our Parent Teachers Organization did do a survey and
11 from my own personal knowledge within my community,
12 approximately between 60 and 70 percent of our homes in
13 our district do not have adult supervision during the day.

14 And many of that is women who are working part time
15 and do plan to be home at the normal time school is
16 dismissed, but it is between 60 percent of our homes do not
17 have adult supervision in them during the day. And we would
18 anticipate that the majority of those persons in a
19 radiological emergency, not having had the ability to foresee
20 it coming as they would in a snow storm, would not be there
21 when we dismiss the kids.

22 Q Dr. Muto, if there were a hurricane announced
23 or an approaching hurricane while the school children were
24 in school, what do you do under those circumstances?

25 Do you institute early dismissal?

1 A (Witness Muto) Yes.

2 Q How much warning time do you suppose you would
3 have from a typical hurricane?

4 A I have experienced one. And at that time we had
5 -- I think it was around eight to ten hours, and we were
6 effectively able to evacuate the children.

7 Q So you got them home before the storm arrived?

8 A We got the kids home. We did have a set up in
9 the gym for adults -- this is in a resort area coming
10 from a camping area. And it never did come off.

11 Q Look at the document I have put on the table
12 in front of you. I have only given you one copy.
13 It is called --

14 MR. CHRISTMAN: I labeled this EP66, Judge, which
15 is the next one in sequence.

16 JUDGE LAURENSEN: It will be so marked.

17 (The document referred to was
18 marked LILCO Exhibit EP66
19 for identification.)

XXXXXX

20 BY MR. CHRISTMAN:

21 Q This is a document -- have you got that in
22 front of you, Dr. Muto?

23 A Yes, sir.

24 MR. CHRISTMAN: I will proffer for the record, this
25 was secured from the county, the county's lawyers, from

1 Suffolk County in discovery. And it is two editions
2 of a document labeled County Comments which purports on
3 its face to be by County Executive Peter F. Coahalan.

4 BY MR. CHRISTMAN:

5 Q Are we looking at the same document?

6 A Yes, sir.

7 Q And the one edition is for release August 21, 1980
8 and the other underneath it is for release July 2, 1981?

9 A No. Both dates are July 2.

10 Okay. All right.

11 Q Do you see the third page down -- July 2, 1981?

12 A Yes.

13 Q So representing on its face that one was
14 released -- they were released about a year apart in the
15 summer season.

16 Is anybody on the panel familiar with this
17 publication called County Comments?

18 A No, sir.

19 Q Nobody is aware of it? No one has ever seen it?

20 A No.

21 Q Not necessarily this particular edition, but
22 any edition of this?

23 A No.

24 A (Witness Smith) It is hard to say unless we
25 read the whole thing. I don't think I have, not in this form.

1 (Witness conferring.)

2 Q You are still looking at it. Let me make sure,
3 no one is aware that the Suffolk County executive publishes
4 a publication called County Comments from time to time?

5 A (Witness Petrilak) No, sir.

6 Q Okay.

7 A (Witness Jeffers) Just for the record, I am
8 aware that the Suffolk County chief executive officer does
9 publish documents. I have seen things that he has
10 published relative to the economic status of the county,
11 relative to job opportunities associated with the implementa-
12 tion of CETA, other such agencies. But I have not
13 seen this document or these documents.

14 Q Have you seen anything out of the Suffolk
15 County government about public health and safety or
16 emergencies?

17 A I have seen documents relative to public health
18 and safety, but nothing -- not this particular document
19 that you are showing us at this time.

20 Q If you look at the second full paragraph on the
21 first page, it says that there are only five places in
22 the country that rank higher than Suffolk County in the
23 total number of hurricane striking since records have been
24 kept in the U.S.

25 Do you believe that is -- well, Dr. Muto, I was

1 talking to you, I guess. Does that look accurate to you?

2 A (Witness Muto) I have no way of knowing.

3 Q Does anybody have any way of knowing on the panel?

4 (No response.)

5 Does anyone have any reason to doubt that Suffolk
6 County has a high incidence of hurricanes compared with
7 other parts of the country?

8 MR. MC MURRAY: Objection, Judge Laurenson,
9 I think we are asking for the witnesses to speculate.
10 Not only have they not seen this document before, but they
11 have just said they have no way of knowing whether this is
12 true.

13 MR. CHRISTMAN: Well, I am asking if they have
14 any reason to doubt that this is correct.

15 JUDGE LAURENSEN: I think you are into an area
16 beyond the witness's knowledge in connection with hurricanes.
17 This is not what they are here to testify about.

18 As Mr. McMurray indicated, they are not familiar
19 with this particular document. They apparently hadn't
20 seen it before, and I don't think you have laid a proper
21 foundation as to what their knowledge is of the incidence of
22 hurricanes.

23 The only testimony we have on that is, I think,
24 Dr. Muto said that he had experience with one.

25 The objection is sustained.

1 MR. CHRISTMAN: Let me ask one more question
2 about the same document then.

3 BY MR. CHRISTMAN:

4 Q It says in the next paragraph that for hurricanes --
5 and they are talking about Long Island specifically -- for
6 the most part warning time is usually six to eight hours.

7 Other than Dr. Muto's experience, which he has
8 already related, does anybody have any reason to doubt
9 that statement?

10 MR. MC MURRAY: Same objection, Judge Laurenson?

11 JUDGE LAURENSEN: Overruled.

12 WITNESS MUTO: To me or to the panel?

13 BY MR. CHRISTMAN:

14 Q To you, Dr. Muto, and then I guess anybody else
15 who wants to --

16 A I can only relate to my experience, that it was
17 sufficient time during my experience.

18 Q Anybody else have any reason to --

19 A (Witness Jeffers) If I may, I would comment on
20 that. My experience has been that we have gotten warnings
21 relative to the time frames that are published in that
22 document.

23 Q Six to eight hours?

24 A Six to eight hours, yes.

25 Q Anybody else want to add?

1 A (Witness Petrilak) Yes, I would. I am not doubting
2 Executive Cohalan's statements here, but my experience
3 with hurricanes is that normally we would have a much
4 greater warning period than that --

5 Q So you --

6 A -- than six to eight hours. In the last storms
7 that we did have to contemplate planning for, it was
8 in the neighborhood of, I would -- if I had to take an
9 average of the storms that we have seen in the past year
10 developing down in the Caribbean, we would have 24 hours or
11 more that at least something was taking place and we
12 could start considering planning, if it was to come in our
13 direction.

14 So I would have to say, from the first
15 establishment of a storm, we may have 24, 48 or more
16 hours to start considering that we may have to plan for it.

17 Q So I take it you are saying that you disagree
18 with this statement that for the most part warning time
19 is usually six to eight hours? And they are talking about
20 warning time there.

21 A I am not sure if this means a minimum of six
22 hours to eight hours or a maximum or an average.

23 A (Witness Jeffers) I think it would be fair to
24 comment that we probably -- since we are not the writer, it
25 is difficult to make the determination, but there are such

1 things as a watch as opposed to an alert, and we don't know
2 what the county executive may have meant in his frame.
3 But I would take it to believe, on the face of it, that
4 he is saying that you need -- you would have six to eight
5 hours to determine action that would have to be taken
6 by the school district as opposed to Mr. Petrilak, who is,
7 I think when he is discussing 24 or more, you are talking
8 about a watch as opposed to an alert.

9 A (Witness Petrilak) Yes.

10 A (Witness Jeffers) But again, perhaps Mr. Cohalan
11 could be more cogent as to what he meant by this
12 statement.

13 Q Probably, but he is not appearing here.

14 Dr. Jeffers, you say on page 7 that it would
15 take a long time either in bus or on foot to reach home.

16 A Excuse me. Seven on what document.

17 Q The thicker of the two, the 24.E testimony.

18 A Be with you in a minute.

19 Page 7 whereabouts?

20 Q Near the -- about eight or nine lines down
21 where it says, "Those children, whether in busses or on
22 foot, would take a long time to reach home."

23 How far is the farthest that a child has to walk
24 when he is in early dismissals from your school?

25 A Mr. Rossi would be better capable of answering that.

1 A (Witness Rossi) We transport students K to 3
2 that live in excess of half a mile, and 4 to 12 that live
3 in excess of a mile.

4 Q That answers my question, I think.

5 Dr. Jeffers, in footnote one on that same page,
6 pages 1 and 2 of that same testimony, you cite an official
7 statement of the district board of education, and it was
8 attached to your earlier testimony.

9 A (Witness Jeffers) Yes.

10 Q And that statement was, of course, voted on
11 by the board?

12 A Yes, it was.

13 Q At one of their regular meetings?

14 A Yes.

15 Q Did the board members hear presentations or
16 speeches about it before they passed it?

17 A There was discussion relative to -- I think I
18 testified to this at prior testimony. There were
19 discussions and meetings prior to that time. Members of
20 the PTA came to the board registering their concerns.

21 Mrs. Patricia Valentine, who is the president
22 of council of PTAs for the district, registered concern.
23 Informal discussions have been held between the school
24 district administrators and Mr. Vernon Lambert, the president
25 of the teachers' union, on the issue of evacuation plans.

1 He has registered concern relative to the
2 plans and also the role of teachers in those plans. And
3 the board was either aware of this or in fact heard directly
4 from the public at prior meetings.

5 We, Mr. Rossi and I, have kept the board aware
6 of the discussions that were taking place, and we did also
7 testify that we were present at various meetings involving
8 the county representative from, I guess, the highway
9 planning division or whatever, Mr. Muenkle. And, in fact,
10 the board received a copy of a letter; I think, that in
11 reading the testimony of Dr. Doremus or some of the
12 testimony, there is allusion to a letter between the county
13 and various districts. Probably it is a letter that I
14 have in my possession. That was dated September 15, 1980,
15 from Mr. Muenkle to me, relative to some discussions.

16 And my copy notes that October 6 it was received
17 from my board so that my board also was kept aware of
18 the ongoing, whatever correspondence were between the
19 district and anybody involved in this process prior to
20 the determination of their resolution.

21 Q Did the board ask to hear from LILCO before
22 they made their determination?

23 A No, they did not.

24 Q Mr. Petrilak, on page 2 of your testimony on
25 24.E, you say that the Mt. Sinai Board of Education has

1 enforced the position that you take in your testimony.

2 I take it the board members, other board members
3 read it before it was filed?

4 A (Witness Petrilak) I went over the testimony
5 with the board members. We had discussions prior to the
6 testimony being put down on paper, and those areas of
7 concern, how we would answer and the answers that we would
8 put in the contentions.

9 The final draft, I can't say that all board members
10 read every word of the final draft, but I am a member
11 of the Board of Education, and I was authorized by the
12 board to put the final touches on this and to testify here.

13 Q Did the board ask to hear from anybody from
14 LILCO before taking the position in favor of this testimony?

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END 4

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1 A (Witness Petrila) No one asked on the Board to
2 hear specifically from LILCO prior to filing this testimony.
3 We have, myself, and at different times other Board members
4 attended other hearings, such as the County planning hearings,
5 some of the NRC hearings, who have heard all the informa-
6 tion that -- I shouldn't say all, much of the information
7 that has been presented by LILCO, by the County, and by
8 other interested parties.

9 And the Board members, the LILCO draft plan was
10 available for their scrutiny prior to us testifying.

11 Q Dr. Muto, you say on Page 2 of your testimony,
12 on 15.C, that you would not -- I will give you a chance to
13 turn to it.

14 A (Witness Muto) Okay.

15 Q It's at the end of the big paragraph.

16 A Yes, sir.

17 Q You say you wouldn't make a determination as to
18 what actions were necessary or appropriate to protect the
19 children based solely on information or advice provided by
20 LILCO.

21 A Yes, sir.

22 Q But you would make the determination yourself?

23 A Yes, sir.

24 Q And you would, I suppose, try to get the best
25 information you could?

#5-2-SueT

1 A Yes, sir.

2 Q And I suppose you would consider only information
3 that was relevant to the health and safety of the children?
4 You wouldn't consider politics or your image or extraneous
5 things like that?

6 I will go back to the question, you would only
7 consider things that were relevant to the health and safety
8 of the children?

9 A I would hope so, yes.

10 Q What information would you want to get other
11 than what LILCO proffered as messages?

12 A In the case of radiological emergency, I would
13 like to know the determining factors. What is an emergency,
14 what the effects might be. And I would like to know the
15 source of that information.

16 My concern would be obviously for the safety and
17 welfare of the children, and I have to deal with that rather
18 often. I do get calls occasionally on bomb scares. I do get
19 calls on occasion from people who don't have accurate informa-
20 tion. I do get calls occasioned from information from
21 people who have some degree of concern over some conditions.
22 And I have to weigh and consider what that source is.

23 At the present time, I have a problem with the
24 fact that LILCO would be supplying me with that information
25 simply because of a conflict of interest.

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Q Well, if there were an emergency and you had to act, where would you go for additional information?

A I guess back to the County and the State Department in that case. If an emergency were to occur at Shoreham, I would think that a set of ground rules for what were to happen and the source for my information and determination when it is, in fact, an emergency would have to be developed.

Q And you would want that to be developed before an accident actually occurred, wouldn't you?

A Yes, sir.

Q I take it if LILCO advised you to evacuate your children directly to a relocation center because there had been an accident at Shoreham, that you wouldn't do that right away?

A You are projecting quite a bit into the future. And if this situation were to happen, I would hope that all parties would have gotten their act together so that I would know my source of authority and what data was sound data for me to base my decision.

And at this stage in the process, I don't see that. And as a direct answer to your question, no, I would not respond to an emergency from LILCO.

Q How long -- if there were a recommendation from the LERO organization to evacuate the school children

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1 immediately, how long do you think you would wait before
2 taking action?

3 MR. MC MURRAY: Objection, Judge Laurenson.

4 This is a very vague question. We don't know what the
5 specifics of the accident are. We are talking about some
6 sort of hypothetical event in the future.

7 I just don't think there is enough information
8 for Dr. Muto to answer this question properly.

9 JUDGE LAURENSEN: Overruled.

10 WITNESS MUTO: Obviously, the children would have
11 to be evacuated as soon as possible.

12 BY MR. CHRISTMAN: (Continuing)

13 Q Dr. Muto, on Page 2 of that same testimony,
14 the fourth line down, you say that based upon information
15 already provided by LILCO regarding its proposals for
16 protecting school children and your general familiarity with
17 LILCO's actions you believe that any plan developed by
18 LILCO would be ineffectual.

19 So, you believe that not just the existing plan
20 but any plan that could be devised would not work; is that
21 right?

22 A Let me see if I can state that a different way.
23 I think that's fairly clear what I'm saying there. But
24 let me see if I can state it a different way.

25 The track record in the relationship to date

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1 does not show me that LILCO has the capability of imple-
2 menting (a) an evacuation plan because they aren't dealing
3 with the variables we have; (b) sending them to a site or
4 a center that hasn't been negotiated, predetermined, planned
5 out, whatever you want to call it; and thirdly, that we
6 have the space in our buildings that we could shelter kids
7 in-house.

8 And, so those three factors are the only ones
9 I've been dealing with in this whole situation, and I don't
10 see that LILCO has provided me with the security in any
11 of those three phases.

12 Q But you and your staff won't meet with LILCO
13 to do further planning and discuss these things without
14 permission from the Board; is that right?

15 A That's not my base of authority. LILCO is not
16 my base of authority for the planning process. I personally
17 have not witnessed LILCO having that kind of capability.

18 My basis of authority for planning in evacuation,
19 a sheltering, or a staging area, whatever term you want to
20 use for it, has to be via the County and the State Depart-
21 ment.

22 Q But the State base of authority does require
23 you to plan for emergencies, does it not?

24 A Yes, sir.

25 Q But you have not planned for an emergency at

#5-6-SueT

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Shoreham?

A No, we have not.

(Witness Smith) May I add the reason we haven't is because we don't believe it's possible. We just don't believe an evacuation of schools can be fulfilled. We have to plan for the worst possible contingency if we are going to plan at all. And everything that we have been hearing, all input to date, tells us that we must evacuate the schools as quickly as possible.

And we don't know all the information on how quickly the plume will move, in what direction, and all the rest of that, towards us. But if there is a prevailing wind and the plume, a radiological cloud, comes over within an hour we are certainly lost. It takes us three hours under ideal conditions to evac, to take kids home. To evacuate from the area to a different relocation area, it's impossible. It can't be done. It's as simple as that.

There is no way we can possible remove kids as quickly as we feel you want us to. The statistics that you gave us at the last information meeting which was on March 7th, indicated that we would need -- this is based on LILCO's figures, Middle Island has eight thousand five hundred and sixty-four children. And it goes on to say how many buses would be needed to transport these kids to relocation centers.

If you add up the number of buses, it comes to

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1 a hundred and sixty-seven. We have ninety-one buses under
2 contract with us that we use everyday. That means seventy-
3 four additional buses. And these figures are fairly ac-
4 curate. We need seventy-four additional buses.

5 At that meeting, I asked where are we going to
6 get the seventy-four additional buses. Nobody knows. We
7 cannot possibly evacuate to relocation centers any quicker
8 than the three hours. There is six hours to relocation
9 centers and that's going under normal multiple runs.

10 Q But you might, might not you, shelter the school
11 children in the building for a period of time until the
12 plume might have passed and then evacuate them afterwards?

13 That would be possible, would it not?

14 A That is an unknown factor as far as I'm con-
15 cerned. I don't know whether we can shelter kids. The
16 powers that be say no, we can't. We don't have a large
17 enough basement. We have a lot of window area, window
18 spaces in each room. I really can't answer that. I don't
19 have that expertise.

20 Q And you also won't allow a LILCO health physicist
21 to come advise you on that without permission from the
22 Board, Dr. Muto; is that right?

23 A (Witness Muto) You are using the wrong term.
24 I have a problem with the fact "allow." I feel like I'm
25 redundant. My base of authority for further decision making

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1 does not rest with LILCO. Now, if LILCO has the expertise
2 in this whole process, then they've got to get into the
3 main stream of where my authority is based. And this
4 document that Dr. Jeffers referred to earlier, I hope
5 that during the break that you will take a look at that,
6 because it comes from a very high ranking official at the
7 State Department, Mr. Freeborn.

8 I think you have to take a look at that. That's
9 where we have our direct line of communication. For me to
10 go against that, really borders on insubordination. So
11 that LILCO directly coming to help, it's not a question
12 of allowing. The question is, that's not my role.

13 (Witness Jeffers) I think important, too, if I
14 may add, that the document do go on the record because the
15 line of questioning that has been coming this morning seems
16 to address what our responsibilities are of Dr. Muto and
17 I, namely as Superintendents, with regard to individual
18 planning.

19 And this document, which is dated May 30th,
20 1984, does speak about Article 2.B of the Executive Law
21 relative to those responsibilities. But I think a telling
22 statement here in the letter, it says: Lacking total plans
23 developed by and which will be executed by the County there
24 may be little or no prospect for the actual implementation
25 of individual district plans.

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1 And I think it very important that this be placed
2 in the record. And I know that counsel hasn't had an
3 opportunity to review the document but I think the question-
4 ing that is -- the line of questioning that is being
5 pursued this morning perhaps should be held in abeyance
6 until he has an opportunity to review the document.

7 MR. CHRISTMAN: Judge, the witnesses are awfully
8 eager to get this into the record. Let's -- before I
9 move to strike all the business about the letter as non-
10 responsive, why don't we take a ten minute break and let me
11 look at the thing and then we will come back?

12 (Would that be acceptable?)

13 JUDGE LAURENSEN: Is there any objection to
14 that?

15 MR. MC MURRAY: We have no objection.

16 JUDGE LAURENSEN: All right. We will take a
17 ten minute recess, then.

18 (Whereupon, the hearing is recessed at 11:15
19 a.m., to reconvene at 11:28 a.m., this same day.)

20 JUDGE LAURENSEN: Mr. Christman.

21 MR. CHRISTMAN: Thank you.

22 BY MR. CHRISTMAN: (Continuing)

23 Q Dr. Muto, the last question that I asked that
24 prompted the -- all the talk about this May 30th letter was
25 that -- I asked you whether you believed that not just the

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1 existing LILCO transition plan but any plan that could be
2 devised would not work. And I based that question on your
3 statement on Page 2 that you believe that any plan developed
4 by LILCO would be ineffectual, I think is the way you put
5 it.

6 MR. MC MURRAY: Judge Laurensen, excuse me. I
7 think I want to raise an objection here.

8 I think the very last question that was asked
9 of Dr. Muto was whether or not he had -- he and his school
10 district had the responsibility to plan for an emergency.
11 Now, that may have been a follow-up question to another
12 previous question but that was the last question asked as
13 far as I can tell.

14 BY MR. CHRISTMAN: (Continuing)

15 Q Well, let me ask this question again, because I
16 don't think the answer came out clearly at all.

17 And the question is, is it your belief that
18 any plan that could be devised would not work? Not just
19 the present existing plan.

20 MR. MC MURRAY: A point of clarification. Are
21 we talking about any plan developed by LILCO as it states
22 in the testimony, or any plan period, or what?

23 BY MR. CHRISTMAN: (Continuing)

24 Q Any plan?

25 A Any plan developed by LILCO, that's correct. No,

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I do not.

Q But you think that a plan could be devised by someone else that would work?

MR. MC MURRAY: Objection, Judge Laurenson, if it's that broad. We are only here to look at the LILCO plan, not any plan.

JUDGE LAURENSEN: Overruled.

WITNESS MUTO: Your question is if anyone can plan. My concern is, I would like to be part of that process, and the planning process for evacuation of children would have to be based on someone with expertise on evacuation procedure.

And that's why my concern is, LILCO to my knowledge, to this date, and I've been here only two years as School Superintendent on Long Island, is they have not demonstrated total understanding of the evacuation procedures that we have to deal with.

BY MR. CHRISTMAN: (Continuing)

Q What would it take to demonstrate that?

A I don't know. They have not demonstrated it to date. And, also while I'm in the planning process I have to look to some authority for my backup on my decision making for evacuation. And, generally that is the State Education Department and the County.

Q Well, LILCO could only demonstrate that to you,

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1 could they not, if they were to meet with you and have
2 discussions?

3 A They wouldn't meet with me. They would have to
4 meet with my authorities. And I have this letter, as I
5 mentioned to you earlier, from Albany and the County
6 Executive's Office. That's where the meeting should take
7 place.

8 Q They would have to meet with your authorities?

9 A Yes, sir.

10 Q By your authorities, you mean whom?

11 A The State Education Department or the County
12 Planning Board.

13 (Witness Smith) I would like to add something
14 at this point. Having LILCO come in to evaluate our
15 buildings is one thing; however, our authority and the
16 people who do evaluate our buildings is the State Educa-
17 tion Department. They come in and they establish the
18 criteria for the protection of the building, what criteria
19 we must meet in order to have a school.

20 That's who is the one who determines whether
21 the buildings are safe, radiologically and any other way.

22 Q They have radiological --

23 A A private agency coming in to tell us that is
24 not where it's at.

25 (Witness Jeffers) I would like to add an

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1 important point. The Bureau of Educational Facilities
2 Management, which is a division of the State Education
3 Department, is the division of the State Education Depart-
4 ment charged with the responsibility of determining any-
5 thing relative to the buildings within the school systems
6 of the State of New York.

7 Now, to this point in time, to my knowledge,
8 that facility has not been asked or directed to provide
9 information relative to the possible protection that any
10 building, certainly in Suffolk County, provides in case
11 of a nuclear incident and the possible radiological exposure.
12 But it would be my opinion that since this agency is charg-
13 ed with reviewing the fire regulations relative to build-
14 ings that it would be somewhat analogous.

15 And I would have to say that we would not seek
16 LILCO's advice relative to this. We would have to turn to
17 the State Education Department for surveys of the relative
18 protective nature of the buildings and the radiological
19 exposure situation. And the place to turn would be this
20 agency, because legally again -- and I think we pointed
21 this out earlier -- we have liability questions here. And
22 I don't know whether or not we can rely upon LILCO as a
23 source to settle any liability that might arise out of any
24 actions we may take based upon LILCO's advice.

25 But on the other hand, it's clear if we are

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1 following the direction of the State Education Department
2 that is the direction that is the normal channel.

3 Q Assume that the plant were operating and there
4 were an accident and you, Dr. Jeffers, disregarded a
5 recommendation, a protective action recommendation, from the
6 Local Emergency Response Organization staffed by LILCO
7 employees and the Department of Energy personnel, what kind
8 of liability implications do you suppose that might have?

9 A Well --

10 MR. MC MURRAY: Judge Laurenson, once again --

11 JUDGE LAURENSEN: Sustained.

12 BY MR. CHRISTMAN: (Continuing)

13 Q To your knowledge, Dr. Jeffers, does the
14 State Education Department do these health physics surveys
15 of school buildings in the vicinity of any other nuclear
16 power plant in the State of New York?

17 A Has the State Education Department done this?
18 I'm not aware of that. And I haven't been asked to deter-
19 mine that, so it hasn't been something that I've had to
20 deal with.

21 Q Does anybody else know the answer to that?

22 A (Witness Muto) Not to my knowledge.

23 (Witness Jeffers) I think it important to
24 point out, too, and again to reaffirm what we have stated
25 in our testimony in the prior hearings, is that it is our

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position that we do have no requirement from the State Education Department to plan for a nuclear exposure to our children when a plant is not in operation.

Conversations have been held with Brian Walsh, who happens to be, by the way, the head of the Bureau Facilities Management. We also have reviewed the most recent draft of the minimum requirements by the State of New York for schools. There is no mention in that document which is dated, Draft, 12/15/82, with regard to such a requirement.

And, as you see from the memo that I've just provided you from Mr. Freeborn, he does not indicate that we have any requirement at this time.

end #5

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1 Q So, the distinction you draw is between an
2 operating and a non-operating plant.

3 A Yes.

4 Q And if you had an operating plant, you would
5 see an obligation to plan for it?

6 A No. We would -- if there were, in fact, an
7 operating plant, we would assume that prior to the determinatio
8 of the operation, we would receive direction from the State
9 Education Department as to how to proceed.

10 Once again, as Dr. Muto has said throughout his
11 testimony this morning, our line of authority and direction
12 comes from that agency, and we would assume that if there
13 was an operating plant, we would receive direction from the
14 State Education Department.

15 Q Okay. But your interpretation seems to be that
16 there is no State obligation to plan, whether you have an
17 operating plant or a non-operating plant, is that right?

18 A We have been led to believe that lacking an
19 operating plant, we have no obligation. I would assume
20 that if there were an operating plant, that we would receive
21 direction from the State Education Department similar to
22 what transpired in Rockland County, where there was
23 direction to plan. That is an assumption.

24 Q But you are talking about a legal obligation to
25 plan, something that exists in law, and your interpretation,

1 I take it, is that even if the plant were operating, there
2 would be no state law requirement to plan.

3 A We find none at this time. I offer to you
4 again the draft of minimum requirements for the schools
5 of New York State, which does not address the issue at
6 all, and the only other communications that we have had
7 is the recent letter from Mr. Freeborn, and Mr. Walsh
8 in his -- or Doctor Walsh in his conversations has not
9 been definitive.

10 So, at this point we find nothing definitive
11 directing us to plan one way or the other. But -- so that
12 is all I can state, and certainly we are going to continue
13 to research the issue with our own counsel and discuss the
14 issue with Mr. Stone, who is counsel for the State
15 Education Department.

16 Q And it would follow, then, that no school in the
17 State, around any nuclear plant in the State has an
18 obligation to plan, even if the nuclear plant is operating,
19 is that right?

20 A I can't answer that question, because I am not
21 in a position to.

22 Q Okay. Now, this letter from Gerald L. Freeborn,
23 dated March 30, 1984, he is -- holds what position?

24 MR. ZAHNLEUTER: Excuse me. Point of
25 clarification. It is not March 30th, it is May 30th.

1 MR. CHRISTMAN: I am sorry. May 30th, 1984.

2 WITNESS JEFFERS: On the letterhead, his
3 position is indicated, but for the record I will establish
4 it. It is Deputy Commissioner for Elementary, Secondary
5 and Continuing Education.

6 BY MR. CHRISTMAN: (Continuing)

7 Q And this communication has been sent to just
8 two district superintendents, is that right?

9 A Yes.

10 MR. McMURRAY: Excuse me, Judge Laurenson. If
11 there is going to be further questioning on this exhibit,
12 I think it would just make the record clearer if we had
13 it marked as an exhibit, so that everybody would know the
14 document that we are talking about here.

15 JUDGE LAURENSON: Do you have copies, Mr. McMurray?

16 MR. McMURRAY: I guess we can have them provided
17 at some break. We will have some copies made.

18 JUDGE LAURENSON: All right. Are we going to
19 have it marked?

20 MR. CHRISTMAN: Yeah. I guess we should mark
21 it LILCO EP-67 for identification.

22 JUDGE LAURENSON: It will be so marked.

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24 (Above referred to document
25 is marked LILCO EP-67 for
identification.)

1 MR. CHRISTMAN: Why don't I just go on, and
2 then we will come back to this when the copies are made.
3 It will save some time.

4 BY MR. CHRISTMAN: (Continuing)

5 Q Mr. Petrilak, you say on page 3, your short
6 piece of testimony on Contention 15.C, that you would
7 determine for yourselves what actions would be feasible
8 and in the best interest of your children. If there were
9 an emergency, who would make that determination?

10 A (Witness Petrilak) That determination would
11 be made -- the final determination would be made by the
12 District Superintendent.

13 Q Superintendent. All right. What kind of
14 information would he need to make that decision in an
15 emergency?

16 A That would depend on the nature of the
17 emergency, but he would talk to the people involved in
18 transportation in our district, our building principals,
19 he would be gathering as much information as he can by
20 contacting the county and state agencies, and from that
21 information he would then try to make a determination of
22 what actions to take.

23 We state specifically in this piece of testimony
24 that we would not rely on the LILCO information as a source,
25 since we do not believe LILCO has any credibility, and is not

1 in most cases -- we believe would be putting the health
2 and safety and welfare of our students as their first
3 priority.

4 Q You believe your superintendent would disregard
5 entirely the EBS messages on the radio.

6 A He wouldn't disregard anything. He would take
7 all pertinent information -- any information he could get,
8 and then again, himself, in conjunction with the building
9 principals, with our transportation people, would try to
10 determine what the best action would be to take at that
11 time for our students.

12 Q What information would he try to get from the
13 State or County authorities?

14 A He would basically ask them for any advice, any
15 assistance that they could provide at that time.

16 Q Okay. But he wouldn't have anything specific
17 in mind. He would simply want to get all the information
18 before making a decision?

19 A That is as much as I can say at this point in
20 time.

21 Q Okay. Would your superintendent implement a
22 protective action recommendation made by LERO, and concurred
23 in, if it were concurred in by the Department of Energy
24 RAP team out of Brookhaven Lab?

25 MR. McMURRAY: Objection, Judge Laurensen. This

1 really calls for the witness to speculate. We are getting
2 far afield from any facts that are in the record.

3 JUDGE LAURENSEN: Overruled.

4 WITNESS PETRILAK: As I said, we would take
5 advice from the County Executive, County Government, and
6 from the State Government. If that information came from
7 LERO to them, or from other sources to them, our basis would
8 be on the advice that we receive from the County Government
9 or from the State Government.

10 I don't know if it would be presented to us
11 that this is the LERO advice that we are passing on.

12 BY MR. CHRISTMAN: (Continuing)

13 Q Okay, fair enough. That is not quite my
14 question. My question was: If this EBS recommendation
15 produced by LERO to be sure were concurred in by the
16 Department of Energy RAP Team, which operates out of
17 Brookhaven Lab, would you implement that with your District?

18 A (Witness Petrilak) The State Department of
19 Energy RAP --

20 Q No, the Federal Department of Energy RAP team;
21 the radiological assessment program team out of Brookhaven
22 Labs?

23 A As I said, we would look to the County and
24 State Government. If that information came from LERO
25 or from Brookhaven Laboratories, it would be part of the

1 input the Superintendent would use to make his decision.

2 Q Let's make sure --

3 A I can't say he would rely on that exclusively.

4 Q He wouldn't rely on it exclusively, but let me
5 not mislead you. It is the Department of Energy that
6 operates the RAP teams. Does that make any difference?

7 A I don't know, we would have to study it, and
8 see exactly what their authority was.

9 Q But you can say that you wouldn't disregard --

10 A We would not disregard any information if there
11 was an emergency at the plant, if indeed, it was operating.

12 Q I suppose if there were a representative of the
13 NRC available, and he concurred in the LERO protective action
14 recommendation, you can't tell me that you would implement
15 it?

16 A I can't say at this point that we would
17 implement it, no.

18 Q But you would --

19 A We would consider all sources of information.

20 A (Witness Jeffers) I think it important to note,
21 speaking as a superintendent, since Dr. Muto and I are the
22 people who, and as Mr. Petrilak has indicated in his
23 testimony, that the ultimate decision would be the
24 superintendent's. That we have tried to rather consistently
25 this morning indicate that the chain of command and our

1 responsibilities to the State, we certainly hold the
2 Federal Government in high esteem, and we certainly hold
3 the Nuclear Regulatory Commission in high esteem.

4 However, we would take our direction from the
5 State or County unless a state of national emergency were
6 declared and the Federal Government clearly was exercising
7 its authority. But other than that, we can only consider
8 whatever statements come forward from LERO or from the
9 Brookhaven Laboratory, or for that matter, from the Nuclear
10 Regulatory Commission, as pieces of information which we
11 would, in turn, frame back to County and State officials
12 for direction, because that is where our line of authority
13 is.

14 Q All -- I was going to ask you that next. You
15 have already anticipated a couple of questions. The
16 next question was going to be supposed LILCO advised you
17 by EBS message -- let me say LERO advised you by EBS
18 message, to hold children who lived in the EPZ but attended
19 your schools, in school rather than sending them home at the
20 end of the day. I take it this is one of those recommendations
21 you would want to verify before you implemented it?

22 A Are you directing that to me?

23 Q Yes.

24 A Yes.

25 Q And you would hold the children in school while

1 you verified it, wouldn't you?

2 A That is true.

3 Q Suppose LERO announced that there was an alert
4 stage of an emergency, and advised the schools to send
5 the students home, including the schools in your District,
6 Dr. Jeffers. You understand that part of the reason for
7 such a recommendation would be so the children could rejoin
8 their families in case there was an evacuation later on?

9 A Yes.

10 Q Do you think that is a sound idea?

11 A That they rejoin their families later on, yes,

12 Q But you wouldn't send the school children home
13 from your schools when you received that recommendation,
14 is that right?

15 A That is right, because I don't recognize LERO
16 as being an authority to assist me in the decision making
17 process. It certainly would be a factor that would
18 trigger our decision making process and put us in contact
19 with appropriate county and state officials, but on the
20 basis of the LERO recommendation, we would not necessarily
21 act immediately.

22 Q Mr. Petrilak, on pages 2 and 3 of your testimony
23 on 15.C, you say that recent actions taken by LILCO such
24 as the problems with the backup diesel generators make the
25 school district not regard LILCO as a reliable source of

1 information. Now, it is true isn't it, that on all the
2 major issues about the safety of Shoreham, except the
3 diesel generators and the emergency planning issues we
4 are litigating right now, an NRC Licensing Board found
5 that Shoreham meets the NRC requirements, didn't they?

6 A (Witness Petrilak) I am not sure that they
7 have met all of the requirements other than diesel
8 generators.

9 Q Did you read in the newspaper about the Licensing
10 Board's decision a year or so ago on all the issues that
11 have been litigated for so long?

12 A I read that -- I am not sure it said all of the
13 issues other than diesel generators. If you submit it is
14 just the diesel generators, then I would have to agree with
15 you.

16 Q That doesn't make you regard LILCO as a reliable
17 source of information, though, and the fact that they have
18 largely passed NRC muster?

19 A No, it doesn't, because in our attendance at the
20 Commission formed by Governor Coumo, and that of the
21 licensing procedures, it has been indicated by the NRC that
22 they do not certify the safety of the plant. They rely on
23 the utility to do that. They are more of a monitoring
24 organization.

25 As we say in the testimony here, the problems with

1 the diesel generators, which supposedly at that time had
2 passed tests, and then after that point failed, and a number
3 of other items included here, do not present to our Board,
4 in our opinion, that LILCO is a reliable source. We have
5 stated in our resolutions that we do not believe that that
6 plant should be licensed, and can be certified safe, until
7 the County Government performs an independent inspection
8 of that facility.

9 Q Well, LILCO recently hired a new Vice President
10 of Nuclear, with considerable nuclear operating experience,
11 did they not?

12 A Yes, they did. They hired a new vice president.

13 Q But that doesn't affect your belief that LILCO
14 is not a reliable source of information?

15 A No, it doesn't.

16 Q Now, you mentioned the independent inspection.
17 Suffolk County's law suit to force an independent inspection
18 of Shoreham was dismissed by the Federal Court, was it not?

19 A I am sure if it was dismissed by the Federal
20 Court, or if it was passed back to the State Courts. -

21 Q That is a different law suit. It was some
22 time ago. Well, if it were the case that the Federal
23 District Court had dismissed the law suit to force an
24 independent inspection of Shoreham, that wouldn't change
25 your opinion?

1 A No, it would not. Whether or not the Federal
2 Court enforced their right to perform that inspection, or
3 denied them the right to perform that inspection, that would
4 not lay -- that would not, I don't believe, relate to the
5 Court believing that the plant was, indeed safe. It is
6 our opinion on the school board that the best source to
7 give us some assurances as to the safety of that plant is
8 an independent inspection, design review by the County
9 Government.

10 Q By the County Government. You say on page 3
11 that LILCO has apparently refused to confront the extreme
12 difficulties which would affect any emergency response to
13 a Shoreham accident. LILCO has developed an organization
14 of some 30 emergency planning personnel, and has been
15 defending its plan for some six months in these licensing
16 proceedings, has it not?

17 A Will you repeat that please?

18 Q Isn't it true that LILCO has formed an organization
19 to do an emergency plan consisting of some 30 planners, and
20 has been defending the plan that it produced for some
21 six months?

22 A Yes, they have been.

23 Q But that doesn't affect your opinion that LILCO
24 is not a reliable source of information?

25 A No, it doesn't. I would state here that in

1 confronting extreme difficulties, we believe those
2 difficulties can only be addressed and considered by the
3 County Government.

4 A (Witness Jeffers) In all honesty and candor,
5 I think I need to state here, because we are talking about
6 reliability and so on relative to these kind of situations,
7 that we had a problem relative to loss of power during a
8 snowstorm toward the end of March of this year.

9 We lost power in four schools, I believe, Mr.
10 Rossi, and quite honestly we were without power in two of
11 the schools for two days.

12 During that time, number one, I had extreme
13 difficulty even getting to talk to anybody at LILCO to tell
14 me what the problem was. Didn't seem to be that they had
15 a high degree of planning or preparedness to deal with the
16 situation, and when I finally reached somebody, because I
17 simply stayed on the phone calling until three a.m., in
18 the morning, the gentleman who I finally reached -- and
19 I forget his name at this point, but I have it in my notes
20 in another place, didn't seem to have the answers that could
21 help me in terms of making a decision because I to them
22 that I need to make a decision relative to opening two of
23 my schools tomorrow morning, and will you have power in
24 those facilities, since the day before I had to institute
25 an early dismissal which lasted about five ours, and the reason

1 being they didn't have power in four of the buildings.

2 He did not give me much help or assistance
3 at all, and when I did reach him again in the morning,
4 around six-thirty, he again didn't seem to have much
5 knowledge or information that could help me in making my
6 decisions.

7 This kind of a situation certainly doesn't give
8 me a high degree of confidence in the ability of LILCO to
9 deal with something that they have never dealt with before,
10 when in this case, one might consider this to be a routine
11 sort of problem that LILCO would face, and yet they weren't
12 very readily available to assist me.

13 In fact, we couldn't even get them on the phone
14 to talk to them relative to the situation.

15 MR. CHRISTMAN: You will excuse me, but Judge,
16 I move to strike Dr. Jeffer's entire answer as non-responsive.
17 That is A. Because the question directed to Mr. Petrilak
18 was whether the -- whether in essence whether the LERO
19 organization and the effort of defending its plan for the
20 last six months in this licensing proceeding changed his
21 opinion that LILCO has refused to confront the extreme
22 difficulties. And my second ground is that there was
23 -- it was irrelevant to the point being discussed.

24 MR. McMURRAY: Judge Laurenson, let me address
25 that. I think it was very relevant to the point being

1 discussed, which was LILCO's credibility.

2 Mr. Christman pointed to page 3 of Mr. Petrilak's
3 testimony on credibility, which is also an issue that Dr.
4 Jeffers addresses, and Dr. Jeffers was giving his reasons,
5 his own reasons, for why he would not find LILCO a credible
6 source of information.

7 So, I think it is very relevant and responsive
8 to Mr. Christman's questions.

9 JUDGE LAURENSEN: I think we have allowed
10 testimony concerning the ability of LILCO to respond to
11 emergencies in connection with its gas operations, and
12 responding to winter storms and restoring power in
13 connection with the Credibility Contention, and I interpreted
14 Dr. Jeffers answer to be his opinion concerning the absence
15 of LILCO credibility in a particular storm that confronted
16 his school district last winter.

17 As to whether it is responsive to the specific
18 question or not, you may be correct on that, Mr. Christman,
19 but I don't know that we are going to accomplish a lot by
20 striking it because it will just find its way back into the
21 record on redirect examination or something, so the Motion
22 to Strike is denied.

23 MR. CHRISTMAN: Good point.

24 BY MR. CHRISTMAN: (Continuing)

25 Q Mr. Petrilak, back to you again. The Federal

1 Emergency Management Agency reviewed the present LILCO
2 Transition Plan and found it adequate on 72 out of 104
3 of the criteria they used, isn't that the case?

4 A (Witness Petrilak) I know they found it
5 adequate in some areas, and inadequate in other areas. I
6 don't know the specific numbers.

7 Q Okay. But a majority of the items were found
8 adequate, were they not?

9 A I don't know about majority -- it was just a
10 number count, or if the areas that were lacking were the
11 most critical areas.

12 Q And -- but in any event, that FEMA review
13 doesn't affect your opinion --

14 A FEMA's review basically, in our opinion, was
15 that the LILCO Plan, as submitted, was not adequate.
16 What the point count was I don't think is important. It
17 was not adequate, and did not provide for -- did not meet
18 the requirements.

19 End 6.
20 Reb fols

21

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1 Q Is the Department of Energy a reliable source
2 of information, in your judgment?

3 A Yes, they are.

4 Q How about the Nuclear Regulatory Commission?

5 A Yes, they are.

6 Q Dr. Muto, would you agree that the Department
7 of Energy is a reliable source --

8 A (Witness Muto) I would agree.

9 Q And the NRC?

10 A Yes, sir.

11 Q Mr. Petrilak, you say on page 2 of your
12 testimony, 15.C testimony, right in the middle of the page
13 where it starts, "Any decision to attempt to implement
14 proposed protective actions recommended by LILCO would have
15 to be made upon recommendations from the county and the
16 state, not from LILCO which is a private corporation,
17 or only after detailed verification of data which
18 underly LILCO's recommendations."

19 Now, assume, if you will, that the NRC
20 approves LILCO's transition plan, the emergency plan
21 we are talking about here, and that the Shoreham plant
22 begins to operate.

23 If there were an emergency, do you think the
24 county or state authorities would make a protective action
25 recommendation?

1 MR. MC MURRAY: Objection, Judge Laurenson. It
2 calls for the witness to speculate.

3 JUDGE LAURENSEN: Sustained.

4 WITNESS PETRILAK: I can't speculate.

5 JUDGE LAURENSEN: When I say sustained, it means
6 you don't have to answer the question.

7 BY MR. CHRISTMAN:

8 Q You said that any decision would have to be made
9 upon recommendations from the county and the state, in
10 your testimony, or after detailed verification of data
11 which underly LILCO's recommendations.

12 What data would you want detailed verification
13 of?

14 MR. MC MURRAY: Objection. I think this was
15 asked and answered, Judge Laurenson.

16 JUDGE LAURENSEN: Haven't we gone through the
17 list of things? I thought that Mr. Petrillak was the
18 one who gave us the list last time.

19 MR. CHRISMANT: I am not sure if the answer
20 would be -- it was a different question and it was
21 referring, I think, to a different part of the testimony.
22 It may very well be that the answer will be the same.
23 I am sure it was similar.

24 JUDGE LAURENSEN: I believe it calls for the same
25 answer. The objection is sustained.

1 BY MR. CHRISTMAN:

2 Q Let me -- let's go back to this, what has
3 been marked for identification as LILCO EP67 which is the
4 memorandum to district superintendents from -- two
5 particular ones from Gerald Freeborne.

6 JUDGE LAURENSEN: May we have copies of that,
7 please.

8 MR. CHRISTMAN: Sure.

9 (Counsel distributes copies of EP67.)

10 BY MR. CHRISTMAN:

11 Q I take it this was distributed to the two
12 district superintendents named?

13 Who is answering the -- Dr. Jeffers, are you the --

14 A (Witness Jeffers) If you want. Yes, apparently
15 it was, and we received in my office a copy of this.
16 It was marked into our office on June 8, 1984.

17 Q What school districts are these two superintendents
18 superintendent of?

19 A They are not superintendents of any school
20 district. Mr. Defeo is the district superintendent of
21 schools for what would be commonly referred to as BOCES 1
22 which is not a school district.

23 Q Right.

24 A And Mr. Hines is the superintendent, district
25 superintendent of district 2.

1 Q BOCES 1 and 2?

2 A But they, in turn -- I think that that is a
3 lack of understanding, quite honestly, on the part of
4 LILCO as to their roles. They hold two roles. They are
5 the chief executive officers of their respective BOCES,
6 but they also serve as district superintendents of
7 geographical areas under the leadership of the
8 commissioner of the Department of Education.

9 So they wear two hats. And I would presume,
10 since they are addressed in this memo as district
11 superintendents, they are being memoed by Mr. Freeborne
12 in their state education department role and not as the
13 chief executive officer of the BOCES.

14 And they do have some control and direction over
15 certain school districts within their supervisory district
16 which are deemed to be nonindependent school districts.
17 There are other school districts that are independent.
18 Both Middle Island and Middle Country are independent
19 school districts. I believe Mt. Sinai is a dependent district.

20 A (Witness Petrilak) We are dependent.

21 A (Witness Jeffers) Which means Mr. Hines,
22 since Mt. Sinai falls in his jurisdiction, has some degree
23 of authority and control over Mt. Sinai. He has no
24 direct authority or control over Middle Country or Middle
25 Island.

1 Q Now, the first sentence of the second paragraph
2 says, "The New York State Master Plan for responding to
3 large scale disasters such as floods, tornadoes, snowstorms,
4 toxic chemical spills and radiological accidents is
5 contained in Article II-B of the Executive Law."

6 So I take it we can all agree that Article II-B
7 of the Executive Law covers radiological emergencies?

8 Is that right?

9 A I would assume so.

10 Q Now, the first sentence of the next paragraph
11 says that, "It is our understanding that at the present
12 time the county structure required within Article II-B
13 does not exist in Suffolk County to address a radiological
14 emergency at the Shoreham Nuclear Power Station."

15 That suggests that Article II-B requires a county
16 structure to address a radiological emergency at Shoreham,
17 doesn't it?

18 MR. MC MURRAY: Objection. I think that calls
19 for a legal conclusion on the part of this witness.

20 MR. CHRISTMAN: The witness has already given
21 a number of legal conclusions about this document. And
22 since you all raised it, I think you ought to answer the
23 question.

24 JUDGE LAURENSEN: Overruled.

25 BY MR. CHRISTMAN:

1 Q You can answer.

2 A I could answer only from the framework that I
3 can't speak for the commissioner in this matter, and I
4 don't know whether or not, quite honestly, he has any --
5 I am certain he doesn't have any jurisdiction over Suffolk
6 County. So I don't know what the intent of the statement
7 was.

8 Q Well, regardless of the intent, the meaning
9 of the sentence, is it not, is that there is a county
10 structure required within Article II-B to address a
11 radiological emergency at the Shoreham Nuclear Power Station?

12 MR. MC MURRAY: Objection. That question is
13 vague. I am not sure whether Mr. Christman means that
14 Article II-B definitely requires that a county participate
15 in emergency planning, or just whether the school districts
16 would not have to implement or prepare any plan without
17 county participation.

18 It is a vague question.

19 MR. CHRISTMAN: It wasn't when I stated it.
20 It has probably gotten muddled up now.

21 JUDGE LAURENSEN: The objection is overruled.

22 WITNESS JEFFERS: I can't answer your question
23 because I don't know what Mr. Freeborne meant relative to
24 that statement, and I would only simply say that I did not
25 deem that for me to be important since he is addressing what

1 is county responsibility.

2 And that would be, I presume, something that
3 would need to be discussed between the education department
4 and the county.

5 I think what is pertinent to me is a statement
6 of "may work to develop local plans." It doesn't say I am
7 required to in the next sentence.

8 BY MR. CHRISTMAN:

9 Q Okay. The next sentence says, "However, as
10 individual districts may work to develop local plans,
11 including plans developed in cooperation with officials
12 of the Shoreham Nuclear Power Station being constructed by
13 LILCO, it must be remembered that total plans are required
14 by Article II-B."

15 So that sentence seems to say that as you develop
16 local plans, remember that total plans are required by
17 Article II-B; isn't that the case?

18 A That would appear to be so, yes.

19 Q And the next-to-the-last paragraph there says,
20 "We encourage and support the development of local
21 disaster preparedness plans but caution that it is
22 Article II-B which defines the overall state approach."

23 Is that right?

24 A That is what it says, yes.

25 Q Thank you.

1 Dr. Muto, did you ever have a bomb threat at any
2 of your schools? You mentioned bomb threats earlier today.

3 A (Witness Muto) Yes.

4 Q Can you describe what happened?

5 A When it became vogue, I would clear the building
6 practically with every bomb threat. After awhile I became
7 less cautious, and I reached a point finally of almost
8 ignoring them.

9 Q These bomb threats tend to be anonymous?

10 A Generally.

11 Q But after awhile you ignored them?

12 A Fairly often at the end of the process.

13 Q How many bomb threats would you say you had had
14 by the time you got to the point where you started
15 ignoring them?

16 A In my superintendent's experience?

17 Q Yes.

18 A A dozen, perhaps.

19 Q Dr. Jeffers, have you had bomb threats in the
20 schools also --

21 A (Witness Jeffers) Yes.

22 Q -- that you had to deal with?

23 What happened? I guess if you've had lots you
24 can't answer that. What typically happened?

25 A I have not only had threats, I have had explosions.

1 Q Did you evacuate the building when you got a
2 bomb threat?

3 A Yes. First of all, generally speaking, I can
4 only speak from my own experience in two districts where I
5 have been superintendent. The issue of what is to be
6 done relative to bomb threats is one that is discussed with
7 the board, and the board provides direction for the
8 superintendent relative to procedures.

9 The general procedures are that you would
10 evacuate the building. The other procedures are that a
11 search be conducted of areas that were not directly under
12 the supervision of anyone at the time that the call came
13 in.

14 The decision for that is generally left with
15 the building principal relative to the time of the day
16 that the call comes in. Searches are conducted for the
17 most part before evacuations take place. But if there were
18 to be a -- depending upon the nature of the call, if there
19 is a sense that the person sounds that they are crazed,
20 I suppose, perhaps, the principal may make a decision to
21 evacuate immediately or he may make a determination that he
22 is going to go to a search procedure in the areas that
23 are not directly supervised.

24 That might include searches of lockers and so
25 on and so forth. But that tends to be a policy or directive

1 from the board as to how to deal with such situations.

2 But I have been, unfortunately, probably more
3 than 100 or so bomb --

4 Q It sounds like, if you are on the spot, you
5 have to make a judgment about what to do?

6 A Quite honestly, it is not a judgment most times
7 the superintendent makes. It is the principal, and I have
8 had to make that decision as a building principal on a
9 number of occasions.

10 Q And they have to make those sorts of decisions
11 based on how the anonymous caller sounds on the phone?

12 A Guidelines, generally what has happened in
13 districts where I have worked as a building principal,
14 there have been workshops conducted by the superintendent,
15 local police officials have been involved. In fact, in
16 one district the state police have been involved in advising
17 us. And ultimately, though, it tends to be a decision
18 that the building principal must make because he, in the
19 final analysis, or she is charged with the responsibility
20 of making a decision relative to their building.

21 It is not something the superintendent necessarily
22 does.

23 Q But oftentimes then I take it that the principal
24 chooses to evacuate a school building in response to
25 an anonymous phone call?

1 A Yes, that is true.

2 Q Mr. Rossi, you are aware, aren't you, that the LILCO
3 emergency plan calls for the school districts to be
4 alerted by tone alert radios?

5 A (Witness Rossi) We have the tone alert
6 radios. I know it is over WALK.

7 Q Right.

8 So I take it LILCO has already provided these
9 to you?

10 A Yes.

11 Q How many?

12 A I have one in my office and each building was
13 present one except one that isn't functioning properly.
14 I am trying to get it repaired.

15 Q When were these delivered?

16 A Back in April, mid-April.

17 Q April or May.

18 If I told you it was May 1 or 2, would that sound
19 about right?

20 A It could be.

21 A (Witness Jeffers) For the record, we received
22 one tone alert radio about a year and a half ago.

23 Q I see. And then you got these others within
24 the last couple months?

25 A There was an offer made by LILCO to provide one to

1 every building, and we accepted the offer, although at
2 the time when we accepted it, we made it clear that that
3 should not be construed that we were planning with them, but
4 we were willing to accept the radios since they would be
5 available to us to announce any emergency situations that
6 might occur.

7 But we received -- one initially was given to
8 us. Maybe you have the date, but I think it was about a
9 year and a half ago. That one was in Mr. Rossi's charge.
10 Actually, initially it was in my charge and then went to
11 Mr. Rossi.

12 And at this point now LILCO has provided one for
13 each school building as well as one for the district office.

14 Q Did -- Mr. Rossi, did you call up within the
15 last couple months and ask them to deliver those?

16 A (Witness Rossi) Yes, I did.

17 A (Witness Jeffers) As a response -- under my
18 direction and as a response to an offer that was made from
19 LILCO at one of the meetings -- in fact, I believe you
20 were present --

21 Q I may have been.

22 A -- at Mr. Hines' office.

23 Q Mr. Jeffers, you testified this morning that,
24 as I understood it -- correct me if I am wrong -- that it
25 would be illegal for you to designate relocation centers for

1 your school children in case --

2 A No. I don't think I said it was illegal. I
3 don't think that I have the legal authority to do it. I think
4 that first of all there is no way that I could enter
5 into agreements, I believe, with other parties to provide
6 such a situation.

7 My understanding is that on advice of counsel
8 that when this issue was discussed when the county
9 originally approached the district relative to the use
10 of the New Lane School as such a facility, that there
11 would have to be some kind of a -- in order to take care
12 of the liabilities of both parties, some kind of a
13 declaration of emergency and save harmless thing of the
14 receiving facility.

15 So lacking that kind of a direction from the
16 county or the state, I don't understand how I legally
17 could enter into such agreements and safeguard the liability
18 of our district, let alone the liability of the agency
19 or whatever facility might agree to receive the children.

20 Q Do you think you could legally evacuate
21 your children to a relocation center operated by the American
22 Red Cross?

23 A I would have to say that I would not make that
24 kind of determination myself, and that question would be
25 the kind of a question that would be routinely referred to

1 Mr. Giaconi (phonetic) who is the district counsel.

2 Q So you can't really answer?

3 A No.

4 Q Dr. Jeffers, if Shoreham were to operate, I
5 take it you would still not conduct any planning for an
6 emergency at that plant unless the county or state
7 government told you to; is that right?

8 A Well, not totally. If Shoreham were to
9 operate, it would be my responsibility to return to my
10 board for direction. At this point I have a direction
11 from my board that we should not participate in the planning.

12 If my board were faced with the fact that the
13 Shoreham facility were in fact operative, then I think that
14 that would be a decision that they would have to make.
15 I don't make that decision. I am the chief executive
16 officer, and I follow their direction. But at this point
17 in time, lacking a change in direction, I would not be able to
18 participate in planning.

19 Q Dr. Muto, would you give a similar answer to
20 that question?

21 A (Witness Muto) Yes, sir.

22 Q Mr. Petrilak, what will the board of your
23 district do if Shoreham were to get an operating license?

24 A (Witness Petrilak) If they were to get an
25 operating license, we have discussed this, we would first make

1 the presumption that Suffolk County and the state of New
2 York were involved in the emergency planning procedures
3 and then would coordinate our efforts with the state and with
4 the county agencies.

5 If in some manner the Shoreham plant was
6 licensed and operating and they had not prepared any
7 plan, our district, our board would indeed work on putting
8 together what plans that we felt that we could accomplish
9 and still ask for assistance from the state and the county.

10 After those plans, whatever they were, may
11 be completed at this time, we believe that we could not
12 go to our residents, however, and indicate that those
13 plans would in any way assure the health and safety of
14 their students.

15 Q You would do the best you could, but you
16 wouldn't make guarantees?

17 A We would just do the best we could. We would
18 have to do the best we could, but we could not guarantee
19 that in any way those would protect the safety of the
20 students.

21 MR. CHRISTMAN: Thank you. I have no further
22 questions.

23 JUDGE LAURENSEN: Mr. Zahnleuter, do you
24 wish to question now or do you want to do it after lunch?

25 MR. ZAHNLEUTER: I prefer to take a lunch break.

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JUDGE LAURENSEN: All right. At this point, let me just inquire -- off the record.

(Discussion off the record.)

END 7

#8-1-SueT

1 CROSS EXAMINATION

2 BY MR. ZAHNLEUTER:

3 Q Gentlemen, do you have LILCO's testimony
4 concerning schools before you?5 A (Witness Jeffers) Yes, we do. At least, I
6 do. I think we all do.

7 Q Have you read this testimony before?

8 A (Witness Petrilak) We've gone through --

9 (Witness Jeffers) We've gone through it. Yes.

10 Q I would like to refer you to Page 23 of
11 that testimony.12 A (Witness Jeffers) Which one are you talking
13 about.14 (Witness Smith) Are you talking about the one
15 from March?

16 (Witness Jeffers) The first one, yeah.

17 Q Yes, it's dated March 21st.

18 A (Witness Rossi) We don't have that --

19 (Witness Jeffers) Yeah, we have it here.

20 (Witness Rossi) I don't --

21 (Witness Jeffers) What page did you --

22 Q 23.

23 JUDGE LAURENSEN: We can't have everybody talking
24 at one time here.

25 BY MR. ZAHNLEUTER: (Continuing)

#8-2-SueT

1 Q There is a reference on Page 23 to two meetings
2 that occurred between school administrators and BOCES,
3 and I would like to ask one representative from each school
4 district, were you present at these meetings?

5 A (Witness Petrilak) If I may, Mount Sinai
6 School District did attend the meetings. I personally did
7 not attend; the Board did not attend.

8 We hired a new superintendent just recently. And
9 when these meetings were called, we directed our superin-
10 tendent to attend both meetings, but to do so not to present
11 any opposition to the LILCO plan but simply to go to the
12 meetings, to gather information, to listen and then return
13 the information back to the Board for our deliberations.

14 Q Dr. Jeffers?

15 A (Witness Jeffers) I was present at the January
16 16th meeting. I was not present at the March 7th meeting.
17 Mr. Rossi, however, was present at both meetings.

18 And we attended. And I believe the context of
19 the entire meetings were one in terms of listening to LILCO
20 and information context. I believe that Mr. Packman, who
21 was our liaison person, did make it clear to LILCO that
22 these meetings should not be construed as an agreement on
23 the part of the individual districts or BOCES 2 or 1, for
24 that matter, that we were participating in planning. But
25 it was designed as information sharing, a meeting -- and

#8-3-SueT

1 they were informative, I might add. And, as I did testify
2 earlier, as a result of that meeting, that's when an offer
3 was made to us -- I believe at the January 16th meeting but
4 it may have been the March 7th, I'm not certain which one --
5 that additional tone alert radios would be made available
6 to the districts if they wished them for emergency prepared-
7 ness, and that we did agree that was a good idea. And we,
8 in fact, accepted the offer of LILCO and have since received
9 the radios.

10 But it has been our position, and we were very
11 careful to that, that this was not to be construed as plan-
12 ning. In fact, I think that was one of the reasons I said
13 to Mr. Rossi that I probably would not attend on March 7th,
14 that I did not want it to be construed that I was so
15 actively involved that it would be in any way deemed to be
16 planning.

17 Q Mr. Muto, do you have any --

18 A (Witness Muto) Yes. I received a call from Mr.
19 Stanley Packman at BOCES that these two meetings -- that the
20 first meeting would take place, asked if I would be in
21 attendance or if I would have anyone else go. I asked
22 David Bergen, who is our business manager, and Mr. Tom
23 Smith to attend.

24 The second meeting in March again I was called
25 by Mr. Packman, and I asked both Mr. Bergen and Mr. Smith

#8-4-SueT

1 to be in attendance. It is my understanding that LILCO had
2 a presentation, and I asked that they go to participate in
3 listening to the presentation and gather the information and
4 come back and discuss it with me.

5 Q To clarify that, Mr. Muto, your district was
6 represented to participate in the meeting but not to
7 participate in the planning process?

8 A That's correct.

9 Q Again, I direct this to a representative from
10 each of the school districts. Did anyone voice opposition
11 to the LILCO plan?

12 A (Witness Smith) I did at the March 7th meeting,
13 not exactly opposition as much as clarification as to some
14 of the detail that was being rendered. I brought this up
15 earlier this morning, that was the number of buses they
16 had said would be in operation, would be necessary. And
17 I wanted clarification on it.

18 I was not in agreement with anything that LILCO
19 was saying at that time. That's my personal opinion.

20 I was there to gather the information, pick up
21 any paper work and bring it back and present it to the rest
22 of the Superintendents of the schools.

23 (Witness Jeffers) As far as Middle Country is
24 concerned, we did not see the meeting to be adversarial. I
25 would couch my comments in that frame. We thought the meetings

#8-5-SueT

1 were exploratory and informational in nature. We weren't
2 really there to be opponents. I think the relationship
3 might be described as collegial, that it was information
4 sharing.

5 I think that some questions may have been raised
6 relative to some of the points of information that were
7 brought forward by LILCO representatives. And they had,
8 in addition to members of their firm, I believe at one of
9 the meetings that I attended a professor from Colorado
10 State who made some presentations relative to how people
11 act during panic situations. I think he talked about loot-
12 ing and a few other things.

13 But, in any event, it was I think an information
14 meeting. There wasn't a lot of opposition. There was
15 certainly no arguments that took place. Some questions may
16 have been raised by all the parties. And the meeting could
17 be characterized as a professional exchange.

18 (Witness Petrilak) As I stated already, we
19 directed our superintendent to attend the meeting and not
20 to take any position in favor or opposed to the LILCO plan
21 or the information presented, simply to bring that informa-
22 tion back to the districts Board.

23 Q In your opinion, would it be appropriate to make
24 an inference from the fact that no opposition, or in the
25 case of Mr. Smith minimal opposition, was voiced?

#8-6-SueT

1 A (Witness Jeffers) I'm sorry. Could you rephrase
2 the question?

3 Q Should an inference be made that because no
4 opposition was expressed, except in the case of Mr. Smith
5 where some opposition was expressed, should an inference
6 be made that -- or, should an inference be made from that?

7 A What, therefore, there was no opposition?

8 Q Correct.

9 A I would think that that would be a fallacious
10 assumption on anyone's part. I believe that Mr. Packman --
11 whether or not this was carried forward, I can't speak,
12 because I wasn't a party to any conversations he may have
13 had with any representatives of LILCO, but I did attend --
14 there were planning meetings of the various superintendents
15 prior to these meetings with LILCO, and I was in attendance
16 at those meetings, as were a number of other superintendents.

17 At that meeting, Mr. Packman was instructed to
18 contact LILCO indicating that this was an information shar-
19 ing, but again it should not be construed as a willingness
20 on the part of any of the districts present to participate
21 in any planning stages; and, therefore, I would think that
22 LILCO, in coming to the meeting, would have still been
23 aware of our concerns and questions, but we were coming in
24 an honest effort to share information.

25 And I don't think they would have made any

#8-7-SueT

1 assumptions that we were planning, because certainly Mr.
2 Packman was instructed to clarify that. In fact, I
3 believe that in addition to that, at the planning meetings
4 the attorney for BOCES 2, a gentleman by the name of Mr.
5 Kevin Seaman, was present and he, too, was to have conveyed
6 to LILCO these concerns relative that it was information
7 sharing.

8 Also, for the record, it would be important to
9 note that in the first meeting -- I wasn't there at the
10 second so I can't comment on that -- opposition was raised
11 but that was not raised by the school districts. Mr. Jones
12 was in attendance representing the County, and he did.
13 Probably if there were any opposing or vociferous opposition
14 raised in that meeting, it was probably by Mr. Jones.

15 Again, also for the record, an offer was made
16 by LILCO to provide for surveys of the schools buildings,
17 as indicated this morning, relative to their safety with the
18 sheltering of students from radiological incidents and so
19 on. And I believe as a result of that offer, one school
20 district did, in fact, invite LILCO to come and do a survey.

21 So, again, it was collegiate and information
22 sharing. But, to respond rather directly to your question,
23 I wouldn't think that anybody would deem that the lack of
24 argumentation could be assumed to be that there was no
25 opposition.

#8-8-SueT

1 (Witness Petrilak) I would like to state also
2 as far as your original question referring to inference,
3 that there should be absolutely no inference drawn from
4 the fact that the Mount Sinai school districts superinten-
5 dent attended that we were in any way planning with LILCO
6 or any lack of his intervention or opposition at that
7 meeting in any way meant that, or could be inferred, we
8 agreed that the LILCO plan in any way, shape or form could
9 protect the safety of our children.

10 Q Mr. Muto, do you agree with the two statements
11 that were just made concerning the inferences?

12 A (Witness Muto) Yes, I do.

13 Q Now, I would like to ask you to turn to Page 37
14 of the LILCO testimony. I'm sorry. It's 39. And that
15 page contains some time estimates for early dismissals from
16 several schools.

17 Mr. Smith, you may have addressed some of these
18 points before so if you feel that you need to supplement
19 something please answer also, but I would direct my question
20 more to Mr. Petrilak or Dr. Jeffers or Mr. Rossi.

21 A (Witness Jeffers) Well, for Middle Country, we
22 would answer that the three hours that are indicated are
23 essentially the hours that might be under normal circum-
24 stances, and I think Mr. Rossi should elaborate on that.

25 (Witness Rossi) Given for parent-conference type

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1 dismissal, three hours is realistic. Given an emergency
2 condition such as snow, which is what we have faced in the
3 past, it has gone as long as seven hours with a lot of
4 confusion in between. So, you know, three hours in
5 "normal condition" compounded by traffic and icy roads and
6 accidents and that type thing, it does add to the time
7 needed.

8 Q Mr. Rossi, are these times relevant to an
9 emergency at Shoreham?

10 A I would think so. We are directly west of the
11 plant, the only way off the Island. So I think traffic
12 patterns in Middle Country school district would be horrible,
13 at least making bringing kids home almost impossible.

14 Q Let me clarify --

15 A (Witness Jeffers) As a point of clarification,
16 do you mean the three hours in the LILCO testimony or the
17 seven or eight hours we are testifying to?

18 Q The LILCO testimony describes the time of three
19 hours as normal conditions.

20 A Well, we wouldn't see that to be the type of
21 situation we would meet at dismissing in a nuclear incident.
22 Mr. Rossi, would you agree with that?

23 (Witness Rossi) No, I agree.

24 (Witness Jeffers) I don't want to speak for
25 you.

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(Witness Rossi) I don't think it would be a normal traffic pattern or temperament.

2
3 Q Mr. Petrilak, is the time of two hours and
4 twenty minutes, which is listed for your school district,
5 appropriate under radiological emergency conditions at
6 Shoreham?

7 A (Witness Petrilak) No, it's not. Our experience --
8 and we believe a dismissal during a radiological emergency
9 would be on the same order, or slightly more, than we have
10 performed our dismissals that were not planned. Our ex-
11 perience is in the range of four and a half to five and
12 a half hours to get our students to their homes from the
13 time that we make the decision to early dismiss.

14 So, two hours and twenty minutes could not be
15 construed to be used for an unplanned for emergency.

16 Q Mr. Petrilak, your testimony on schools mentions
17 the fact that some of your students attend a high school in
18 Port Jefferson.

19 Could you explain what effect that would have on
20 a time estimate for an early dismissal?

21 A Yes. On the timing for an early dismissal, as
22 I stated in my testimony, we do send our high school students
23 to the Port Jefferson school district. And I believe we now
24 have approximately four hundred eighty-four, four hundred
25 eighty-five students that attend that school. Under normal

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1 dismissal procedures, eight of our buses, almost half of
2 our fleet, is used to bring those students either to the
3 Port Jefferson school or back from the school to our school
4 buildings within our district.

5 Under an early dismissal plan, due to weather
6 conditions, snow storms and so forth, we do have at times
7 been able to coordinate these activities with the Port
8 Jefferson school districts such that they will institute
9 their early dismissal prior to us instituting our early
10 dismissal program. This allows us to get the buses to the
11 Port Jefferson schools, return the students to our schools,
12 and then as we announce an early dismissal we can proceed
13 with all the buses on the premises and start the normal
14 procedure.

15 If Port Jefferson and Mt. Sinai under a radiolo-
16 gical emergency were to announce or start an early dismissal
17 program at the same time, we believe this would add con-
18 siderably to our time estimates for early dismissal of our
19 district in that the buses must head from Port Jefferson
20 with our students back to Mt. Sinai, which is in the
21 direction of the plant rather than away from the plant,
22 and it must take one of two roads, North Country Road or
23 Route 25A which are the two primary evacuation routes from
24 the EPZ.

25 So, we don't believe that even a four and a

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1 half hour estimate would be appropriate. It would probably
2 be longer than that. How much longer I can't determine
3 at this time. But it would be longer.

4 Q Do each of your school districts have students
5 which attend BOCES facilities?

6 A (Witness Jeffers) Yes, we do.

7 (Witness Rossi) Yes.

8 (Witness Muto) Yes.

9 (Witness Smith) Yes.

10 (Witness Petrilak) Yes.

11 Q You all do? While those students are in the
12 BOCES program, do you know if they are your responsibility
13 as a school district, or do you transfer responsibility to
14 BOCES when they attend the BOCES facility?

15 A (Witness Jeffers) BOCES by the Commissioner's
16 regulation is considered to be an extension of the school
17 district. Their programs are extensions of the school
18 district. So, the immediate decision relative to the
19 children rests with BOCES, but they have to get back to us
20 relative to the ultimate decisions involving children.

21 Q Do you know what procedures are in effect when
22 BOCES has an early dismissal? Do you know what procedures --

23 A I think Mr. Rossi would probably be better able
24 to answer that.

25 (Witness Rossi) Contact is made -- BOCES 2 has a

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1 series of five districts they listen to. If they close,
2 they automatically close.

3 In the event of an early dismissal where we are
4 closing down, we are in contact with BOCES telling them of
5 our intent and they in turn secure their buses, whether it
6 be contract or whether they own them, and do one of two
7 things. If it's a student they've picked up at home, such
8 as in the case of a special education child, they return
9 that child to home; if it's a child they've picked up at
10 one of our schools, the child is returned to our school.

11 We, in turn, now have to provide a bus to pick
12 these students up at the school and bring them home.
13 Normally, it's tied in with a special dismissal bus so that
14 under normal conditions I know they arrive back in the
15 district prior to four o'clock. And I have a four o'clock
16 and four-fifteen bus specifically there for these BOCES
17 students, the occupational students.

18 But in an emergency situation, a special bus
19 must be dispatched.

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1 (Witness Smith) As far as Middle Island, it
2 is pretty much the same criteria established. We follow
3 the same, almost exactly procedure.

4 Q Mr. Petrilak, is the same true for Mt. Saini?

5 A (Witness Petrilak) Yes, it is. The majority
6 of our students are handicapped students. Special education
7 students. We are not running a high school district. Almost
8 all the students that we have to BOCES are picked up by
9 BOCES as their homes, and then returned to their homes.

10 Q What affect would the transportation of BOCES
11 students from the BOCES facilities to each one of your
12 schools have on the early dismissal times that you discussed
13 before?

14 A (Witness Rossi) It generally falls within the
15 -- anywhere between the three and seven hour plan of getting
16 kids back into the district and again getting them home. It
17 depends on what these buses faces enroute back to the
18 district.

19 They are outside the district. Traveling distances
20 is much further, so the time involved in getting a bus from
21 wherever it may be to the central location and then back
22 into the district, it has varied. I can't really -- it is
23 somewhere within that time framework that I have indicated
24 before.

25 A (Witness Jeffers) I think it would be fair to

1 say that we generally experience the greatest degree of
2 difficulty in the early take home procedures with the
3 children that we do not directly house in our district,
4 whether they be BOCES students or they be private and
5 parochial, because there the distances are longer, We
6 send children, by the way, not only to BOCES 2, we also have
7 children in special programs at BOCES 3, which is in
8 Huntington.

9 So, we are transporting as far as Huntington.
10 And when we do go to our early dismissals when we have a
11 weather problem, it is those buses and those children who
12 tend to be the last children who are gotten home safely.

13 I think the last time -- I remember sitting at
14 about seven p.m., seven-thirty in your office, trying to
15 put the last piece together when those kids did come in
16 from Huntington, so that is geneally our most difficult
17 piece, because they are not in our district. Not that it
18 is an easy proposition to take the kids home who directly
19 attend our schools, but it is more difficult with the
20 children at the BOCES facilities, especially Huntington,
21 the BOCES 3, and also the private and parochial.

22 A (Witness Smith) I have to agree exactly with
23 what they are saying. It sounds like -- we go to sixty-four
24 schools outside of our district, and it is a twenty-eight
25 mile radius, and we have 997 kids going to other schools,

1 and they have to be transported back into the District.

2 If we call them, and say there is an emergency
3 take home procedure going into effect, we want to get our
4 kid back, or what have you, needless to say common sense
5 tells you there is a lot of decision making. What is the
6 right thing to do?

7 And it is going to draw out the time immensely.

8 Q Mr. Smith, are those nine hundred and ninety-seven
9 students transported to your school, or are they taken
10 directly to their homes?

11 A They are taken directly to their homes.

12 A (Witness Jeffers) In our case there may be
13 some rendezvousing that takes place with district buses
14 at a district school site, depending upon the school.

15 A (Witness Rossi) We have buses that meet at an
16 in district school in order to facilitate getting the
17 kids home. We try to match -- meet buses -- without
18 radios, incidentally, which gets to be a little tricky,
19 and have the kids get home as quickly as possible.

20 Q Dr. Jeffers, I would like to ask you one question
21 about LILCO EP-67, which is the letter from Mr. Freeborn.
22 If Article 2-B of the New York Executive Law were to
23 provide that County Governments were authorized -- and I
24 emphasize authorized -- to undertake emergency planning for
25 disasters, would you understand that statute to mean that

1 County Governments were required to undertake emergency
2 planning for disasters?

3 MR. CHRISTMAN: Objection. That seems to be
4 a question based on the document, but not truly based on
5 it at all.

6 MR. ZAHNLEUTER: I don't understand the
7 objection.

8 MR. CHRISTMAN: The objection is it assumes
9 something not in evidence.

10 MR. ZAHNLEUTER: The question that I asked
11 deals with Article 2-B, which was the subject of
12 questioning by Mr. Christman, and it is also in the letter
13 that I am referring to.

14 MR. CHRISTMAN: You are asking the witness to
15 assume that Article 2-B says something, I guess, right,
16 which has nothing to do with this exhibit.

17 MR. ZAHNLEUTER: This exhibit that says Article
18 2-B is pertinent.

19 JUDGE LAURENSEN: He has asked him to interpret
20 Article 2-B as he has stated it here. I think we have
21 allowed witnesses to give their interpretation of various
22 laws and regulations. Objection is overruled.

23 WITNESS JEFFERS: Would you restate the
24 question?

25 BY MR. ZAHNLEUTER: (Continuing)

1 Q Sure. If Article 2-B of the New York Executive
2 Law were to provide that County Governments were authorized
3 -- and I emphasize authorized -- to undertake emergency
4 planning for disasters, would you understand that statute
5 to mean that County Governments were required to undertake?

6 A (Witness Jeffers) Not based upon what you are
7 telling me, no. Authorized simply means they have the
8 authority to do so if they deem, but it is not a requirement.

9 MR. ZAHNLEUTER: I think I may have overlapped
10 with the answer. Did the Court Reporter receive that full
11 answer?

12 COURT REPORTER: I got the complete answer.

13 MR. ZAHNLEUTER: Okay, thank you. I have no
14 other questions.

15 JUDGE LAURENSEN: Mr. Bordenick, any questions?

16 MR. BORDENICK: Yes. I have one area.

17 CROSS EXAMINATION

18 BY MR. BORDENICK:

19 Q Mr. Muto, on your testimony on page 7, having
20 to do with sheltering, your testimony states in part: Our
21 schools do not have adequate staff or supplies to enable us
22 to care for our school children for periods of several hours.

23 I wonder if you could tell me what it is that
24 you would consider to be inadequate staff to accomplish
25 the task of caring for school children for periods of

1 several hours?

2 A (Witness Muto) Several hours, I would think
3 the entire staff. We have a ratio of teachers and
4 students, for example, in the upper 20s. 26, 7, 8, 9.
5 If we have a staff of fifty teachers, and they are in the
6 school, and twenty or thirty of them left to go with their
7 families, I would think of that as being inadequate.

8 So, I would like to assume that we would have
9 to have the normal student/teacher ratio for that kind of
10 supervision.

11 Q In the same context, what sort of supplies were
12 you referring to in this testimony?

13 A In that particular case, I was referring to
14 an extended period where perhaps there were meals involved,
15 and in our school district we have six separate campuses
16 and we have a central kitchen, and all the schools will be
17 supplying that, so we have no facilities for meals, and
18 that was one area.

19 The other thing was medical supplies, minor
20 nature, but that wasn't extensive. In that particular
21 context, I had assumed it was meals.

22 Q Principally meals, then?

23 A That was basically what I intended on that one.

24 MR. BORDENICK: All right, thank you. I have
25 no further questions.

1 JUDGE LAURENSEN: Mr. McMurray?

2 MR. McMURRAY: Yes, Judge Laurenson. I have
3 two questions. They are on issues that were raised since
4 our last break. I would like to request just a minute or
5 two to meet with my witnesses, and then we will be back
6 and get this over with very shortly.

7 JUDGE LAURENSEN: Is there any objection?

8 MR. CHRISTMAN: Yes, I object. Let's go right
9 ahead. I don't see why counsel should meet with his
10 witnesses every time before he conducts his redirect.

11 MR. McMURRAY: We don't always do it. But it
12 has been practiced in the past that when counsel on either
13 side has asked for time to speak with his witnesses before
14 redirect, there has been no problem in doing that.

15 MR. CHRISTMAN: Well, I don't remember asking to
16 do that, but I can't speak for everybody else in the
17 proceeding.

18 JUDGE LAURENSEN: Do you object, or you don't
19 object?

20 MR. CHRISTMAN: I do object.

21 JUDGE LAURENSEN: All right. Let's go forward.
22 I don't think there is any necessary right to do that.

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REDIRECT EXAMINATION

24 BY MR. McMURRAY:

25 Q Mr. Petrilak, do you remember earlier some questions

1 from Mr. Christman regarding whether the NRC and DOE are
2 reliable sources of information?

3 A (Witness Petrilak) Yes, I do.

4 Q Let me pose a hypothetical to you. Let us
5 suppose that an accident occurs at Shoreham. LILCO gives
6 a protective action recommendation, and tells you that
7 prior to giving that protective action recommendation it
8 has consulted with the NRC and DOE.

9 Would your response be any different than that
10 which you have already stated, which is that you would
11 still look to the County and State for guidance?

12 A If they all indicated that they had consulted
13 with those agencies, my response would be the same. We
14 look to the County and State for guidance, in addition to
15 that statement.

16 Q Dr. Jeffers, let me refer you to LILCO Exhibit
17 EP-67. Under your interpretation of this document, do
18 you believe that this document is intended in any way
19 to set forth what the State believes Counties are required
20 to do with respect to planning for a radiological emergency?

21 A (Witness Jeffers) My interpretation would be,
22 no. Because I don't believe that Mr. Freeborn has authority
23 over counties, so, therefore, I don't think it was meant to
24 in any way define the responsibility of the counties. I
25 think -- probably, but again that is supposition on my

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1 part -- designed to try to clarify it for school districts,
2 their responsibilities, and in the final analysis, to me,
3 I think the most telling phraseology, and again makes me
4 more assured in my position that we are not required, is
5 that he uses the word, in the third paragraph, 'individual
6 districts may;' he doesn't use a imperative.

7 MR. McMURRAY: Judge Laurenson, I have no
8 further questions?

9 JUDGE LAURENSEN: Any further questions for the
10 panel?

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RE CROSS EXAMINATION

12 BY MR. CHRISTMAN:

13 Q Yes, sir, just one or two. I will ask Mr.
14 Rossi, though several people responded. Several of you
15 testified about the time estimates on page 39 of the LILCO
16 testimony, which are represented in that testimony as being
17 for normal conditions, incidentally, and you said they
18 wouldn't apply in a radiological emergency.

19 I take it that was large part because of all
20 the evacuation traffic from other people that would be
21 interfering?

22 A (Witness Rossi) I would think we would have
23 the extra traffic, yes.

24 Q We are talking about early dismissal there, are
25 we not; those time estimates for early dismissal?

1 A Yes.

2 Q And that is - under the LILCO Plan, recommended
3 at the alert stage of an emergency, is it not?

4 A I don't know what the reaction of the public
5 would be if there were any type of an indication of a
6 problem at Shoreham. I have to think, again, as was said
7 before, the worst, and just giving a normal day at regular
8 dismissal time with a little bit of rain, I have a problem
9 getting buses to a school building, because of extra
10 traffic.

11 Q But you are assuming, in your answer, that there
12 would be evacuation traffic that would interfere with your
13 buses at the alert stage?

14 A Yeah, that and compounded also by previous
15 testimony that we did a survey of our drivers, and out of
16 sixty-two, I believe only three said they would respond
17 directly to work.

18 A (Witness Petrillak) Let me add also, since I
19 answered that area, that it would not only be traffic, okay.
20 Those times that are listed for our district are under
21 normal circumstances, which means we can preplan for it.
22 We would not plan to institute an early dismissal while we
23 are bringing our students to the school. So, it would be
24 traffic. It would be the timing of when that early dismissal
25 was declared, which we couldn't anticipate for, and as was

1 just stated, surveys have shown that our bus drivers will
2 take care of their families first. Under that type of
3 an emergency or early dismissal plan, our teachers and
4 supervisory staff also would experience role conflict, and
5 would attend to their families first prior to attending to the
6 needs of the students in many cases.

7 So, it is not simply traffic.

8 MR. CHRISTMAN: No further questions.

9 JUDGE LAURENSEN: Anything else for the witnesses?

10 MR. McMURRAY: One question.

11 MR. ZAHNLEUTER: Yes, I have a question, too.

12 JUDGE LAURENSEN: All right. Let Mr. Zahnleuter
13 go first.

14 RE-CROSS EXAMINATION

15 BY MR. ZAHNLEUTER:

16 Q Mr. Rossi, the question that Mr. Christman just
17 asked you stated whether the effect of evacuation traffic
18 would, in large part, affect your estimates of early
19 dismissal plans. Is it true that evacuation traffic would
20 effect, in large part, your estimates?

21 A (Witness Rossi) I believe if there were any
22 type of an alert, the traffic would increase, and would
23 increase the amount of time I would need if I were directed
24 to bring children home.

25 Q Is that the major factor? Or are there other

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1 factors?

2 A Supposed non-responsiveness of bus drivers.
3 Problems in the schools other -- parents -- traffic
4 around the school with parents coming in to pick up the
5 kids, as well as other local traffic exiting from the
6 ten mile zone.

7 MR. ZAHNLEUTER: Okay. Thank you.

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8 REDIRECT EXAMINATION

9 BY MR. McMURRAY:

10 Q Mr. Smith, earlier I think in response to some
11 questions by Mr. Christman, you stated that one problem, or
12 some problems with respect to an early dismissal are not
13 being able to communicate with drivers, accidents, the problem
14 of children getting a little bit upset and needing supervision.

15 In your opinion, would those factors apply in
16 a radiological emergency at Shoreham?

17 A (Witness Smith) In my opinion, absolutely.

18 MR. McMURRAY: I have no further questions,
19 Judge Laurenson.

20 JUDGE LAURENSEN: All right. This completes
21 the County's school testimony. The witnesses are excused,
22 and we thank you for your testimony. We will take our
23 luncheon recess, and we will resume with the LILCO Training
24 Testimony at 2:15 p.m.

25 (Panel stands aside.)

AFTERNOON SESSION

(2:18 p.m.)

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3 JUDGE LAURENSEN: We are back on the record
4 now.

5 Let me just clarify a few matters concerning
6 the testimony this morning. There were two LILCO
7 exhibits that were marked but not offered. Are those
8 not going to be offered in evidence, Mr. Christman?

9 MR. CHRISTMAN: Correct.

10 JUDGE LAURENSEN: Is there any rebuttal testimony
11 concerning what we have marked as the school's testimony
12 concerning I guess it was cluster 13?

13 MR. MC MURRAY: The county has none,
14 Judge Laurenson.

15 MR. CHRISTMAN: No, sir.

16 JUDGE LAURENSEN: All right. I think we are
17 ready then to begin the testimony on training, cluster 16,
18 contentions 39 through 44 and 98 through 100.

19 Miss Monaghan?

20 MS. MONAGHAN: Judge Laurenson, I believe that
21 Mr. Miller wishes to move for reconsideration of the
22 motions to strike as a preliminary matter.

23 MR. MILLER: Would you like to take this up,
24 Judge Laurenson, before the panel goes up?

25 JUDGE LAURENSEN: Sure.

1 MR. MILLER: I'll keep this short. As I advised
2 the Board at the end of Friday, the county had some serious
3 concerns regarding the Board's rulings in light of the
4 fact that LILCO's own testimony and the LILCO attachments
5 address some of the very same issues that have been stricken
6 by the Board from the county's testimony.

7 I think the bottom line, Judge Laurenson, is
8 that in the county's view the material stricken by the
9 Board is relevant, is probative, and it falls well within
10 the scope of the admitted contentions.

11 Let me state at the outset that by my count, the
12 Board struck 12 passages from the county's testimony. We
13 are not rearguing three of those 12 passages. Nine of
14 the 12, however, are passages where LILCO's own testimony
15 and, in most cases, attachments address the same issues
16 that have been stricken from the county's testimony. And
17 those are the nine that we would like to reargue.

18 I think, Judge Laurenson, the argument is a
19 very simple straightforward one. It is an argument of
20 fairness. It is an argument of equity.

21 LILCO claims that testimony submitted by the
22 county should have been stricken for the most part on
23 grounds of relevancy. It is inconceivable to the county
24 how LILCO can claim testimony is irrelevant and yet address
25 the same issues in its own testimony, thereby acknowledging

1 the relevancy of the county's testimony.

2 If we were to do a search through the passages
3 that have been stricken by the Board, as I said, nine out
4 of the 12 were issues addressed in LILCO's own testimony.
5 For the Board's convenience, I will be glad to list those
6 passages. They would be the materials stricken from
7 page 40, lines 5 to 8 and lines 15 to 16; page 43, line 15
8 to page 45 line 16 and page 45 line 17 to page 46 line 17;
9 third, page 51 line 13 to page 52 line 17; fourth, page 52
10 line 18 through page 53; fifth, page 54 lines 9 through 10,
11 lines 10 through 11, lines 11 through 13, lines 15 through 16;
12 sixth, page 60 line 5 to page 62 line 19; seventh, page 63
13 lines 1 through 9; eighth, page 69 line 21 through the first
14 word on page 70; and ninth, page 74 line 22 to page 75 line 6.

15 LILCO has, as you have heard, offered to withdraw
16 certain of their attachments but as I have stated, that
17 doesn't really solve the problem. In fact, I am not sure
18 it is even relevant to the issue now before the Board.

19 The offer made by LILCO essentially obscures the
20 real issue. And that issue is, is it fair for LILCO to
21 address issues in its testimony while the county is barred
22 from addressing the same issues in its own testimony.

23 The fact remains, Judge Laurensen, that even if
24 attachments would be withdrawn by LILCO, the LILCO
25 testimony raises subject matters, raises areas of concern

1 to the county that the county will explore during cross-
2 examination.

3 Since the issues would be left in the testimony,
4 the county would still have to go into the materials that
5 LILCO has offered to withdraw.

6 JUDGE LAURENSEN: Let me just interrupt for a
7 second to be sure that I understand the issue that you are
8 raising.

9 Is it your position that even if the testimony
10 was irrelevant, the fact that LILCO had present such
11 irrelevant testimony gives the county the right to respond
12 to such testimony?

13 MR. MILLER: No, sir. My position is that the
14 testimony is, indeed, relevant. It is relevant to the
15 training issues, to the contentions admitted by the Board
16 for litigation.

17 JUDGE LAURENSEN: The ruling we made last
18 Friday was, in most of these cases, that the testimony that
19 we were striking was beyond the scope of the contentions
20 that were admitted to this proceeding. So I don't know
21 that it really advances the case much to say, well, LILCO
22 has presented testimony on that.

23 I think you have to address the question of whether
24 or not your testimony that we have ordered stricken is
25 relevant to those contentions and within the scope of those

1 contentions.

2 Now, it is a different matter as to whether or
3 not we should enter some sort of order admitting the
4 LILCO exhibits or attachments for a limited purpose because
5 of this matter. That is a different matter. But I think
6 we are going to have to, instead of trying to respond to
7 LILCO's testimony, as I understand the argument you are
8 making, you are going to have to show that the testimony
9 that we ordered stricken is indeed within the scope of
10 the training contentions that we have admitted and is
11 relevant to those.

12 MR. MILLER: Judge Laurenson, under that posture,
13 I really would just point the Board to the arguments that
14 were made by the county in its response to LILCO's
15 original motion to strike. I think that in that response
16 the county very clearly addressed why, in our view,
17 the county's testimony falls within the admitted contentions
18 by this Board.

19 The response obviously goes on and addresses
20 other factors such as the fact that LILCO has raised these
21 same issues in its own testimony and its attachments. But
22 I do think that our response points out why we feel the
23 testimony that has been stricken falls within the scope
24 of admitted contentions. And frankly, I guess rather than
25 go through the same arguments with the Board and take

1 hearing time, I would just ask the Board to reconsider
2 based upon the arguments made in our original response
3 to LILCO's motion to strike.

4 The arguments are there.

5 JUDGE LAURENSEN: Let me just go on to the
6 next point then and ask whether there is some protective
7 type order or limiting order that the Board could enter
8 concerning various specific training materials that are
9 marked either as attachments to the exhibits or some
10 other designation that would, in fact, not admit them for
11 the contents of what was in them but for the fact that they
12 exist.

13 In other words, to recap the essence of what
14 our order was last Friday, we said that we don't want to
15 litigate in this hearing the specific complaints about
16 any particular video tape, any training module, or whatever.
17 That is just too much into the details of an emergency
18 plan, and that is not what we are here to do. We will,
19 of course, hear complaints about the overall training
20 program and the adequacy and so forth in connection with the
21 contentions that have been admitted.

22 Now, it is true that LILCO is proposing to offer
23 in evidence some very specific training evidence, video
24 tapes and so forth. And that is what I am raising now as
25 to whether some type of order could be entered restricting the

1 use of those so that we don't then, by admitting them,
2 have to litigate whether a particular tape is any good or not.

3 MR. MILLER: Judge Laurenson, maybe this will
4 help. I am afraid there is a misapprehension about the
5 county's intent with respect to both the LILCO testimony
6 and the attachments that have been offered by LILCO.

7 It has never been the county's intent, it is
8 not now the county's intent to go through these attachments
9 page by page. It is not the county's intent to focus on
10 the specifics of LILCO's attachments. And that is why
11 I am not now complaining that LILCO's material is irrelevant.
12 I think it is relevant to the training issues. I think
13 our testimony is also relevant, however.

14 It is the county's intent to, in some cases,
15 look at the LILCO attachments with the LILCO witnesses
16 and try and use, for example, any random workbook, try
17 to make a point about the general training material that
18 is encompassed in LILCO workbooks.

19 We haven't the intent, however, to go through
20 20 different workbooks. We might want to go to a workbook
21 to make a point, a point about the overall training materials
22 that have been relied upon by LILCO.

23 And I think that the Board would acknowledge
24 that that is certainly with the proper realm of cross-

25

1 examination by the county.

2 So I hope there is not a misapprehension by the
3 Board that the county would intend to go through these
4 various volumes of paper, page by page, because that is
5 not the intent.

6 My argument really does come back to my
7 argument of fairness. If you strike the county testimony
8 but leave in the LILCO testimony, not the attachments
9 here but the testimony, there are a variety of examples
10 I can cite as to how that is unfair.

11 For example, with testing. I think roughly a
12 two- or three-page segment of the county's testimony
13 which addresses the fact that, one, there is no testing
14 or appropriate evaluation in the LILCO training program
15 and, two, the consequences of that to an adequate training
16 program -- that was stricken by the Board.

17 On the other hand, LILCO in its own testimony
18 on probably eight to ten pages at various places state
19 that the LILCO program has testing and that testing is
20 adequate to serve a purpose. It just doesn't seem fair to
21 have taken any reference to testing out of the county's
22 testimony but to have left it in LILCO's testimony.

23 JUDGE LAURENSEN: I don't recall testing
24 as such. I think it was graded exercises and so forth
25 that we were talking about, weren't we, on the motions to

1 strike?

2 MR. MILLER: I think that --

3 MS. MOHAGHAN: I believe that is right,

4 Judge Laurenson, but perhaps Mr. Miller has a specific
5 reference.

6 MR. MILLER: Page 52 of the county's testimony,
7 I believe, if my memory is -- page 52 begins at the bottom
8 talking about -- it makes a premise. "Even if the review
9 excercises in the workbooks were used as tests, they
10 would be ineffective because many of these exercises do
11 not even reflect the learning objectives listed at the
12 beginning of the workbooks."

13 That material goes on for another page and
14 basically goes to our issue that self-testing, as LILCO
15 talks about in its testimony in an open-book fashion,
16 as LILCO admits in its testimony, does serve the purpose
17 of evaluating LERO trainees.

18 That is an issue which I think needs to be
19 addressed during this trial.

20 MS. MONAGHAN: Judge Laurenson, I object to
21 Mr. Miller's characterization of that testimony as going to
22 the self-testing aspect. It seems to me that what this
23 portion of the testimony goes to and the reason that LILCO
24 moved to have it stricken was that it reraised an issue
25 which had been raised by another county contention, and that

1 was whether the objectives listed at the front of the
2 workbook in fact were tested on by the tests in the back of
3 the workbook.

4 And I think that that was the reason that the
5 Board ruled on this portion of the testimony and granted
6 the motion to strike.

7 I still don't think that Mr. Miller has pointed
8 to a portion in the LILCO testimony where we specifically
9 talk about graded testing.

10 MR. MILLER: Judge Laurenson, I am not sure
11 I used the term "graded testing." I think testing can
12 perhaps mean different things to different people, and that
13 is perhaps one of the points of dispute between the
14 county and LILCO. But I think that is a point of dispute
15 which the county is entitled to address in its testimony
16 and entitled to cross-examine the LILCO witnesses upon.

17 JUDGE LAURENSEN: You called this testing, but
18 in fact, as I understand it, the testimony in questions
19 deals with your claim that the review exercises in the LERO
20 workbooks are inadequate.

21 That may be stretching the point to call that
22 testing, but I don't consider that to necessarily be
23 within testing. I thought you were talking about giving
24 trainees grades for various parts of the program. And
25 that is another section that we did strike out, that is true.

1 Again, because it did not involve a specific admitted
2 contention.

3 MR. MILLER: Judge Laurenson, I think if I am given
4 time, LILCO in its own testimony talks about these review
5 exercises and they use the term "testing." What they
6 mean by that term I will find out during my cross-examination.
7 But on the other hand, what the county means by its
8 term of "testing" and why the county believes that is
9 important, that should be subject to cross-examination by
10 LILCO. But it can only be so if it is in our testimony.

END 10

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1 I propose the solution, which is the easiest
2 solution for everyone, would be to put back in the County's
3 testimony on the nine passages that were struck, that I
4 will be glad to read again for the Board, and therefore
5 we haven't the dispute which now seems to be brewing be-
6 tween the parties. If LILCO's proposal is to simply with-
7 draw the attachments, but not the testimony, in the
8 County's view the prejudice is still there and it doesn't
9 resolve a thing in terms of the problems that would face
10 the County, and the lack of fairness in this approach.

11 JUDGE LAURENSEN: Up to this point, I don't --
12 I only speak for myself at this point, but I don't see any
13 point that you can cite in the testimony where this event
14 has occurred, where part of whatever we have striken from
15 your testimony is, in fact, in the LILCO testimony that is
16 going to be offered in evidence.

17 I think until you can give us examples of that,
18 you are talking in the abstract here.

19 MR. MILLER: One example that comes to mind,
20 and this I guess could be resolved if LILCO is going to
21 withdraw workbooks, I know one of the passages that was
22 striken by the Board -- and I think it might be Page 69 --
23 refers to Module 5, specifically talks about Module 5.
24 Module 5, as you know, is not only attached to the LILCO
25 testimony but it's specifically talked about in the LILCO

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1 testimony. So there is an example, perhaps made moot by
2 LILCO's offer if they indeed go through with it, of where
3 there is something in the County testimony addressed in
4 exactly the same manner by LILCO in its testimony and yet
5 we lose ours and they keep theirs in.

6 MS. MONAGHAN: Judge Laurenson, first of all, I
7 can't find the reference on Page 69 that Mr. Miller is
8 referring to where his testimony has been stricken that
9 refers to Module Number 5.

10 MR. MILLER: Yes, you are right. Why don't you
11 look on Page 74, continuing over to 75.

12 MS. MONAGHAN: And I would also like for Mr.
13 Miller to point to the portion of the LILCO testimony which
14 discusses the workbook section on Module 5 in detail, if
15 that's his point to be made.

16 It seems to me, Judge Laurenson, that if the
17 County wishes to reopen, or ask the Board to reconsider,
18 the motions to strike that they should have been prepared
19 to point to the portions of the LILCO testimony that they
20 claim are at issue here and show that the Board has not
21 acted fairly in striking portions of the testimony which
22 we believe were not relevant portions of the County's
23 testimony.

24 I think that the time was now to argue it, that
25 Mr. Miller has failed to prove his point regarding that.

#11-3-SueT 1

2 LILCO will still make the offer to enter the
3 attachments for a limited purpose only, and we do that in
4 order to try to mitigate some of this dispute regarding
5 portions of the testimony. We certainly agree with the
6 Board that the contents of the video tapes and the work-
7 books should not be litigated in this proceeding.

8 JUDGE LAURENSEN: Let me back up for a second.
9 The first example I used about testing, given enough time
10 I can find these things. At the bottom of Page 16, con-
11 tinuing on 17 of the LILCO testimony, it states: The
12 workbooks are designed to provide a means for the LERO
13 trainees to engage in self-testing. When a trainee works
14 through a LERO workbook and the attached review exercises,
15 he verifies that he has remembered and understood the infor-
16 mation contained in the video tapes.

17 That's the exact point that the County addressed
18 in its testimony that was stricken by the Board on Friday.
19 It goes to the issue of the review exercises and whether or
20 not that provides adequate means of testing of LERO trainees.

21 MS. MONAGHAN: The portion of the LILCO testimony
22 to which Mr. Miller refers does not concern adequacy of
23 testing. It merely describes what that portion of the work-
24 book is used for.

25 MR. MILLER: Well, it must describe adequacy of
testing when it talks about that they use these review

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1 exercises to verify the trainees have remembered and under-
2 stood the information. If it doesn't say anything about
3 adequacy, then what is it doing in the testimony.

4 MS. MONAGHAN: I believe that portion of the
5 LILCO testimony is descriptive of how the training program
6 itself works. And I don't believe that that's the same
7 issue that is raised on the passage that was stricken from
8 Pages 52 to 53 of the County's testimony, if that's what
9 Mr. Miller was making a cross-reference to. Pages 52 to 53
10 of the County's testimony, I maintain, still deal with
11 whether or not the objectives that are listed at the front
12 of the workbook are, in fact, tested upon in the self-test
13 or review sections in the workbook.

14 MR. MILLER: Judge Laurenson, without prolonging
15 the point, if the Board would like I can go through these
16 nine examples, the nine passages that were stricken on
17 Friday that I think should be put back in the County's
18 testimony and give the cites to LILCO testimony where I
19 think that LILCO's own testimony and/or LILCO attachments
20 address the same issues.

21 JUDGE LAURENSON: I think you had better do that,
22 because we really can't rule on that without specific
23 references and without an opportunity for everybody to look
24 at that.

25 Furthermore, we are apparently not going to get

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1 to your testimony until either late this week or when we
2 reconvene some other time. So, it's not a matter of
3 urgency today that has to be ruled upon unless you want
4 some limitations on the admission of the LILCO evidence
5 concerning training.

6 MR. MILLER: Well, I would be glad if LILCO
7 would withdraw its testimony and its attachments. Other
8 than that, I fail to see what kind of limitations can offer
9 relief to the County which really is meaningful, because
10 of the problems I stated before. Even if the attachments
11 are taken out, the testimony still addresses those issues,
12 and we will subsequently then want to ask questions about
13 the testimony which brings us kind of back to the materials
14 that back up the testimony, meaning the attachments.

15 In some way, it seems this is much ado about
16 nothing, and again the concern is an attempt by the County
17 to explore in detail these attachments. That's not the
18 County's intent. I just have to let it go at that. I
19 can make that representation.

20 JUDGE LAURENSEN: All I'm saying is that at this
21 point, you haven't produced any information to indicate to
22 us that we should change our decision of Friday, and if
23 you want to do that I think you have to get it in as soon
24 as you can. But it should be a detailed reference to what
25 you are saying so that we can have the page numbers at hand

#11-6-SueT

1 and make the comparison to determine if the County is
2 correct on this.

3 MR. MILLER: Let me try to do that now, Judge
4 Laurenson. I think I can do it pretty quickly.

5 The reference on Page 40, Lines 5 through 8, and
6 Lines 15 through 16 --

7 JUDGE LAURENSEN: Tell us which testimony you
8 are referring to now, because we are going to be comparing
9 the LILCO testimony to the County's testimony.

10 MR. MILLER: I am referring to the pages of
11 the County testimony that were stricken by the Board on
12 Friday. And the first passage which we would like re-
13 consideration of -- there was another passage or two struck,
14 but this is the first one we would like reconsideration of,
15 would be on Page 40, Lines 5 through 8 and Lines 15 through
16 16.

17 Judge Laurenson, I would submit that if you look
18 at the LILCO training testimony on Pages 88 to 89, LILCO's
19 own witnesses discuss the same issues that have been stricken
20 by the Board for this particular passage. Would you like for
21 me to just go through and give you this kind of match up,
22 or do you want to take the time to look at each one indivi-
23 dually?

24 JUDGE LAURENSEN: Well, we are going to have to
25 read each one individually. But I don't know that this has

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to be ruled on today.

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MR. MILLER: Well, I am content to let the Board -- you are right, the County's testimony might not get addressed this week and, therefore, there would seem not to be the urgency to handle it this week, except if the issue is whether or not LILCO's testimony would also be withdrawn or stricken by the Board to correspond to what was done to the County's testimony, then I guess we have to resolve it this week.

JUDGE LAURENSEN: Well, you haven't filed any motion to strike their testimony up until now. I mean, you filed other motions to strike their testimony which we ruled on on Friday, so are you proposing to file some sort of motion to strike out of order?

What is your -- I mean, in the alternative, supposing your motion is denied to let your testimony in, do you want all of these pages now that you are going to cite stricken from the LILCO testimony?

MR. MILLER: No, sir. Let me just emphasize again, the answer is no. It's not the County's position that these passages are not relevant to the training issues.

My position is that if -- my position is that the Board should reconsider its rulings on the motions to strike by LILCO, because the passages that were stricken are relevant. They are probative, and they fall within stated

#11-8-SueT 1

2 contentions. And, in addition to all of that, they are
3 also issues addressed by LILCO's own testimony. And it,
4 therefore, becomes an argument of equity and fairness.

5 It's not my primary -- my primary relief is not
6 to have passages stricken from LILCO's testimony. What I
7 would like is for the County's testimony to be readmitted.

8 JUDGE LAURENSEN: I think you ought to take that
9 up, then, as soon as you can, of course. But I think you
10 are certainly going to have to present a better argument
11 than you have given us today, because there is nothing new
12 in here from the oral argument that you just presented that
13 would make us change our mind, is what I'm telling you.

14 Now, if there are other arguments that you want
15 to raise, then I think it has to be done in a different
16 fashion. But, as of now, you haven't told us anything we
17 didn't know last Friday.

18 MR. MILLER: What I am prepared to do, Judge
19 Laurenson, is to give some additional pages where LILCO's
20 testimony addresses the same issues if that would help the
21 Board.

22 But I think, in essence, you are correct. The
23 arguments are the same as what we presented in our response
24 to LILCO's motion to strike. Many, many of the pages in
25 the LILCO testimony and the attachments are specifically
set forth in the County's response to LILCO's motion to

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1 strike. And I would like not to take the hearing time
2 resolving this, but it's an argument of the fairness and
3 the equity of what the Board has done. And I think we
4 should try to resolve it if we can do so.

5 JUDGE LAURENSEN: Okay, let's go through with it.
6 Let's get the pages on the record here, and we can take a
7 look at them.

8 MR. MILLER: The second passage of the County's
9 testimony, Page 43, Line 15 to Page 45, Line 16, and Page
10 45, Line 17 to Page 46, Line 17. In the County's opinion,
11 LILCO has corresponding testimony on Pages 16 and 19, 59
12 to 60, 80 to 82, 85, 93 to 94, 95 to 96.

13 The third passage of the County's testimony,
14 Page 51, Line 13 to Page 52, Line 17. LILCO's testimony
15 would correspond to that passage at Pages 16 to 17, 21, 25
16 and 108 to 110.

17 The fourth passage, Page 52, Line 18 through
18 Page 53. LILCO's corresponding testimony would be set
19 forth on Pages 16 to 17.

20 The fifth passage, Page 54, Lines 9 through 10,
21 Lines 10 through 11, Lines 11 through 13 and Lines 15
22 through 16. LILCO's corresponding testimony -- this is
23 the one --

24 JUDGE LAURENSEN: That's the summary.

25 MR. MILLER: Yes, sir. And the one thing I would

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2 like to point out in that summary is that the Board actually
3 did strike three lines that LILCO didn't even move to strike
4 in rewriting that paragraph.

5 The sixth passage, Page 60, Line 5 to Page 62,
6 Line 19. LILCO's corresponding testimony would be set
7 forth at Pages 40 to 42, 93 to 97, 100 to 101, 103 to 105 --

8 JUDGE LAURENSEN: You are going too fast.
9 What's after 97?

10 MR. MILLER: 93 to 97, 100 to 101, 103 to 105,
11 106 to 107. That would be it.

12 The seventh passage, Page 63, Lines 1 through 9,
13 the same page cites that I just gave for the sixth passage
14 would correspond also for this passage of material in the
15 County's testimony.

16 The eighth passage in the County's testimony is
17 Page 69, Line 21 through the first word on Page 70. The
18 County's view is that the LILCO testimony at Pages 16 to
19 17, 21, 25 and 108 to 110 corresponds to the points made
20 in the County's testimony.

21 And, lastly the County's testimony at Page 74,
22 Line 22 to Page 75, Line 6. In the County's view, the LILCO
23 testimony -- this is the one, Judge Laurenson, I think I
24 used as the example with Module 5. That is specifically
25 attached as Attachment 14 to the LILCO testimony.

JUDGE LAURENSEN: You have no specific LILCO

#11-11-SueT 1

2 testimony as such to cite there? It's just the module
3 itself, I mean the attachment.

4 MR. MILLER: If there are instances in the LILCO
5 testimony, I don't have them right now.

6 JUDGE LAURENSEN: I think the only thing we can
7 say at this point is that we will have to take a look at
8 these pages and if necessary consider further oral argument
9 on this tomorrow or some time later this week.

10 But at this point, I don't think there is any
11 way, without stopping the hearing for quite a while, that
12 we can rule on them. And I don't see that there is any real
13 urgency to have it ruled on now anyway.

14 MR. MILLER: No, sir. The only concern I would
15 have is that if the County would pursue cross-examination
16 on the LILCO testimony and then the Board would decide
17 that the equitable thing would be to strike LILCO testimony
18 corresponding to what was stricken from the County's testimony,
19 there might be a hesitancy to do that if time has been spent
20 in the hearing room cross examining witnesses.

21 MS. MONAGHAN: Judge Laurenson, my understanding
22 is that there is no outstanding motion to strike right now.

23 JUDGE LAURENSEN: That's correct.

24 MR. MILLER: Well, we all understand that.

25 MS. MONAGHAN: But then there could be nothing
striken from the LILCO testimony if there is no motion to

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strike.

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MR. MILLER: It's one of the alternatives I've presented to the Board to consider.

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JUDGE LAURENSEN: Okay. We will go forward, as we have indicated, and we will examine this later on.

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Ms. Monaghan.

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MS. MONAGHAN: I would like to call the LILCO training testimony panel at this time.

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MR. MILLER: Judge Laurenson, while the panel is going up, there is another procedural issue which I would suggest maybe we could just hold until the end of the day. I think it could be done pretty quickly. It is regarding these exhibits and so forth.

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It stems from the testimony presented last week that --

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JUDGE LAURENSEN: If it's not related to the training testimony, let's hold off until some other time.

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Let's go off the record for a moment.

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(An off-the-record discussion ensues.)

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JUDGE LAURENSEN: All right. Let's go back on the record.

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MR. MILLER: Judge Laurenson, is LILCO withdrawing their offer to withdraw the attachments?

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MS. MONAGHAN: Yes, we are withdrawing the offer to withdraw the attachments. It seems we were willing to

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1 withdraw the attachments if that resolved what was the
2 apparent concern of Suffolk County on Friday afternoon,
3 that the mere presence of the attachments brought into
4 question the Board's rulings on the motions to strike.

5 Since the Courty's dispute apparently goes beyond
6 that, we see no benefit to be gained by offering to withdraw
7 the attachments. We do agree with the Board, however, that
8 the attachments, although they are admitted, that we are
9 not putting them into evidence for cross-examination on
10 the contents of those attachments.

11 We view these attachments as illustrative of
12 the types of materials that are being used in the LILCO
13 training program, and we submit them on that basis.

14 MR. MILLER: Judge Laurenson, I'm not going to
15 even respond to that.

16 If they are being submitted into the record by
17 LILCO, they are subject to cross-examination.

18 MS. MONAGHAN: Well, certainly, Judge Laurenson,
19 LILCO would feel free to object on the use of the attachments
20 by Suffolk County based on my prior statements as to the use
21 of their contents and our feeling about the Waterford deci-
22 sion.

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#11-14-SueT 1

Whereupon,

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HARRY N. BABB,

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GARY J. BERGER,

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MATTHEW C. CORDARO,

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CHARLES A. DAVERIO,

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DENNIS S. MILETI,

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WILLIAM F. RENZ,

8

-and-

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RONALD A. VARLEY

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were called as witnesses by and on behalf of the Long

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Island Lighting Company and, having been previously duly

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sworn, except for Mr. Berger and Mr. Babb, were examined and

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testified as follows:

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DIRECT EXAMINATION

INDEXXXXX 15

BY MS. MONAGHAN:

16

Q Starting with Dr. Cordaro, would each of the

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panel members introduce themselves to the Court and to the

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court reporter so they can get your names down, please?

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A (Witness Cordaro) Matthew C. Cordaro.

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(Witness Renz) William F. Renz.

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(Witness Daverio) Charles A. Daverio.

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(Witness Varley) Ronald A. Varley.

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(Witness Berger) Gary J. Berger.

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(Witness Mileti) Dennis S. Mileti.

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(Witness Babb) Harry N. Babb.

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COURT REPORTER: Your last name?

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WITNESS BABB: Babb, B-a-b-b.

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MS. MONAGHAN: LILCO filed on the other parties and on the Board an errata sheet concerning some amendments to the testimony, and we would submit that errata sheet at this time to be bound in with the transcript at that point rather than take the time to read the corrections on the record.

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We do, however, have one additional correction.

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JUDGE LAURENSEN: Before you do that, according to my notes, all of these panel members except Mr. Berger and Mr. Babb have previously been sworn. And the rest of you are still under oath.

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If Mr. Berger and Mr. Babb will stand and raise your right hand and be sworn.

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(The witnesses, Mr. Berger and Mr. Babb, are sworn by Judge Laurenson.)

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BY MS. MONAGHAN: (Continuing)

Q Are there any corrections to the testimony in addition to the errata sheet that is already submitted?

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A (Witness Varley) Yes. If the members would turn to Page 70 in the testimony, on Line 9, we would like to change the reference that currently states Section 5.2.3.7 to read 5.2.5.7.

end #11 25

Joe flws

1 Q With that additional correction, and the amendments
2 filed with an errata sheet, is the testimony true and correct
3 to the best of your knowledge and belief?

4 A (Witness Cordaro) Yes.

5 A (Witness Renz) Yes.

6 A (Witness Daverio) Yes.

7 A (Witness Varley) Yes.

8 A (Witness Berger) Yes.

9 A (Witness Mileti) Yes.

10 A (Witness Babb) Yes.

11 Q Was this testimony prepared under your supervision
12 or direction?

13 A (Witness Cordaro) Yes.

14 A (Witness Renz) Yes.

15 A (Witness Daverio) Yes.

16 A (Witness Varley) Yes.

17 A (Witness Berger) Yes.

18 A (Witness Babb) Yes.

19 A (Witness Mileti) Yes.

20 MS. MONAGHAN: Judge Laurenson, I move that
21 this testimony be bound into the record at this time.

22 JUDGE LAURENSEN: You are offering all five
23 volumes, is that right?

24 MS. MONAGHAN: That is right.

25 JUDGE LAURENSEN: Is there any objection that

1 we haven't previously ruled on.

2 MR. MILLER: Well, Judge Laurenson, in light
3 of the arguments made and the Board's indication they
4 would like to consider the arguments, yes, we have an
5 objection and I would suggest that the Board hold the
6 attachments and the LILCO testimony in abeyance pending
7 the Board's decision regarding our Motion for Reconsideration.

8 JUDGE LAURENSON: Your Motion for Reconsideration
9 doesn't go to any of this evidence. You are not asking that
10 any of it be stricken. I specifically raised that question
11 with you, and you said you didn't want any of it stricken.

12 MR. MILLER: I thought, Judge Laurenson, at the
13 end I made clear that in response to Ms. Monaghan's statement
14 to that effect, that in the alternative that would be the
15 County's position, that if the County's testimony is not put
16 back into the record, then yes, we would be moving to strike
17 the corresponding passages in the LILCO testimony, and the
18 LILCO attachments.

19 JUDGE LAURENSON: I didn't recall you making
20 that statement. All I can say is, that at this point then
21 we will -- let me ask if there are any other objections we
22 haven't heard to this testimony.

23 MR. BORDENICK: No objection.

24 JUDGE LAURENSON: The State?

25 MR. ZAHNLEUTER: I think the State would have

1 no other objection besides what the County has already
2 commented upon.

3 JUDGE LAURENSEN: At the present time there is
4 no unresolved Motion to Strike any of this testimony, so
5 the testimony will be received in evidence. If a -- the
6 County's Motion for Reconsideration is granted, or some
7 other orders are entered, which would affect any of this
8 testimony we will then have to make appropriate orders.

9 But my recollection of what the arguments were
10 by Mr. Miller, there were relatively few pages involved
11 in his citations as to allegedly conflicting testimony.

12 So in any event, the testimony will be received
13 in evidence. The Volume 1 will be bound in the transcript
14 following this page.

15 The other four volumes in the five-part set
16 will be separately bound under today's date. Is that
17 clear to everyone, including the Court Reporter?

18 MS. MONAGHAN: Judge Laurenson, we would also
19 suggest that the errata sheet filed by LILCO be bound in
20 after the testimony.

21 JUDGE LAURENSEN: Oh, yes, that is correct.
22 LILCO's amendments to direct testimony on training contentions
23 will be bound in the transcript.

24 (Above referenced documents follow)

25 XXX

LILCO, April 2, 1984

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

TESTIMONY OF HARRY N. BABB, GARY J. BERGER,
MATTHEW C. CORDARO, CHARLES A. DAVERIO,
DENNIS S. MILETI, WILLIAM F. RENZ, AND
RONALD A. VARLEY ON BEHALF OF LONG ISLAND
LIGHTING COMPANY ON PHASE II EMERGENCY PLANNING
CONTENTIONS 39.A, B, 40, 41, 44.D, E, and F,
98, 99.C and G, 100.B, D, and G

Volume 1 of 5

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

TESTIMONY OF HARRY N. BABB, GARY J. BERGER,
MATTHEW C. CORDARO, CHARLES A. DAVERIO,
DENNIS S. MILETI, WILLIAM F. RENZ, AND
RONALD A. VARLEY ON BEHALF OF LONG ISLAND
LIGHTING COMPANY ON PHASE II EMERGENCY PLANNING
CONTENTIONS 39.A, B, 40, 41, 44.D, E, and F,
98, 99.C and G, 100.B, D, and G

PURPOSE

Contentions 39.A and B, 40, 41, 44.D, E, and F, 98, 99.C and G, 100.B, D, and G raise numerous allegations concerning the effectiveness and adequacy of the LERO training program. The purpose of this testimony is to demonstrate that the LERO training program is a comprehensive, well designed training program that provides its participants both with an understanding of their role in the emergency response effort and an understanding of their specific job responsibilities. The testimony shows that LILCO has taken attrition into account in the staffing of the LERO organization and that normal attrition will not adversely affect the ability of LERO to respond (Contention 39.A and B). It also shows that trained LERO workers can be trained to perform emergency jobs that differ from their

normal job activities and can be expected to perform the emergency jobs during the stress of an emergency (Contention 40).

The testimony demonstrates that LERO workers receive adequate training and practice in their specific job duties to enable them to perform in those duties, including the use of communication equipment (Contentions 44 and 99.G). The testimony further shows that the LILCO Transition Plan provides for the communications links with federal emergency response organizations and States within the ingestion pathway to be tested quarterly (Contention 44). It also shows that the LERO drill and exercise program allows free play for decisionmaking, for LERO workers to practice their LERO jobs during drills and that the LILCO Transition Plan provides for the LERO drill and exercise program to be evaluated and critiqued (Contentions 44.E and F, 100.B, D, and G). The testimony further demonstrates that LILCO has provided for the training of non-LILCO organizations which may be called upon either to assist in an emergency or to take action during an incident (Contention 98).

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TESTIMONY

1. Q. Please state your name and business address.

A. [Babb] My name is Harry N. Babb. My business address is Department of Criminal Justice, State University at Farmingdale, New York, 11735.

[Berger] My name is Gary J. Berger. My business address is American Savings and Loan Association, 11 South San Joaquin Street, Suite 606, Stockton, California, 95202.

[Daverio] My name is Charles A. Daverio. My business address is Long Island Lighting Company, 100 East Old Country Road, Hicksville, New York, 11801.

[Cordaro] My name is Matthew C. Cordaro. My business address is Long Island Lighting Company, 175 East Old Country Road, Hicksville, New York, 11801.

[Mileti] My name is Dennis S. Mileti. My business address is Department of Sociology, Colorado State University, Fort Collins, Colorado, 80523.

[Varley] My name is Ronald Arthur Varley. My business address is Impell Corporation, 225 Broad Hollow Road, Melville, New York, 11747.

2. Q. Please summarize your professional qualifications and your role in emergency planning for the Shoreham Nuclear Power Station.

A. [Babb] I am Chairperson of the Criminal Justice Department at SUNY, Farmingdale. My professional qualifications are being offered into evidence as part of a document entitled "Professional Qualifications of LILCO Witnesses." My major research and instructional areas include: Police Administration; Police-Community Relations; Police Patrol -- Traffic Functions; Juvenile Delinquency; Organized Crime; Criminology; and Corrections. Prior to my appointment to the Criminal Justice Department at Farmingdale, I was a police officer for some 18 years, first with the Town of Babylon and then with the Suffolk County Police Department. During my tenure with the Suffolk County Police Department, I was

Captain and Executive Officer of Suffolk County's Highway Patrol; Captain, Executive Officer Police Academy of the County of Suffolk; and ^{Captain assigned to Office of} Chief of Uniform Patrol Command, as well as other positions in the Suffolk County Police Department.

[Berger] I am Director of Corporate Training for American Savings and Loan Association which is a subsidiary of American Financial Corporation of America. Previously, I was Manager of Human Resource Development for the Impell Corporation. My professional qualifications are being offered into evidence as part of the document entitled "Professional Qualifications of LILCO Witnesses". My role in the emergency planning training program for Shoreham was that of videotape producer and director for the instructional media portion of the program. In this capacity, I was responsible for identifying the visual images that would best represent the information in the scripts, directing the actions of the videotape production crew on location, and editing the original footage into the final presentation master tapes.

[Cordaro] I am Vice President, Engineering for LILCO. My professional qualifications are being offered into evidence as part of a document entitled "Professional

Qualifications of LILCO Witnesses". I am sitting on this panel to provide the LILCO management perspective on emergency planning and to answer any questions pertinent to management. My role in emergency planning for Shoreham is to ensure that the needs and requirements of emergency planning are met and that the technical direction and content of emergency planning are being conveyed to corporate management.

[Daverio] I am Assistant Manager of the Local Emergency Response Implementing Organization for LILCO. My professional qualifications are being offered into evidence as part of a document entitled "Professional Qualifications of LILCO Witnesses". My familiarity with the issues raised in these contentions stems from my work in developing and implementing LILCO Offsite Emergency Response Plan for Shoreham (referred to as the LILCO Transition Plan).

[Mileti] I am an Associate Professor of Sociology and Director of the Hazards Assessment Laboratory at Colorado State University and a consultant to LILCO. My professional qualifications are being offered into evidence as part of a document entitled "Professional Qualifications of LILCO Witnesses". My role in emergency planning for the Shoreham Nuclear Power Station

is, in general, to provide planners with information about human behavior in emergencies and with information about the social sciences aspects of emergency planning that can help provide for a good emergency response. I have been involved in many aspects of emergency planning for Shoreham, including the training of emergency workers. With respect to the training of LERO workers, I have reviewed and commented on some 19 scripts for training videotapes as well as accompanying workbooks and have prepared a videotape to answer some questions for LERO evacuation bus drivers. I have also offered comments to planners throughout the planning process to help put the role of training in perspective from a social science/emergency response viewpoint.

[Varley] I am Manager of the Training Division of the Local Emergency Response Implementing Organization (LERIO) of the Long Island Lighting Company. My professional qualifications are being offered into evidence as part of a document entitled "Professional Qualifications of LILCO Witnesses." As Manager of the Training Division, I have been generally responsible for supervising and coordinating the development of the LERO training program as well as for its administration.

3. Q. What has been your prior experience with training programs for emergency response organizations?

A. [Varley] From September 1982 to February 1983, I worked as the Senior Project Coordinator at Beaver Valley Power Station operated by Duquesne Power & Light. I was responsible for directing the activities of onsite and offsite personnel. As part of my responsibilities, I provided recommendations and guidance regarding the tasks and staffing necessary to upgrade the Beaver Valley station's emergency response capabilities. I also coordinated and provided guidance to the station's scenario development committee in preparation for their annual graded exercise. Finally, I developed and conducted the training program relating to the role and responsibility of the Emergency Coordinator/ Emergency Director for Duquesne Light corporate and site management personnel.

As Project Coordinator at Louisiana Power and Light, from September 1981 to September 1982, I was responsible for directing and guiding the development of the utility's emergency preparedness program. I developed emergency plan implementing procedures for the emergency plan and designed, wrote and conducted a training program for LP&L corporate and site management personnel. Additionally, I wrote and conducted a training course on emergency preparedness for station operations

personnel, developed drill scenarios, and acted as Drill Coordinator for drills.

As the Emergency Preparedness Site Coordinator at the Department of Energy's Fast Flux Test Facility (FFTF), from August 1979 to September 1981, I was responsible for the development and implementation of training programs for executive management and on-shift supervisory personnel in the area of emergency preparedness. My responsibilities also included the development and implementation of a Site and In-Plant Drill Program. As the Emergency Response Team Training Coordinator, I was responsible for establishing a program to train and maintain the proficiency of a team of operators on each of five shifts to respond to emergencies at the FFTF.

[Berger] The LERO Training Program has been my first opportunity to participate in the design of an emergency planning instructional activity. However, I have been an instructional program designer and adult educator for over fifteen years. While on the human resource staffs of four major corporations, I have been responsible for the design and presentation of managerial, technical skills, and supervisory skills training programs. In this capacity, I have designed lesson plans, textual support materials, case studies and

exercises, media materials, and tests to determine mastery of skills. As an instructional program designer, I have developed programs for corporate employees with diverse educational and job backgrounds. As a classroom instructor, I have conducted programs for over five thousand employees. My experience has provided me with insight into the needs of adults in a learning situation and the type of instructional design strategy required to effectively teach new skills.

[Mileti] Prior to LERO, I have never been formally involved in a training program for an emergency response organization. However, I am a teacher by profession and I have taught classes at all levels in a university setting for some ten years. I teach a senior level class at Colorado State University on hazards and emergencies, and I have taught a graduate level course at the University of Southern California on emergencies to students, largely from emergency response organizations who were pursuing additional education while working full-time.

For a decade or so, I have been involved in providing knowledge about human behavior to people who work in emergency response organizations or organizations with some emergency response role. For example, I have made presentations to groups in both the public

and private sectors, for example, the Southern California Earthquake Preparedness Project; the Governor's Emergency Task Force on Earthquakes; the Southern California Emergency Services Association; the Emergency Preparedness Commission for the County and Cities of Los Angeles; the Governor of California; the Mayor of Los Angeles; emergency response officials from emergency organizations in northern and southern California communities as well as in emergency organizations in Tokyo, Paris, Kawasaki, and Geneva; IBM; Atlantic-Richfield Corporation; the California Office of Emergency Services; the American and International Red Cross and other groups.

I also have provided utility and offsite emergency planners with information to be used in training people for emergency response at several other nuclear power plants in the nation; and I have reviewed several of their plans. I have also had the occasion to become familiar with some of the training activities for offsite response personnel at several other nuclear power plants.

[Daverio] Since 1980, I have been responsible for emergency preparedness for the Shoreham Nuclear Power Plant. During this time, I have been responsible for the development of the Onsite Emergency Preparedness

Training Program for approximately 500 employees. In addition, I have been an instructor in a number of the class sessions. The Onsite Emergency Preparedness Training Program includes a drill and exercise program that has been ongoing since 1982. With respect to radiological emergency response training at other nuclear power plants, I have been an exercise observer at Indian Point, Nine Mile Point, and Ginna.

4. Q. Please summarize the issues raised by Contention 39.

A. [Cordaro, Daverio, Varley] Contention 39 alleges that the LILCO Transition Plan does not effectively deal with the problem of attrition from LERO of either LILCO personnel or personnel from non-LILCO organizations and, therefore, that the LILCO Transition Plan does not comply with NRC regulations or NRC/FEMA Guidelines.

Contention 39, with surrounding text reads as follows:

Preamble to Contentions 35-44. 10 CFR Section 50.47(b)(15) requires that radiological emergency response training be provided to those who may be called on to assist in an emergency. In addition, 10 CFR Section 50.47(b)(14) requires that periodic exercises be conducted to evaluate major portions of emergency response capabilities, periodic drills be conducted to develop and maintain key skills, and that deficiencies identified as a result of exercises or drills be corrected. See also, 10 CFR Part 50, Appendix E, Section IV.F.

Under the LILCO Plan, in order to provide training "to those who may be called on to assist in an emergency," LILCO must ensure that both its own personnel and the

personnel of non-LILCO emergency response organizations are adequately trained, and that they participate in drills and exercises that meet the requirements of the regulations. See NUREG 0654, Sections II.N. and O. Intervenors allege in Contentions 35-44 that LILCO's Plan fails to demonstrate that adequate training can and will be provided to emergency response personnel.

Contention 39. LILCO's Plan fails to deal effectively with the problem of attrition. As a result, LILCO cannot demonstrate that adequate numbers of trained support organization personnel will be available to respond to an emergency at Shoreham and thus cannot demonstrate compliance with 10 CFR Sections 50.47(a)(1) and 50.47(b)(15), 10 CFR Part 50, Appendix E, Section IV.F and NUREG 0654, Section II.0.1.

A. With respect to LILCO personnel, the Plan relies on quarterly general training to qualify new LERO members for positions opened through attrition. (Plan at 5.1-7, 5.1-8; OPIP 5.1.1 at 6-7). Such training for new members is insufficient, because it does not assure that trained LILCO employees will be available to fill positions in LERO as the need arises. As a result, there is no assurance that LERO will be fully staffed with trained personnel on a continuous basis. To ensure compliance with 10 CFR, Section 50.47(b)(15), 10 CFR Part 50, Appendix E, Section IV.F and NUREG-0654, Section II.0.1, LILCO must demonstrate that all personnel are trained in their designated emergency response organization positions. Thus, LILCO should make satisfactory completion of its emergency response training program a prerequisite to the hiring of personnel who will be assigned emergency response duties.

B. With respect to all non-LILCO personnel, except Coast Guard and ambulance personnel, the Plan ignores the issue of attrition. (OPIP 5.1.1, Section 5.1.3.2 and Attachment 1). And, with respect to the Coast Guard and ambulance companies, LILCO will attempt to counteract the affects of

attrition only if notified by one of these groups that understaffing exists. (Plan at 5.1-6; OPIP 5.1.1, Section 5.1.3.3). However, the Coast Guard and ambulance companies are under no obligation to maintain necessary staffing for LERO, to notify LILCO of "understaffing," or otherwise to assure LILCO's compliance with 10 CFR § 50.47(b)(15), 10 CFR Part 50, Appendix E, Section IV.F and NUREG 0654, Section II.0.1. Therefore, there is no assurance that LILCO will know whether personnel in any non-LILCO emergency response support organizations who might have been trained at one time by LILCO remain with their respective organizations, and thus remain available to respond to an emergency at Shoreham. Thus, there is no assurance that any non-LILCO support organizations will be sufficiently staffed with adequately trained emergency response personnel.

5. Q. As a background for later discussions, could you briefly describe the structure of the Local Emergency Response Organization (LERO) training program?
- A. [Berger, Cordaro, Daverio, Miletì, Varley] The purpose of the LERO training program is to provide each LERO member with both a broad overview of the LERO organization and its response capabilities, and an in-depth knowledge of each individual's job responsibilities and how each job is integrated with other LERO jobs necessary to implement an emergency response. Additionally, the drill and exercise portion of the LERO training program provides each LERO member with the opportunity to gain practical in-the-field experience in carrying out his LERO job responsibilities under simulated emergency conditions.

Sound educational design strategies suggest that students acquire knowledge and skills through a series of training events. The basic approach to training program design is presentation of the information to the learner, application of the information by the learner, and critique of the application by the instructor. The LERO training program follows this accepted educational design strategy. First, information on tasks and skills is presented to LERO trainees in a classroom setting through videotape presentations, workbook activities, and in some instances demonstrations by the instructor. The second phase of the instructional process is application of the skills. This phase is accomplished during the drill and exercise portion of the training program. LERO members apply the classroom knowledge in a simulated emergency condition. The third phase of the instructional process also occurs during the drills and exercises, that is a critique. During drills that occur early in the training process, observers critique LERO workers while they performed their LERO tasks to correct inappropriate actions and reinforce appropriate performance. In later phases of the drill and exercise program, the controllers and observers record their comments and provide LERO workers with a critique shortly after the drill or exercise.

This standard design strategy has been the foundation of the educational process for LERO and is the basis for most emergency planning instruction throughout the United States. A brief explanation of some of the details of the LERO training program demonstrates how the educational design strategy has been implemented in the LERO program.

The classroom training program has been divided into two segments. The first segment contains information about which all LERO workers should have knowledge. All LERO personnel must attend the following training sessions, which constitute this first segment of the classroom training.

- General Emergency Planning Overview
- Site Specific Overview
- Radiation Protection
- LERO Notification and Mobilization
- Communications
- Personnel Dosimetry
- Personnel Radiological Monitoring

(See Attachments 11-15, 17, 18, and 20).

The second segment of the training program provides job-specific training and is attended by select groups within LERO. Subjects covered in this portion include:

- Local EOC Activation
- Public Notification Methods and Procedures
- Relocation Center Operations
- Mobile Radio Operation
- Traffic Control Operations
- Special Evacuation Coordination Operations
- Transportation Coordination
- Security Operations
- Personnel Monitoring and Decontamination

- Contaminated/Injured Personnel
- Command and Control
- Public Information
- Administration
- Sociological Aspects of an Emergency

(Attachments 16, 19, and 20).

The LERO training matrix, Figure 5.1.1 of the LILCO Transition Plan, illustrates which LERO members participate in each of the training sessions.

Upon completion of the classroom training, LERO personnel (with the exception of supporting organizations such as the U.S. Coast Guard, American Red Cross, etc.) are required to participate in the drill and exercise program to put into practice the knowledge gained in the classroom. In order to focus on developing specific aspects of a LERO response, drills were developed to exercise certain portions of the overall LERO organization. Examples include:

- EOC/ENC Activation Drill
- Traffic Guidance Drill
- Transportation Coordination Drill
- Personnel Monitoring and Decontamination Drill

(Attachments 1-4).

As LERO personnel became more familiar with the operation of their respective facilities, drills and exercises focused on integrating these groups into a common response with all facilities being exercised simultaneously. Examples include:

- EOC/ENC/All Staging Areas/EWDF Drill
- SNPS/LERO Interface Drill

(Attachments 5-6).

Finally, as is the case for any operating nuclear power plant in the nation, training would also result from the yearly exercises that would be conducted for review by the Federal Emergency Management Agency. These exercises not only test the plan but also provide emergency workers with some useful field experience.

6. Q. How are the classroom sessions of the LERO training program structured?

A. [Berger, Cordaro, Daverio, Miletì, Varley] The classroom sessions consist of a combination of videotape presentations and related workbook materials which are administered to the participants by a classroom instructor. Each videotape focuses on a particular aspect of the LERO program and provides the viewers with a detailed explanation of that subject. To reinforce the information provided to the student in the videotape, a workbook is provided to the student that covers the same subject matter as the videotape. The student is required to read the material in the workbook and complete a set of review questions during the classroom session. The workbooks are designed to provide a means for the LERO trainees to engage in self-testing. When a trainee works through a LERO workbook

and the attached review exercises he verifies that he has remembered and understood the information contained in the videotapes. Throughout the classroom session, an instructor is available to answer questions that may arise while the students view the videotape and work through the workbooks. Upon the class's completion of the review questions in the workbook, the instructor conducts a question-by-question review of the material presented. If the subject matter being presented involves the use of equipment, a hands-on demonstration related to the use of that equipment frequently is provided by the instructor. Examples of this include demonstrations of the proper use of the direct reading dosimeters and dosimeter chargers, and the operation of radiation detection instruments. In addition, the training of traffic guides includes an "in field/hands on" demonstration on the installation and use of mobile radio equipment.

7. Q. Why did LILCO choose to use videotapes?

A. [Berger, Cordaro, Daverio, Miletì, Varley] The main purpose of any training program is to meet the instructional objectives of the program. The use of videotape provided a number of instructional advantages over more conventional training methods such as live classroom instructors. Some of the many advantages are: the

visual impact of videotape instruction, the type of individuals being trained are accustomed to receiving information from the television medium, and the need for consistency in the content of the program.

The nature of the subject matter being presented in the LERO training program lends itself to videotape as an instructional tool. Participants have the opportunity not only to hear about each task but, in many instances, to see the task being performed at the actual emergency location. For example, the operation of a relocation center radiological monitoring and decontamination station is more easily understood by viewing a videotape of the function and operation than it would be through an instructor's oral description.

An additional reason videotapes were chosen as an instructional tool is that adults are accustomed to receiving information from the television medium every day. In contrast, many adults have been away from a classroom instructional format for a long time. One of the fundamental concepts of instructional design is that the characteristics of the learner must be considered when selecting a medium. The material presented in the LERO training program are simulations of LERO tasks converted into sound, motion, and color to provide the trainee with a graphic representation of an

event. This educational design strategy will stimulate interest and hold the attention of the trainee in a manner much more conducive to the learning process than the traditional teacher/student standup classroom presentation technique.

Finally, videotape provides a consistency of instruction that cannot be matched by live, standup classroom instructors. The fact that over 1500 individuals were to receive training on the same subjects made it virtually impossible to assure consistency of instruction and accomplishment of training objectives without presenting the instruction via a videotape format. Through the use of videotape, LILCO was able to ensure that each trainee received the same high quality instruction, in a consistent and completely verifiable presentation. Videotape is also extremely portable as a presentation medium. Due to the number of people to be trained and the logistics involved in training personnel at work locations spread throughout Long Island, videotaped presentations provided a highly desirable format for conducting such an extensive training program.

An added benefit derived from videotaped presentations is that the same material will be used for training new personnel being added to LERO and for

conducting the annual retraining program. This continuing level of consistency could not be assured with strictly live instruction techniques.

While the videotapes and workbooks provide the primary instructional method for the LERO Training Program, a live instructor is present at each session to answer questions and assist in the completion of the associated written workbook material.

8. Q. Have educators found the videotape medium to be an effective instructional method?
- A. [Berger, Milet] Video presentations have long been used for instructional purposes in schools and universities. Individual lectures and even entire courses are sometimes offered over televisions in universities. The benefits of video presentations, however, do not eliminate one flaw that comes with the use of video instructional methods. That flaw is that students are often unable to ask a question about the lecture that they have heard and get an answer. Coupling the video presentation with a live instructor to answer questions about the presentation, as was done in the LERO training program, solves this problem.

9. Q. How do LERO workers gain practical experience for their LERO jobs?

A. [Berger, Cordaro, Daverio, Varley] In addition to classroom training, drills and exercises are conducted to permit trainees to practice the knowledge and skills gained in the classroom. "Drills" are supervised instruction periods aimed at testing, developing, and maintaining skills for a particular LERO position. Drills are conducted by drill controllers who observe the participants' actions, assure the actions are carried out correctly, and correct the participants' mistakes on the spot.

Drills are conducted for various parts of the LERO organization to focus on practicing certain specific aspects of the overall emergency response effort. Examples of typical drills include: ECC/ENC Activation Drill; Traffic Guidance Drill; Transportation Coordination Drill; and Personnel Monitoring and Decontamination Drills. (Attachments 1-4).

"Exercises" are conducted to test the entire LERO organization and its ability to function as an integrated unit to carry out its responsibilities. Unlike drills, during an exercise the controllers and observers are not allowed to coach or correct the drill participants in their actions unless a participant's mistake is endangering someone or a major break in the

exercise would occur. An exercise is the culmination of the training program. It is used as the final evaluation tool to determine the effectiveness of the training program and to demonstrate the ability of the emergency organization to carry out its responsibilities. An annual graded exercise is conducted at which representatives from the Federal Emergency Management Agency and the Nuclear Regulatory Commission will provide a graded evaluation of LERO's performance. Additionally, state and local authorities will be invited to observe the exercise. These governmental authorities attend the annual exercise to observe and verify that the capabilities of the LERO organization meet the needs of protecting the public in the event of an accident at SNPS.

10. Q. How would you evaluate the LERO training program?

A. [Daverio, Varley] The LERO classroom training program and the drill and exercise program that is being provided to the members of LERO is a very complete, well designed program. The program provides to its participants a well-rounded understanding of the tasks necessary to carry out an emergency response for an accident at SNPS. The training program, which addresses radiological exposure and radiological protection topics in a very forthright and detailed manner, provides the

participants with the appropriate information to allow them to develop an understanding of the physiological consequences that may result from exposure to ionizing radiation. The training program provides the participants with an explanation of the background behind emergency planning and response concepts, giving them an understanding of how their role in the organization supports the overall response effort. The job specific training sessions leave the participants with an understanding of their job responsibilities as a member of LERO and also provide them with knowledge about how their job is integrated with the other LERO jobs necessary to implement an emergency response.

In total, the LERO classroom training program, combined with the drill and exercise program, has established a high standard for quality and detail in the training of offsite emergency response personnel.

[Mileti] The LERO training program is the most detailed and comprehensive training program for emergency workers for offsite response at a nuclear power plant that I have encountered. All-in-all, I have reviewed about a dozen emergency response training programs over the last decade; of these, four were for nuclear power plants.

[Berger] The LERO training program is the most extensive and comprehensive skills program I have encountered. The LERO program integrates all the educational design strategies required for an effective instructional process. The three phase process of classroom activities, drills, and exercises provides each LERO member with the opportunity to participate in the learning strategy in a meaningful and productive manner.

The educational design strategy allows the acquisition of cognitive, motor, and attitude skills. These are special and important skills since they govern the individual's own learning, remembering, and thinking behavior. This educational strategy developed by J.S. Bruner, R.F. Magger, and B.F. Skinner, acknowledged instructional experts, suggest that skills are acquired by studying, application, and problem solving.

First, the LERO training program provides the trainee with the opportunity to gain cognitive skills through the presentation of knowledge during the videotape portion of the program, completion of workbook activities, and discussion of any questions with the instructor.

Motor skills, are acquired in the LERO training program through application of cognitive knowledge during drills and exercises. Motor skills are acquired through such activities as operation of radios, reading dosimeters, etc.

Attitude skills, often called the effective domain of learning, occur as the LERO trainees continue to practice acquired skills to the point of proficiency. As the drills and exercises continue and move towards the final graded exercise the confidence of the participants will increase in their ability to perform the skills without coaching.

In the final analysis, the proof of the effectiveness of any training rests in the participants' ability to perform the expected behavior, often called the terminal performance behavior, when called upon to do so. The ability of LERO workers to perform their jobs will be evaluated and critiqued during the drill and exercise program. The final test will be the FEMA-graded exercise in which LERO workers will be called upon to perform the job skills they have learned in a simulated emergency environment and be evaluated by FEMA and the NRC-impartial federal agencies.

11. Q. Who will receive LERO training?

A. [Berger, Cordaro, Daverio, Varley] LILCO employees with LERO jobs have participated in the LERO training program. Additionally, personnel from the U.S. Coast Guard, ambulance companies, and the helicopter company have or will receive classroom training. ~~If desired by either organization, LILCO will provide training and information sessions to acquaint personnel in these organizations with their role in a LERO response.~~ In addition, the American Red Cross and DOE-RAP Teams will be invited to participate in LERO drills that are conducted during the course of each year. Finally, the Red Cross and the DOE-RAP Teams will participate in the annual FEMA-graded exercise. Training and information sessions also will be offered to those organizations which must take action during an emergency at the Shoreham Nuclear Power Station, including hospitals, schools, and nursing homes located inside the 10-mile EPZ.

CONTENTION 39.A

12. Q. Contention 39.A alleges that LILCO should make satisfactory completion of its emergency response training program a prerequisite to the hiring of personnel who will be assigned emergency response duties. Do you agree with that statement?
- A. [Cordaro, Daverio] No. LILCO personnel are not assigned to LERO. A person hired to replace a LILCO employee who had been a member of LERO might not become a member of LERO himself and, therefore, would not need LERO training. LILCO employees are not required to participate in LERO.
13. Q. How will LILCO ensure for the long term, that there are an adequate number of trained personnel to respond to an emergency?
- A. [Cordaro, Daverio] LILCO will ensure that an adequate number of trained personnel are available to respond to an emergency by providing annual retraining for previously trained personnel, by training new personnel for the LERO organization to fill those positions affected by attrition, and by maintaining enough reserve trained personnel in the LERO organization that attrition will not be a problem.
14. Q. What has been the rate of attrition at LILCO?
- A. [Cordaro, Daverio] The attrition rate of LILCO employees is low. For both the year 1982 and the year 1983, the attrition rate for LILCO as a whole was less than 5% including retirements.

15. Q. Recently, LILCO laid off a number of its employees. Should this be considered attrition?

A. [Cordaro, Daverio] No. The recent layoffs at LILCO are an exceptional situation; they are not representative of normal attrition.

16. Q. Is LILCO committed to restaffing LERO to replace those LERO workers who were laid off?

A. [Cordaro, Daverio] Yes. LILCO has already identified LILCO personnel to replace those LERO workers who were laid off. LERO training for these new LERO workers will begin sometime in April 1984.

17. Q. How is the LERO organization structured to account for attrition?

A. [Cordaro, Daverio, Varley] For those LERO jobs that must be staffed throughout the duration of an emergency, the LERO organization is staffed to support a twenty-four hour a day, two-shift operation with enough reserve personnel to staff a complete third shift. LERO jobs such as route alert drivers, bus drivers, road crews, evacuation route spotters, relocation center monitoring and decontamination personnel, dosimetry record keepers, and traffic guides that deal with the one-time evacuation of the EPZ are staffed for one-shift plus reserve personnel. This second category of LERO jobs is staffed at approximately 150%.

18. Q. Is LILCO committed to the goal of maintaining the staffing level of LERO jobs at approximately 150%?

A. [Cordaro, Daverio] Yes.

19. Q. Why did LILCO not staff certain positions for twenty-four hour operation?

A. [Cordaro, Daverio] The positions of bus driver, road crew, evacuation route spotter, route alert driver, traffic guide, relocation center monitoring and decontamination personnel, and dosimetry record keeper are only needed to facilitate the evacuation of people from the EPZ. It is estimated that evacuation of the EPZ will be completed within less than six hours under normal weather conditions. Therefore, it is only necessary to have enough bus drivers, etc. to staff one shift and reserves to counteract absences. To ensure that there would be an adequate number of trained LERO personnel to cover vacancies due to vacation, sickness or attrition, LILCO will have trained personnel to cover approximately 150% percent of the evacuation-related positions. Administrative support at the staging areas are the only exception with staffing at 140%.

20. Q. What does LILCO do when a LERO worker leaves the LERO organization? Is that LERO worker replaced by another LILCO employee who has been trained to perform the LERO job left vacant by the departing LILCO employee?
- A. [Cordaro, Daverio] All LILCO employees who are members of the LERO organization are listed on a computer printout by employee number, employee name, LERO job title, LILCO job title and work location, and home address. Any personnel changes can be monitored by the computer program and can be automatically brought to the attention of the personnel department. The LERO organization has the capability of knowing at any given point in time who is absent due to vacation, prolonged illness, disability or retirement. Once a long term vacancy has been identified, an evaluation is conducted by the Emergency Planning Coordinator to determine the urgency with which the position must be filled. As noted above, for a number of LERO jobs LILCO is committed to maintain staffing at 150% thereby ensuring that a substantial number of reserve personnel will be available to fill vacancies without receiving training. For other LERO job positions, for example the Director of Local Response or Health Services Coordinator, there currently exist only sufficient trained personnel to staff two shifts plus a reserve shift. In the case of such positions, arrangements and prompt training of replacement personnel will be made by the Emergency Planning Coordinator.

Selection of LILCO personnel to fill LERO job vacancies is accomplished with reference to the LERO job descriptions listed in OPIP 2.1.1. As was the case in the initial selection of LERO workers, a LILCO employee selected to become a LERO worker may decline to participate in the LERO program.

All LERO personnel will be retrained on an annual basis. As is outlined in Section 5 of the Plan and OPIP 5.1.1, new LERO personnel will receive initial training as part of the ongoing training process.

21. Q. How will the annual retraining of personnel who have already received LERO training be accomplished?

A. [Cordaro, Daverio, Varley] As outlined in the LILCO Transition Plan, retraining will be accomplished through an ongoing training program. LERO personnel who have already received training will be scheduled to attend classroom training sessions on the basic LERO program and on their specific job function. Classroom training will be scheduled quarterly and each LERO worker will be expected to complete an entire review program annually. New LERO workers will be scheduled to attend various quarterly classroom training sessions at which they will view the LERO training videotapes and complete the associated workbook sections. New LERO workers will also participate in the drill and

exercise program where they will have the opportunity to practice their LERO job skills. New LERO workers will attend the quarterly training sessions and drills with LERO workers who are receiving refresher training.

22. Q. Will you explain how the ongoing training program is structured?

A. [Cordaro, Daverio, Varley] The refresher training program is designed to be conducted on an annual basis with all LERO personnel completing the required sessions, as outlined on the Training Matrix, Figure 5.1.1 in the Plan, within each year.

Each quarter classroom training sessions are held which cover the "generic" LERO training subjects.

These subjects are:

Module 1	General Overview
Module 2	Site Specific Overview
Module 3	Radiation Protection
Module 5	LERO Notification
Module 8	Communications
Module 9	Personnel Dosimetry
Module 10	Personnel Monitoring

Every LERO member is scheduled to attend each of these sessions once in one of the four quarters for a given year.

The more specialized "job specific" LERO training sessions are held once every other quarter as follows:

First Quarter

Module 4	EOC Activation
Module 6	Public Notification
Module 7	Relocation Centers
Module 8A	Mobile Radio Operations

Module 10A Personnel Monitoring
Module 16 Security

Second Quarter

Module 12 Traffic Control
Module 13 Special Evacuation Coordination
Module 14 Transportation Coordination
Module 17 Command and Control
Module 18 Public Information
Module 19 Administration

Third Quarter

Repeat First Quarter Material

Fourth Quarter

Repeat Second Quarter Material

Every LERO member is scheduled to attend those sessions required for the individual's job position once a year.

By so structuring the training program LERO members are afforded flexibility to attend the sessions which best fit into their normal work and vacation schedules. The training program was structured with flexible sessions to assure good attendance. The quarters concept also spreads the material over the course of the year so that an individual is involved in LERO activities throughout the year, thereby keeping the individual alert to his LERO job responsibilities on a continuing basis. The structure of the training program also provides the capability for a new LERO worker to complete his initial classroom training within six months.

Just as has been the case with the initial training of LERO workers, attendance at the retraining session will be monitored to ensure that each LERO worker has completed the annual retraining program. Attendance records for all LERO training sessions are maintained by LILCO. Those individuals who may miss a scheduled session are identified, rescheduled, and their attendance is tracked until they have completed that session.

CONTENTION 39.B

23. Q. How will LILCO deal with training members of non-LILCO emergency response support groups?

A. [Cordaro, Daverio, Varley] The training provided to non-LILCO emergency response support groups is discussed more fully in our testimony on Contention 98. Briefly, There are two groups of non-LILCO support organizations who will be providing personnel to assist in LERO. First, the American Red Cross (ARC) and the Department of Energy, RAP Team (DOE-RAP) will provide trained personnel to assist LERO. If desired by either organization, LILCO will provide training and information sessions to acquaint these organizations with their role in a LERO response.

The second group of non-LILCO support organization, consisting of the Coast Guard, ambulance companies, and

helicopter companies, receive training from LILCO. LILCO will provide annual training to the Coast Guard, ambulance company personnel, and helicopter company personnel. This training consists of videotape presentations, workbook materials, instructor question-and-answer sessions, and hands-on demonstrations for topics as indicated by Figure 5.1.1., the LERO Training Matrix in Chapter 5 of the Plan, and as described in the lesson plans attached to this testimony as Attachments 7-9.

24. Q. How will LILCO ensure that enough trained personnel from the Coast Guard and the ambulance and helicopter companies are available?

A. [Cardaro, Daverio, Varley] While LILCO does not anticipate that the rate of attrition at either the Coast Guard, ambulance companies or helicopter companies will pose a problem in maintaining an adequate number of trained personnel through an annual retraining program, LILCO has a policy that these organizations inform LILCO if the need for training additional personnel arises before the scheduled annual retraining. (See, for example, Attachment 10).

If LILCO is informed by any of these organizations that insufficient trained personnel are available to assist LERO, LILCO will provide training to the replacement personnel on an ad hoc basis.

CONTENTION 40

25. Q. Please summarize the issues raised in Contention 40.

A. [Berger, Cordaro, Daverio, Mileti, Varley] In Contention 40, intervenors allege that LERO workers will not be able to perform their LERO jobs because training cannot compensate for lack of job-related experience and that the stress and fatigue of an emergency will exacerbate the problems caused by LERO workers' lack of job-related experience. Contention 40 reads as follows:

Contention 40. There is no assurance that LILCO personnel can adequately perform the emergency functions and duties they are assigned under the LILCO Plan. The Plan calls upon LILCO personnel to perform emergency functions which, in most instances, are unrelated to their LILCO job functions. For example, LILCO meter readers are to serve as Traffic Guides (OPIP 2.1.1, at 28), Customer Relations personnel are to serve as Evacuation Route Spotters (i.d., at 32), LILCO maintenance foreman and mechanics are to serve as Radiological Monitoring Personnel (i.d., at 17), and various designers, planners and analysts are to serve as Security Personnel (i.d., at 47-54). There is no assurance that LILCO training will compensate for this lack of job-related experience, especially when the tasks to be performed may be accompanied by high levels of stress and fatigue involving life-threatening situations. Training alone cannot prepare people for the actual stress and trauma that accompany emergency conditions. Experience is also essential.^{11/} Moreover, training that is not regularly applied or used will be ineffective. Thus, even if their initial training were adequate, LILCO personnel will forget what was learned during that

training. Following their training, LILCO personnel will be expected to perform their regular job functions, which have no relation to their emergency roles, rather than applying or using their emergency training. This will minimize any benefits gained through the emergency training, especially since that training is only repeated on an annual basis, and there are no incentives for LILCO personnel to learn or to retain the emergency training provided to them. Accordingly, LILCO cannot demonstrate compliance with 10 CFR Section 50.47(b)(15), or that the emergency functions and duties assigned to LILCO personnel under the Plan can or will be implemented, as required by 10 CFR Section 50.47(a)(1).

11/ For example, doctors and police officers are required to intern as residents and to serve as rookie police officers before their training is completed.

The issues raised in Contention 40 overlap with the issue raised in Contention 99.G, particularly with respect to the job-specific training received by LERO workers. The details of the type of job-specific training LERO workers receive will be discussed in Contention 99.G and will not be duplicated here.

26. Q. The contention alleges, in effect, that on-the-job training and experience are necessary for radiological response workers and that periodic training is automatically inadequate because emergency workers, to be adequately prepared, must continually and frequently exercise their emergency duties. What is your response to this?

[Mileti] What is pertinent in addressing this question is not the obvious difference between experience and training, but what is necessary to assure that personnel can adequately perform emergency functions and duties assigned to them under the proposed LILCO Transition Plan.

There is no doubt that, in the best of all possible worlds, emergency workers are best selected to do emergency jobs that match their routine jobs as closely as possible, for example, by selecting police to do police work during an emergency. The reason is straightforward: emergency workers must know their emergency jobs and how to do them, and these goals are more readily achieved if emergency jobs and workers are matched to virtually identical non-emergency jobs and workers. However, this general principle does not mean that others cannot adequately perform emergency work if some other way is devised to provide them with knowledge about their emergency jobs and how to do them. The alleged lack of daily job-related experience of LERO workers for their emergency jobs does not preclude

assurance of an adequate emergency response. It does, however, require that training provide emergency workers with the opportunity to know their emergency jobs and how to do them.

In sum, emergency workers must know their emergency jobs and how to do them. Experience is one way for these objectives to be achieved, especially when supplemented with training for particular emergencies. These objectives, however, can also be achieved with training that is elaborate enough to compensate for deficiencies in "on-the-job experience." This is especially the case if that training is supplemented, as it is in LERO training, with drills and exercises for relevant emergency jobs.

[Berger, Cordaro, Daverio, Varley] There are a number of reasons why LILCO employees will be able to adequately perform the emergency functions and duties that they have been assigned. First, the drills and exercises are structured and conducted to simulate, as closely as possible, an emergency situation, and, therefore, give LILCO personnel the opportunity to practice the tasks required by their LERO job under simulated emergency conditions. Second, the emergency response tasks that are assigned to individual LILCO employees generally are not complex or difficult and do

not require daily practice to ensure proficiency. Third, LILCO's years of experience with its Emergency Restoration Organization have demonstrated the ability of LILCO personnel to perform emergency jobs that are not related to their normal LILCO jobs. Fourth, in certain instances, the LERO organization has made use of the job-related skills of LILCO employees when assigning them to LERO jobs. For example, the majority of LERO bus drivers are underground lines personnel who drive trucks or other large vehicles as part of their daily work.

27. Q. Let's take up the reasons you have just listed serially. First, how do the drills and exercises ensure that LILCO personnel can adequately perform the emergency functions and duties they are assigned under the Plan?
- A. [Berger, Cordaro, Daverio, Varley] As is discussed in the testimony on Contention 99.G, LERO trainees receive job-specific training both in the classroom and in drills and exercises. Drills and exercises are designed to give LILCO personnel experience in performing the emergency jobs to which they have been assigned. In addition to giving LERO workers an opportunity to practice their assigned tasks, the drills and exercises are structured and conducted in such a manner as to simulate actual emergency conditions. For example, during drills and exercises, operations in the local

EOC are carried out in response to information presented to the EOC staff in the same form and manner as it would be in a real emergency via the various emergency communications circuits. The EOC staff must make use of this information, much as they would in an actual emergency, as the basis for developing their projected course of action and protective action recommendations. The EOC staff then are required to carry out the course of action they have developed using, as they would in an actual emergency, the procedures and equipment provided at the EOC. The EOC itself is set up for the drill just as it would be for a real emergency.

At the three staging areas, the staging area staff is also exercised in the same manner as the EOC. Just as in a real emergency, directives to the staging area staff come from the EOC via the emergency communications circuits intended for that purpose. The decisions made at the EOC initiate the actions to be taken at the staging area; the actions taken by personnel at the staging area are in accordance with the plan and procedures. The full complement of field personnel are processed, briefed and dispatched from the staging areas, and carry out their activities in the field but do not carry out tasks that would interfere with normal public activities. In short, the scenarios used in

conducting the drills and exercises provide information which must be evaluated by and then acted on by the drill or exercise participants, in the same manner as in a real emergency.

Another way in which the drills simulate an actual emergency is through the use of "subsituations" within the framework of the main accident scenario. The subsituations provide additional problems and distractions to which the drill participants must respond and for which the drill participants must develop on the spot responses. These situations are the type of situations that may arise in a real emergency. Examples of unanticipated situations would be: the simulated failure of a normally available line of communication, the removal of a key staff member from the organization through a simulated injury, and the injection of requests for additional resources.

Drills and exercises such as these can assess the ability of the emergency response organization to ^{Respond to} some future emergency. The use of drills and exercises is not unique to LERO or nuclear power plant emergency preparedness; drills and exercises have long played a role in emergency preparedness for responding to a range of hazards.

28. Q. You stated before that the emergency response tasks that are assigned to LILCO employees are not the type of tasks that require daily practice to establish proficiency. What did you mean by that statement?

A. [Cordaro, Daverio, Varley] In general, the types of activities that LERO members are ~~must~~^{to} perform to support an emergency response to an accident at SNPS are not overly complicated or difficult to perform.

For example, the mobile radio units used by traffic guides and transfer point coordinators to communicate with the staging areas are simple to use. The radios are operated by simply depressing the button on the hand-held microphone and speaking into the microphone. At the end of the message, the operator releases the push-to-talk; the unit is then ready to receive messages. These mobile radio units are used during drills to allow traffic guides and transfer point coordinators to gain practice in using the radios. Similarly, route alert drivers are to perform the simple task of driving through neighborhoods broadcasting a message over a loudspeaker system. The message will be prerecorded on a cassette tape and the route alert driver will drive through the area covered by a siren marking off on his map of the area the roads that he has covered. During drills and exercises, route alert drivers practice driving all or part of their routes while reading the maps that cover the route area.

Participation in the LERO training program provides familiarization and practice to assure that all LERO personnel can perform their job tasks. Additionally, the Emergency Plan Implementing Procedures provide detailed guidance for each LERO function to be performed; LERO workers are trained to refer to these procedures in carrying out their actions. The combination of the training program and the detailed guidance in the procedures ensures an accurate and consistent, timely response.

29. Q. Why does LILCO believe that its employees can be trained to perform emergency tasks that differ from their normal job activities?

A. [Berger, Cordaro, Daverio, Miletì, Varley] There are three reasons. The first objective that must be achieved in order to assure that LILCO personnel can adequately perform their emergency jobs is that LERO workers know their LERO job and how to do it. The LERO training program achieves this objective through its educational design structure of presentation of information during the classroom sessions, application of the information in the drills and exercises, and critique of the application by the drill and exercise controllers and observers. Second, emergency response work in hazardous situations is not new to the LILCO personnel who are members of LERO. A number of LILCO

personnel are regularly called upon to respond to hazardous situations in their capacity as utility workers. Third, LILCO has trained some of its employees for other sorts of emergencies to do emergency jobs that do not deal with their normal jobs. This training has been successful. Specifically, as part of the Emergency Restoration Organization Program, LILCO employees are trained to be either members of survey teams, which identify damage to power lines by location and type of power line or connector, or two-man crew teams, which repair low voltage power lines. The LILCO employees who are trained for survey teams and two-man teams do not deal directly with power lines in their normal LILCO jobs. Yet, they do identify problems with and repair power lines during a power outage caused by a severe storm. During the last seven years, the Emergency Restoration Organization has been mobilized seven times for training purposes and three times in response to major storms causing widespread emergency conditions. In each case LILCO employees responded quickly and effectively to cope with the emergency situation. In no instance was there a shortage of manpower due to the failure of LILCO personnel to show up for their positions in the organization.

30. Q. The contention mentions high levels of fatigue as reducing the ability of LILCO employees to perform emergency tasks that are not part of their daily work routine. How does LERO propose to avoid excessive fatigue among LERO workers?

A. [Cordaro, Daverio, Varley] LERO has been structured to provide shift relief for all of the LERO positions that it is anticipated will be required to be manned for long periods of time (12 hours or more). There are sufficient numbers of personnel trained to establish a two-shift operations rotation, plus reserves for all positions in the local EOC and select positions at the staging areas and relocation centers. After the initial response to the incident has been addressed (the first 6 to 8 hours of the emergency), a formal shift rotation schedule will be put in place and followed for the duration of the response.

31. Q. The contention mentions that high levels of stress would occur in a radiological emergency and that the stress would incapacitate LERO workers who are not used to performing their emergency tasks. Do you believe LILCO employees will be unable to perform their LERO jobs due to the stress associated with a radiological emergency?

[Mileti] I have no doubt that LILCO employees will be able to perform their LERO jobs despite the stress that would be associated with a radiological emergency. There are many reasons why I have no doubt about this judgment.

First, the concept of stress is multidimensional and has many different meanings. It is actually the consequences of stress -- however stress is defined -- which are at issue in the contention. The contention alleges that stress would lead to "negative" consequences, that is, incapacitating LERO workers. It is, however, more plausible that stress has "positive" impacts during an emergency, for example, focusing the attention of the emergency worker on the emergency situation or overcoming fatigue. That is, that stress may motivate people to rise to the occasion. It may be a form of coping which is beneficial rather than detrimental to an emergency response. Long-lasting stress that continues to exist after the emergency is over is not a phenomenon that is applicable to the soundness of emergency response.

Second, in the extensive history of research into emergency response, I know of no instance in which an emergency response organization has not been able to do its job because workers were "incapacitated" because of high stress levels. This is likely the case because emergencies -- no matter how "stressful" an outside observer may deem them to be for emergency workers -- are not a time when emergency workers become incapacitated. Rather, they are an occasion when trained

emergency workers do the best and most that they can do to do their job. This conclusion is borne out by evidence about the behavior of emergency workers in some of the most extreme catastrophes in human history where stress for emergency workers would have almost assuredly been at its highest. This conclusion also is borne out by evidence about the behavior of emergency workers who work in organizations that do "emergency" work daily, for example, fire and police departments, and for workers in organizations who tend to do emergency work only when an emergency occurs, for example, the Red Cross, most of whose workers have non-emergency normal jobs.

There is also extensive research evidence about how people who do not have normal emergency jobs do emergency work when emergencies occur (almost all emergencies precipitate scores of public volunteers for existing emergency organizations and "emergent groups" of citizens which do emergency work spontaneously and on their own). Although, to the best of my knowledge, none of these studies statistically examined the effect of stress per se on these workers' ability to perform emergency work, their work has always gotten done and has always been followed by accounts of how these people did so much and for so long during the emergency.

This outcome occurs in almost all emergencies; differing "stress" levels (which would undoubtedly have varied across the emergencies studied) do not seem to affect the behavior or ability of these essentially non-emergency workers to do emergency work in an emergency. Most of these workers -- I might also point out -- never had even received emergency training. About a dozen or so studies on the behavior of emergency workers during emergencies who did not have pre-emergency jobs dealing with emergency work are summarized in Chapter IV of my monograph (Human Systems in Extreme Environments: A Sociological Perspective, Boulder, Colorado: Institute of Behavioral Science, 1975), on emergencies and human behavior published with two other sociologists. My book (also written with two other sociologists) entitled Organizational Response to Changing Community Systems, Kent, Ohio: Kent State University Press, 1976, also describes that stress in a social system is actually why non-emergency workers do emergency work, for example in "emergent" groups. Existing evidence suggests to me that stress facilitates doing work in an emergency and does not detract from it.

Third, several research studies have documented the stress phenomenon at the radiological emergency at

Three Mile Island and have demonstrated that the stress did not incapacitate emergency workers. Some illustrations follow.

The Technical Staff Analysis Report on Behavioral Effects to the President's Commission on the Accident at Three Mile Island examined stress in utility workers at TMI before, during and after the accident. They compared these measures to workers at the Peach Bottom nuclear power plant which they used as a control group. Stress (measured by self-reports of extreme upset) was found to go up for utility workers at TMI during the accident. The percentage of utility workers at TMI and at Peach Bottom who reported extreme upset before, during and after the accident appear in the following table. The 28% extreme upset score for TMI workers was obviously higher than the 17% reported for Peach Bottom.

<u>Plant Location</u>	<u>During the 6 Months Before 3/28/79</u>	<u>TMI "Accident Week"</u>	<u>At About 10/31/79 or 6 Months After 3/28/79</u>
TMI	10%	28%	16%
Peach Bottom	11%	17%	13%

A report by Evelyn Bromet, Preliminary Report on the Mental Health of Three Mile Island Residents,

Pittsburgh: Western Psychiatric Institute and Clinic at the University of Pittsburgh, May, 1980, analyzed utility workers at TMI as compared to a control group in Beaver County of utility workers at the Shippingport-Beaver Valley reactors. Bromet used a modified version of a standardized interview schedule (Schedule for Affective Disorders and Schizophrenia) and other symptomatic indicators for stress. The conclusion of the analysis was that the accident did cause depression and/or anxiety in TMI utility workers. "Overall, during this period . . . [November 1978 to January 1980] . . . 19% of the TMI workers and 14% of the Beaver County workers reported at least one episode of anxiety and/or depression. Apart from a small peak in April among TMI workers, both groups had similar rates throughout the year (at page 34)." The peak referred to was during the month of the TMI accident; 8% of TMI workers had depression/anxiety compared to about 3.5% in Beaver County.

Both the Dohrenwend report (the Technical Staff Report to the President's Commission) and the Bromet report illustrate what they and others have concluded: stress did exist in emergency workers (and others) during the radiological emergency at Three Mile Island. However, no evidence was found that stress

incapacitated the work of emergency organizations to do their jobs. Although many important lessons were learned from the TMI experience, the Pennsylvania Commission on Three Mile Island, Report of the Governor's Commission on Three Mile Island, Harrisburg: February 26, 1980; the Rogovin Report (Nuclear Regulatory Commission Special Inquiry Group, Three Mile Island: A Report to the Commissioners and to the Public, Washington, D.C. U.S. Nuclear Regulatory Commission, Volume II), and others do not report on incapacitated emergency workers.

Fourth, the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association in 1980 ("DSM-III") states that diminished responsiveness to the external world is not a characteristic response during an emergency. Diminished responsiveness, if it occurs, usually begins soon after the traumatic event (DSM-III at pages 236-38). Incapacitation, when it does occur, is a result of, rather than an occurrence during, an emergency. My reading of DSM-III and the other works referenced in this testimony lead me to conclude that people would not become "incapacitated" in any form during a radiological emergency at Shoreham.

In sum, stress did exist in utility emergency workers at Three Mile Island, yet these workers did not become incapacitated as the contention alleges would occur with utility emergency workers in a radiological emergency at Shoreham. Stress would almost certainly exist in LERO emergency workers at Shoreham in the event of an emergency. It would also likely be higher in some people than in others. In my judgment, it would not incapacitate emergency LERO workers when their services are needed. Given what is known and based on the research I have cited in answer to this question, if stress has an effect on LERO workers when their services are needed during an emergency at Shoreham, it probably would enhance their ability to meet the demands of the situation and not to detract from it.

32. Q. How do you propose to simulate stress in drills and exercises?

A. [Berger, Cordaro, Daverio, Varley] It is our understanding that the regulations do not require that drill and exercise scenarios provide training on how to deal with stress. Stress is not specifically simulated in LERO drills or exercises; however, the drills and exercises themselves may be stressful situations. During the course of conducting drills and exercises stress

may be present by virtue of the peer pressure applied to the individuals in the form of drill observers and drill controllers monitoring the individual's actions him subjecting him to review and critique. Everyone wants to do his job correctly and appear competent and capable in the eyes of the evaluator.

Additionally, the drill and exercise scenarios are structured and run on a strict timetable which forces actions to occur in a manner that requires the participants to feel the pressures of time and its impact on the overall ability of the organization to carry out its objectives.

Finally, the participants in a drill or exercise are unaware of the situations or surprise subsituations that the scenario will present. The inability to predict the future events in the scenario creates uncertainty and doubt about the developing accident. When this is combined with the peer pressure provided by observers it tends to create stressful conditions for the participants.

33. Q. How often is training repeated?

A. [Cordaro, Daverio, Varley] Each individual is involved in participating in LERO activities throughout the course of the year. The ongoing training program, described in detail earlier in this testimony, was

intentionally designed to ensure that LERO personnel remain active and aware of their LERO responsibilities on a continuing basis.

34. Q. Will an annual refresher training program be sufficient to maintain the training level necessary for LERO workers to perform their jobs?

A. [Berger, Cordaro, ^{DAVERIO} Milet^Ai, Varley] The annual training program has been designed to be conducted over the course of the year, requiring LERO personnel to attend sessions during one of the quarters in which the session is given. Attendance at these quarterly sessions will help ensure that each individual maintains a sufficient level of awareness and preparation for his specific job responsibilities. In addition to conducting the classroom training during the year, drills and exercises are scheduled on a quarterly basis as well, providing additional exposure for LERO personnel to LERO activities on a regular and frequent basis.

The combination of attendance at classroom training sessions and participation in the drills and exercises provides adequate exposure to the responsibilities and job functions required of LERO members allowing each member to maintain his proficiency.

35. Q. Dr. Milet^Ai, what about the concept included in Contention 40 that training can not prepare people for the stress and trauma associated with a radiological emergency and that actual experience is essential?

A. [Mileti] The notion that the "stress and trauma" of a radiological emergency at Shoreham could be dealt with only after experience (I presume with other "stressful and traumatic" events as part of one's routine job) which LERO workers do not have is unfounded.

Put simply, stress and trauma can occur in people. They do not, in community-wide emergencies, emerge to interfere with the ability of people to do things, especially if those people know (through training, or some other mechanism) that they have a job to do that needs to get done and what they need to do in order to accomplish it.

Furthermore, the literature on psychological and system stress (much of which I have already referenced) indicates that stress assists rather than detracts from the ability of people to cope with the situation. Trauma, on rare occasions, can result in a post-traumatic stress disorder which could reduce a person's responsiveness to the outside world. This occurs, however, after a traumatic event and not during the period of warning of it (for example, when an evacuation might be ongoing) or during the event. I have already discussed the relationship of stress and trauma on people's ability to function in an answer to a prior question when I discussed the "DSM-III." The material

presented there was generic in that it applies to people in general, including people who are LERO workers.

CONTENTION 41

36. Q. What does Contention 41 state?

A. [Berger, Cordaro, Daverio, Renz, Varley] Contention 41 reads as follows:

Contention 41. All necessary emergency personnel must be trained adequately in the proper use of the communications equipment relied upon in the LILCO Plan. Such training must include instruction in the proper use of radio frequencies, the range of coverage available for each frequency, and proper radio discipline. The LILCO Plan, however, only requires that there be "communication drills" and that exercises shall test, inter alia, emergency response capabilities, "including communications capabilities." (Plan, at 5.2-2 and 5.2-3). The Plan gives no indication of the scope or content of the proposed communication drills and exercises. Thus, there is no assurance that LILCO's Plan satisfies the requirements of 10 CFR, Section 50.47(b)(15) or that emergency response personnel will be prepared and adequately trained to initiate and receive communications, as required by 10 CFR, Section 50.47(b)(6) and NUREG-0654, Section II.F.

37. Q. Contention 41 involves training in the use of communications equipment. In the LILCO Transition Plan, who are the personnel required to use "communications equipment"? Do the personnel assigned to use the communications equipment have prior experience in the use of similar communications equipment?

A. [Cordaro, Daverio, Renz, Varley] The LILCO Transition Plan contemplates that two basic types of

communications equipment will be used by LERO personnel -- telephones and radios. As citizens of the twentieth century, LERO personnel are familiar with the use of telephones. LERO members who will be required to use two-way radios for communications include: staging area support staff, traffic guides, road crews, evacuation route spotters, transfer point coordinators, and certain communicators and coordinators assigned to the EOC. In many cases these individuals use two-way radios on a frequent basis in conducting their normal job activities for LILCO. For example, transfer point coordinators are all assigned to LILCO's Underground Lines Department. This department uses radio equipment in conducting its normal day-to-day business. In addition, LERO personnel who are required to use mobile radios in a LERO response receive classroom training on the use of the mobile radios and actually install and use these radios as part of the drill and exercise program. (See Attachments 16 and 30).

38. Q. What communications equipment is to be used by LERO workers? Is the communications equipment to be used by LERO workers complex or is it similar to CB radios used by the general public?
- A. [Cordaro, Daverio, Renz, Varley] The communication equipment used by LERO personnel to communicate with other LERO personnel or with non-LILCO organizations

consists of mobile radios, desk-top radios, Radiological Emergency Communication System (RECS), dedicated telephone lines, and commercial telephone lines.

The telephone equipment used by LERO personnel is either a simple touch-tone desk commercial telephone or a dedicated telephone line. All LERO personnel are familiar with the operation of a simple commercial telephone from personal use. The operation of a dedicated line merely requires the user to pick up the telephone receiver; the action of picking up the receiver will cause the other telephone or the dedicated line to ring. The RECS Line, which is comprised of a series of dedicated line circuits, is operated by lifting the receiver and depressing a manual ring down button. The depression of the manual ring down button causes all of the telephones in the RECS system to ring.

The mobile radio units used by LERO workers such as traffic guides, evacuation route spotters, and transfer point coordinators is a Motorola "MOCOM 70" unit. LERO workers who will be operating the mobile radio units view the videotape for Training Module 8A entitled "Mobile Radio Operations" which gives instruction on the operation of the Motorola "MOCOM 70" unit. (See Attachments 16 and 30). As the videotape clearly

shows, the operation of the mobile radio is simple. First, the unit is placed in the vehicle and the antenna is attached to the top of the vehicle. A grounding cable is grounded to the metal of the vehicle. Then, the unit is plugged into the cigarette lighter for a power source. The operator then turns the "on-off" switch to the "on" position. The "squelch" and volume controls are then adjusted to the desired listening level and the radio is ready to be used. Transmission of messages on the mobile radio is accomplished by pressing the button on the hand-held microphone and speaking into the microphone. At the end of the message, the operator releases the push-to-talk button; the unit is then ready to receive messages. When the transmission is complete, the operator places the microphone in the clip that holds it.

Finally, some LERO workers, such as communicators at the EOC, use desk top radios. The desk top radio is operated by turning the "on-off" switch to the "on" position and adjusting the volume to the desired level. The unit is then ready for use. To transmit a message on a desk top unit the push-to-talk button on the microphone is depressed. Release of the button on the microphone places the unit in a receive mode.

39. Q. How are the LERO workers trained in the use of the communications equipment?

A. [Cordaro, Daverio, Renz, Varley] Training Module 8 of the LERO training program addresses the communications systems employed by LERO. Module 8, which is part of the classroom training program for all LERO personnel, features a thirty minute videotape presentation, a workbook section, and a question and answer session with an instructor. (Attachments 15 and 20). Additionally, during drills and exercises, LERO personnel whose LERO jobs require them to use communications equipment practice using that communications equipment.

Some emergency workers have experience in the use of communications equipment from their regular LILCO jobs. In the case of traffic guides and other LERO workers who may not use communications equipment in their daily work, special communications training is provided, through a videotape training session on the use of mobile radios. (See Attachments 16 and 30). As discussed above, the mobile radio used by LERO personnel is simple to operate. The objectives of the course include understanding the installation and operation of mobile radio as well as the basic protocol used in operating a mobile radio. After viewing the videotape on the use of mobile radios, the traffic guides participate in a drill during which they install their mobile

radios and check their operations at the staging area and in the field. Drill controllers are available to assist and instruct the traffic guides in installing the mobile radios if such assistance is necessary. Attached are the script of the videotape portion of the course, and an excerpt from the drill scenario.

(Attachments 16 and 2).

DOE-RAP personnel who will be part of LERO use their own communications equipment for which they receive training through the DOE-Brookhaven area office. Therefore, DOE-RAP personnel do not receive nor do they require the training in the use of communications equipment provided in the LERO classroom training program.

40. Q. What is the scope and content of the communication drills?
- A. [Cordaro, Daverio, Renz, Varley] Communication drills are conducted to verify that the installed emergency communication networks identified for use during an emergency by LERO are in proper working order and that the personnel designated to operate the equipment are proficient in its use. To assure that equipment and personnel are both in a constant state of readiness, communication drills will be developed during the life of the plant which require the designated LERO

communicators to operate their respective communications equipment and relay prepared messages to recipients on that particular network. The recipients of the messages provide verification of accurate message transmittal. Drills designated to be conducted for the purpose of communications verifications ^{are} conducted on a periodic basis as outlined in Chapter 5 of the LILCO Transition Plan.

41. Q. How often will LERO workers who use communications equipment be drilled or exercised on the use of that equipment?

A. [Cordaro, Daverio, Renz, Varley] In addition to the drills discussed above, which are conducted to verify communications readiness, the drills identified in the Drill Matrix Figure 5.2.1 of the Plan, all require the actual use of the emergency communication equipment as part of the expected drill response. For example, the traffic guidance drill requires all traffic guides to install and operate their mobile radios as part of their job function during the drill.

For example, during the drills involving the EOC and the staging areas, LERO workers such as traffic guides, bus dispatchers, EOC communicators, lead traffic guides, staging area support staff, and transfer point coordinators have actually used the telephone and radio communications links between the EOC and each staging

area, and between the staging area and field personnel. (See, for example, Attachment 5). At drills in which the EOC has been activated, drill controllers have played the role of outside organizations and simulated communications on the RECS line as well as other EOC telephone lines. (See, for example, Attachments 1 and 5). During integrated drills between LERO and the onsite organization (SNPS) communications links between those organizations and their respective field personnel have been exercised. (See, for example, Attachment 6). These communications links are the same links and type of equipment that these LERO workers will use in the performance of their LERO job. In addition, special communication tabletop drills have been run that provided an opportunity for both the onsite and offsite communicators to sit down together, meet each other, and review their respective job responsibilities and any interface of those responsibilities.

Through the attendance at the annual training classroom session on communication coupled with participation in the communication verification drills and the LERO drill program, all communicators within LERO receive ample practice with the communication equipment enabling them to be able to use the equipment.

42. Q. Is the training program adequate for the use of the LERO communications equipment?

A. [Cordaro, Daverio, Renz, Varley] Yes. The final proof of any training program is ultimately the demonstration that an individual can put into practice the skills learned in the training program. To date numerous drills have been conducted in which communications played a key role in the course of carrying out response actions, during the drills the LERO personnel and the equipment fulfilled the intended objectives of the communication links exercised.

43. Q. Contention 41 states that instruction on the use of communications equipment must include "instruction in the proper use of radio frequencies, the range of coverage available for each frequency, and proper radio discipline". Does the LERO training program for communication include training in the subject areas?

A. [Cordaro, Daverio, Renz, Varley] The training program does not detail the range of coverage of the particular frequencies. It was felt that instruction on the range of coverage available for each frequency was unnecessary since all frequencies have been verified through field use to provide coverage over the response area covered by LERO personnel. The LERO training program does provide instruction on the proper installation, operational checks, and proper usage of the communication equipment. During drills and exercises those LERO members whose jobs require the use of radios are

required to actually install and use those radios as part of the drill and exercise response. In this way all those LERO personnel who are required to use radios gain experience in radio use and proper radio procedures.

CONTENTION 44

44. Q. Would you please summarize the issues raised by Contention 44?

A. [Berger, Cordaro, Daverio, Renz, Varley] Contention 44 questions whether the drills and exercises contemplated by the LILCO Transition Plan will adequately test the training of emergency response personnel and ensure that such personnel are familiar with, and capable of performing, their LERO job tasks. Specifically, the contention states that:

Contention 44. The LILCO Plan fails to demonstrate that drills and exercises will adequately test the training of emergency response personnel so as to ensure that personnel are familiar with, and capable of performing, their duties under the Plan as required by 10 CFR Section 50.47(b)(14), 10 CRF Part 50, Appendix E, Section IV.F, and NUREG 0654, Section II.N. Specifically:

* * *

D. The Plan does not provide for quarterly testing of communications with Federal emergency response organizations or States within the ingestion pathway. NUREG 0654, Section II.N.2.a. Moreover, the Plan does not provide for testing whether the content of messages is understood by emergency response personnel. Id. (See FEMA Report, at 13.)

E. The Plan fails to describe how exercises and drills are to be carried out to allow "free play for decisionmaking." NUREG 0654, Section II.N.3. (See FEMA Report, at 14.)

F. The LILCO Plan fails to provide for official observers from Federal, State or local governments to observe, evaluate, and critique training exercises. NUREG 0654, Section II.N.4. (See FEMA Report, at 14). Nor does the Plan provide adequate means for evaluating observer and participant comments. NUREG 0654, Section II.N.5. (See FEMA Report, at 14.) Instead, under the LILCO Plan, post-exercise/drill critiques will be performed primarily by LILCO. (Plan, at 5.2-3; OPIP 5.1.1, at 8 and 9). LILCO, however, will not be able to critique adequately its own Plan, including the exercises conducted under the Plan, due to its lack of expertise and objectivity. Thus, deficiencies in the LILCO Plan and implementing procedures may not be identified or corrected.

CONTENTION 44.D

45. Q. Contention 44.D. alleges that the LILCO Transition Plan does not provide for quarterly testing of communications with federal emergency response organizations or States within the ingestion pathway. Is this true?

A. [Cordaro, Daverio, Renz, Varley] No. The Plan at 5.2-2 and OPIP 5.1.1. Section 5.2.1.5., do provide for quarterly testing of communications with Federal emergency response organizations and States within the ingestion pathway. Thus, the LILCO Transition Plan satisfies the requirements of NUREG-0654, Section II.N.2.a. which requires that communications with federal emergency response organizations and states within the ingestion pathway be tested quarterly.

46. Q. Exactly what is the schedule for communications drills?

A. [Cordaro, Daverio, Renz, Varley] Communications within the immediate LERO response structure are tested on a quarterly basis. (See OPIP 3.4.1). This would include circuits between the EOC and the staging areas, the EOC and the onsite response facilities, as well as the radio frequencies between the staging area and the field stations. Communications with federal and State organizations within the ingestion pathway are also tested quarterly.

47. Q. Will the testing of communication links include testing whether the content of messages is understood by emergency response personnel?

A. [Cordaro, Daverio, Renz, Varley] Yes. As part of the communication verification drills the communicators participating in the drill will be presented with a pre-completed message form which the communicators will be required to transmit over the appropriate network. The message recipient will record the transmitted information for later comparison with the original message material supplied to the communicator.

CONTENTION 44.E

48. Q. Contention 44.E. states that the LILCO Transition Plan fails to describe how exercises and drills are to be carried out to allow "free play for decisionmaking." First, would you define what is meant by "free play for decisionmaking"?

A. [Berger, Cordaro, Daverio, Varley] "Free play for decisionmaking" is required by NUREG-0654, II.N.3. "Free play for decisionmaking" is the term used to describe the instructional method used in an exercise wherein the exercise participants are expected to collect, analysis^{ze} and diagnose accident symptoms and develop response action decisions. The exercise participants are provided with simulated accident symptoms in the same or nearly the same manner as those symptoms would be presented to them in a real emergency. Once the information is available to the participants it is their responsibility to carry out the appropriate response action based upon the information they have received. Their actions should be based upon their training and should follow established procedures. The exercise participants are free to reach whatever decision they feel is appropriate without interference or coaching on the part of the exercise controllers or observers. The exercise participants are allowed to carry out whatever actions are required in response to their decisions. Only in the event that the participants decisions or actions would result in hazardous situations for personnel or equipment would an exercise controller step in to stop the flow of events during an exercise. The "free play for decision making" concept

is the critical element in allowing exercise controllers and observers to make valid judgments on the capabilities of an emergency organization to carry out its responsibilities during an accident.

49. Q. Will the drills and exercises conducted under the LILCO Transition Plan provide for free play for decision-making?

A. [Berger, Cordaro, Daverio, Varley] Yes. OPIP 5.1.1., Section ~~5.2.3.7.~~ **5.2.5.7**, makes explicit provision for free play in drill and exercise scenarios. The drill and exercise scenarios provide for free play for decisionmaking by posing a hypothetical emergency situation to the LERO organization. The LERO organization must then make decisions about how to respond to the emergency situation in the same manner that LERO would make decisions during an actual emergency. The inclusion of free play in drills and exercises is inherent in the manner in which drills and exercises are conducted. The participants are provided with a set of circumstances simulating an accident, they are then required to develop a set of response actions and to implement those actions under the observation of the drill controllers. (See, for example, Attachments 1-6).

50. Q. Is LILCO's method for incorporating free play for decisionmaking in exercises and drills similar to that used for other drill and exercise programs with which you are familiar?

A. [Berger, Cordaro, Daverio, Varley] Yes. As is the case with drills and exercises conducted at other locations, the drill participants are presented with accident parameters and information in much the same manner as the information would be available to them in a real accident. The simulated accident information is injected into the drill through incoming lines of communications or through simulated personal observations of personnel in the field. The drill participants must be able to record, digest and take actions based upon their judgment and in accordance with the guidelines set forth in the procedures.

51. Q. Other than the fact that NUREG-0654 requires free play for decisionmaking to be incorporated in exercises and drills, what is the benefit of including free play for decisionmaking in a drill or exercise scenario?

A. [Berger, Cordaro, Daverio, Mileti, Varley] By allowing the members of the emergency organization the freedom to take whatever actions they deem appropriate for the situation presented by the drill or exercise scenario, the members gain knowledge and experience in conducting accident response activities. They will perceive the unfolding situation in much the same manner that it would appear during a real emergency. The participants

can experience, through their own conduct, the implementation of the accident management decisions reached by the emergency organization. Rather than following pre-developed time tables based on knowing the accident scenario beforehand the participants must develop response decisions and carry out actions based upon the information as it becomes available, just as they would be required to formulate responsive actions when faced with a real accident.

CONTENTION 44.F

52. Q. The intervenors have alleged in Contention 44.F. that the LILCO Transition Plan fails to provide for official government observers to observe, evaluate and critique LERO training exercises. Is that true?

A. [Cordaro, Daverio, Varley] No. LILCO Transition Plan at 5.2-4 specifically states that Federal, State or local government observers will be invited to evaluate and critique annual exercises.

53. Q. How will the comments of these observers be evaluated and deficiencies corrected?

A. [Cordaro, Daverio, Varley] LILCO Transition Plan's Procedures (OPIP 5.1.1.) provide that the Emergency Planning Coordinator will (1) organize a post-exercise critique for all observers and participating personnel to be held before the end of the work day following the exercise, (2) attend all post-exercise critiques held

by Federal, State or local observers, (3) collect and evaluate all exercise records from all observers, and (4) issue an exercise report that incorporates the recommendations of the FEMA Post-Exercise Assessment Report as well as recommendations from LERO personnel and observers. These provisions, plus the fact that LILCO must respond to and correct any deficiencies noted in the FEMA Report, will ensure that observers' comments on areas needing improvement are properly evaluated and that corrective actions are implemented, as required by NUREG-0654, Section II.N.5.

54. Q. How will the post-exercise critiques be performed?

A. [Cordaro, Daverio, Varley] During the course of the exercise, observers and controllers record their observations on the performance of the participants' response to the simulated accident situation. Upon completion of the exercise, a meeting will be held for all exercise controllers and observers. During this meeting the comments and observations made by the controllers and observers are collected and discussed, these comments then are used as the basis for conducting the post-exercise critique for the participants. The post-exercise critique is conducted a short time after completion of the exercise, usually the following day. Key participants in the exercise such as

the Director and Manager of Local Response and other senior LERO personnel attend the session. During the critique major items observed in the exercise are highlighted and discussed. Both strong points and those areas needing further attention are presented to the participants.

The cumulative result of the controllers' and observers' recorded comments and the items addressed during the critique discussions become the basis for the post-exercise written evaluation.

55. Q. Who will attend the post-exercise critiques?

A. [Cordaro, Daverio, Varley] Attendees of the post-exercise critiques will include the following personnel:

- Any federal, State or local observers
- Lead exercise controller
- Key exercise controllers and observers, such as those in the local EOC, staging areas and selected field positions
- Key exercise participants, such as those in LERO management positions in the EOC and staging areas
- The LILCO Emergency Preparedness Coordinator
- Other invited personnel,

Section 5.2(B) of the Transition Plan

56. Q. What sort of prior experience will the observers of LERO drills and exercises have?

A. [Cordaro, Daverio, Varley] All personnel designated to act as controllers or observers in an exercise must attend pre-exercise briefings. During these briefings the accident scenario is discussed in detail and key points for observation are highlighted. Each controller and observer is briefed on his position and provided with written guidance on the specific areas to be evaluated. Exercise control strategy is outlined as well as safety precautions to be taken to ensure that all activities undertaken during the course of the exercise are in accordance with safe and prudent practices.

57. Q. Since a number of the observers will be LILCO personnel, how will LILCO ensure objectivity in the evaluation of its drills and exercises?

A. [Cordaro, Daverio] It is common for any utility or offsite organization to control and observe an exercise using their own personnel supplemented by contracted personnel and personnel from other utilities or offsite organizations. Observers from both the NRC and FEMA are also present at the annual FEMA-graded exercise. Federal and other observers provide an independent evaluation of the exercise. During a graded exercise, observers from both the NRC and FEMA rove to various

facilities and locations. Part of the federal observers evaluations is based on whether the exercise was conducted and evaluated properly. LILCO will not only be evaluated on its ability to implement emergency response actions but also on its ability to conduct a fair and accurate graded exercise.

CONTENTION 98

58. Q. Please summarize the issues raised by Contention 98.

A. [Cordaro, Daverio, Mileti, Varley] Contention 98 alleges that the LILCO Transition Plan does not demonstrate that training and periodic retraining will be provided to organizations, such as schools, hospitals, nursing homes, adult homes, and other special facilities and that the LILCO Transition Plan does not demonstrate that training or periodic retraining will be provided to the personnel of emergency response organizations, including the U.S. Coast Guard, DOE-RAP, the American Red Cross, and ambulance personnel. The contention alleges, therefore, that the LILCO Transition Plan does not comply with NRC regulations or NRC/FEMA guidelines. Contention 98 reads as follows:

Contention 98. The LILCO Plan states that emergency response training and periodic retraining "will be offered" to organizations, such as schools, hospitals, nursing homes, adult homes and other special facilities, which may be called upon to "take actions during an incident" at the Shoreham plant (see Plan, at 5.1-6).

However, the Plan fails to demonstrate that such training and retraining will, in fact, be provided, nor is there any description of the training that "will be offered." Further, the Plan fails to demonstrate that training and/or periodic retraining will be provided to the personnel of emergency response organizations which are relied upon by LILCO to provide essential support services during an emergency, including the U.S. Coast Guard, DOE-RAP, the American Red Cross, and ambulance personnel. Therefore, the LILCO Plan does not comply with 10 CFR § 50.47(b)(15), 10 CFR Part 50, Appendix E, Section IV.F, and NUREG 0654, Section II.O. Because the Plan provides no assurance that the persons necessary to implement the LILCO Plan will be timely and adequately trained, there can be no assurance that the protective measures described in the Plan can or will be taken in the event of an emergency, in violation of 10 CFR § 50.47(a)(1).

59. Q. What are the regulations cited in Contention 98?

A. [Cordaro, Daverio, Varley] The regulations cited in Contention 98 are 10 C.F.R. § 50.47(b)(15), 10 C.F.R. Part 50, Appendix E, § IV.F., and NUREG-0654, Section II.O. Section 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, Section II.O.4, provides that "each organization shall establish a training program for instructing and qualifying personnel who will implement radiological emergency response plans."

60. Q. As emergency planners, what is your understanding of which organizations the regulations and guidelines include within the organizations that should receive emergency planning?

A. [Cordaro, Daverio, Varley] It is our understanding that organizations which will provide essential support services during an emergency must receive training. In the case of the LILCO Transition Plan, this means the U.S. Coast Guard, DOE-RAP, the American Red Cross, ambulance personnel, and helicopter personnel. While organizations such as schools, hospitals, nursing homes, and other special facilities may be called upon to take action during an incident at the Shoreham plant, they are not part of the emergency response organization. Therefore, it is our understanding that personnel from those organizations do not need to receive the full complement of radiological emergency response training that makes up the LERO training program.

61. Q. Did you consider anything other than the regulations and guidelines in deciding who needed emergency response training?

A. [Cordaro, Daverio, Miletì, Varley] Yes. One can easily wonder where training for emergency response should end. In our opinion, it is not necessary to train everybody who could be involved in an emergency to do everything that they might be called upon to do in some future emergency.

First, there is no reason to train people or organizations to do in an emergency what they already know how to do. For example, teachers do not need training to keep students orderly while standing in a line; the public does not need training about how to drive a car (in an evacuation) or close windows in their homes (during sheltering).

Second, there is good reason to train people who do not already know how to do what it is they would do in an emergency. For example, people who would decontaminate vehicles in an emergency should be provided training about how to decontaminate vehicles if they do not know how to perform that task.

Third, people who would make decisions in an emergency need some training on issues and topics relevant to those decisions. For example, if school principals will decide if their school will evacuate or not during an emergency, then school principals should be presented with information that informs them of the logic of that decision.

62. Q. What does the LILCO Transition Plan say with respect to training of organizations such as schools, hospitals, nursing homes, adult homes, and other special facilities?
- A. [Cordaro, Daverio, Varley] The LILCO Transition Plan states at page 5.1-6 that emergency response training and periodic retraining will be offered to such organizations. As the LILCO Transition Plan states, LILCO will offer training and information sessions to any organization

which must take action during an incident at SNPS. These organizations include schools, hospitals, nursing homes, adult homes, and other special facilities.

63. Q. Has training been provided to these organizations?

A. [Cordaro, Daverio, Varley] Training has not yet been provided to these organizations. We have developed a training program for these organizations on a conceptual basis and are in the process of preparing training materials. Once these materials are available we will offer to conduct training programs for these organizations.

64. Q. Exactly what type of training will be offered to organizations such as schools, hospitals, nursing homes, adult homes, and other special facilities?

A. [Cordaro, Daverio, Mileti, Varley] For organizations such as schools, hospitals, and nursing homes located inside the 10-mile EPZ, the type of material offered will include a general overview of emergency planning concepts and requirements, details specific to a LERO response, and details of the particular organization's involvement in a response.

65. Q. Could you outline a typical lesson plan for the type of training that will be offered to schools, hospitals, nursing homes or adult homes?

A. [Cordaro, Daverio, Mileti, Varley] At the present time, LILCO plans to offer the following training materials, some of which are part of the LERO training program and

some of which are now being developed specifically for outside organizations, to schools, hospitals, nursing homes, and adult homes.

Hospitals: Key Administration Personnel

"Radiation Naturally" videotape
Radiation Handouts
"LERO & Shoreham" videotape
"Planning for Emergencies" handout
"Hospitals Response" handout
Question and Answer Session

Hospitals: Doctors, Nurses, Other Staff

"Hospitals Response" handout
"Planning for Emergencies" handout

Nursing Homes and Adult Homes:
Key Administration Personnel

"Radiation Naturally" videotape
Radiation Handouts
"LERO & Shoreham" videotape
"Planning for Emergencies" handout
"Nursing Homes/Adult Home Response" handout
Question and Answer Session

Nursing Homes and Adult Homes:
Nurses, Other Staff

"Nursing Homes/Adult Homes Response" handout
"Planning for Emergencies" handout

Public and Private Schools:
Key Administration Personnel

"Radiation Naturally" videotape
Radiation Handouts
"LERO And Shoreham" videotape
"Planning for Emergencies" handout
"Schools Response" handout
Question and Answer Session

Public and Private Schools: Bus Drivers

"Radiation Naturally" videotape
LERO Training Modules (videotape and workbook)
- Module 3 "Radiation Protection"

- Module 9 "Personnel Dosimetry"
- Module 10 "Personnel Monitoring"
- "Schools Response" handout
- "Planning for Emergencies" handout

Public and Private Schools: Teachers, Other Staff

- "Schools Response" handout
- "Planning for Emergencies" handout

The training program for school bus drivers will consist of LERO training program videotapes and workbooks Module 3 ("Radiation Protection"), Module 9 ("Personnel Dosimetry"), and Module 10 ("Personnel Monitoring") and the two handouts "Planning for Emergencies" and "Organization Response."

66. Q. With the exception of the school bus driver training, how does this type of training differ from the training that is being provided to organizations that are part of LERO?
- A. [Cordaro, Daverio, Miletì, Varley] The training and information offered to these organizations is intended to provide the particular organizations' staff with an awareness of how their organization and facilities would be impacted in the event of an emergency at SNPS. The material will outline the general actions the staff of an organization, such as a school, hospital or nursing home, would take in response to and in concert with the LERO response activities. In comparison, the training offered to organizations that are part of LERO such as the ambulance companies is designed to provide members of those organizations with information about LERO generally and about their specific job responsibilities within LERO.

67. Q. What type of retraining program will be provided to schools, hospitals, nursing homes, and other special facilities?
- A. [Cordaro, Daverio, Varley] As stated in the LILCO Transition Plan at page 5.1-6, the Emergency Planning Coordinator or his designee will meet annually with each organization to develop a timetable for conducting the agreed upon training program. Retraining will be done annually and will consist of a re-presentation of the above outlined material.
68. Q. Does the LERO drill and exercises program include interaction with officials such as school administrators, and special facility administrators?
- A. [Cordaro, Daverio, Varley] No. It is our understanding that the regulations and guidelines do not require the inclusion of persons such as school administrators and special facility administrators in the LERO drill program.
69. Q. How does the LERO drill and exercise program ensure that the LERO workers who will have to interact with school administrators, special facility administrators, and the public be able to perform their jobs?
- A. [Cordaro, Daverio, Varley] While actual public officials and various administrators have not been involved in the drills that have been conducted by LERO, drill controllers were used to simulate these individuals. The drill controllers manned telephone lines and acted the part of various outside organizations' officials. The LERO participants were required to place actual phone calls to these

individuals and carry out their responsibilities as if they were dealing with the actual officials.

70. Q. Could school administrators or special facility administrators participate in the LERO drill program if they desired to do so?
- A. [Cordaro, Daverio] Yes. Any request by these organizations to participate in drills and exercises would be accepted.
71. Q. What type of training does LILCO plan to provide to the personnel of emergency response organizations which are relied on by LILCO to provide essential support services during an emergency, such as the U.S. Coast Guard, DOE-RAP, the American Red Cross, ambulance personnel, and helicopter personnel?
- A. [Cordaro, Daverio, Varley] Emergency response organizations that will support the LILCO Transition Plan can be essentially divided into two groups. The first group includes the U.S. Coast Guard, ambulance personnel, and helicopter personnel, and the second group includes the American Red Cross and DOE-RAP.

The first group, which includes the U.S. Coast Guard, ambulance personnel, and helicopter personnel, are provided training by LILCO as part of LERO. This group will be called upon to support LERO activities for situations which, while similar to their normal activities, are in many respects unique to their LERO response actions. For example, the U.S. Coast Guard patrols the waters of Long Island Sound as part of its normal function; however,

during a radiological emergency Coast Guard personnel might be within the 10-mile EPZ and be exposed to radiation. They would, therefore, need to be aware of radiation monitoring as well as radiation protection measures. LERO training provides them with needed information about radiation monitoring, radiation protection, and personnel dosimetry. The same videotape presentations and workbook materials used in the training of LILCO employees are used to train and retrain those Coast Guard, ambulance, and helicopter personnel designated as LERO responders. The training modules presented to these groups are indicated in Figure 5.1.1, the LERO training matrix in Chapter 5 of the LILCO Transition Plan. The subject matter presented to these groups is outlined in the lesson plans (Attachments 7-9).

The second group, the American Red Cross and DOE-RAP, are called upon to support LERO in activities which these organizations conduct as part of their normal response actions. In the case of the American Red Cross, they normally set up relocation centers for a wide variety of natural and manmade disasters. American Red Cross personnel are trained by the Red Cross to perform these duties. Unlike the Coast Guard, the assistance given by the Red Cross in setting up relocation centers does not require Red Cross personnel to go into the EPZ and, therefore,

does not require that Red Cross personnel receive training about radiation. Monitoring and decontamination facilities at Red Cross relocation centers will be staffed with trained LERO personnel. Likewise, DOE-RAP teams are trained to respond to radiological emergencies and to provide dose assessment during such emergencies. DOE-RAP has its own training programs in which DOE-RAP trains its emergency response personnel.

CONTENTION 99

72. Q. Please summarize the issues raised by Contention 99.

A. [Berger, Cordaro, Daverio, Varley] Contention 99 and its subparts allege that the LERO training program is inadequate because the classroom instructors are not experienced educators and are not experienced in the subject areas they are to teach, and because the LERO training program provides insufficient information concerning how trainees are to perform the specific job responsibilities assigned to them under the LILCO Transition Plan. Contention 99 and its subparts reads as follows:

Contention 99. In violation of 10 CFR § 50.47(b)(15), 10 CFR Part 50, Appendix E, Section IV.F, and NUREG 0654, Section II.O, the training provided by LILCO to emergency response personnel (both LILCO and non-LILCO) is inadequate and, as a result, in the event of a radiological emergency such personnel will neither understand nor be able to perform properly the functions assigned to them under the LILCO Plan. There is, therefore, no assurance that adequate

protective measures can and will be taken in the event of a radiological emergency at Shoreham, as required by 10 CFR § 50.47(a)(1). The specific deficiencies in LILCO's training program, each of which contributes to the overall inadequacy of the training proposed by LILCO, are set forth below.

C. LILCO's classroom training sessions have been conducted by individuals who are neither experienced in, nor knowledgeable about, the subject areas they are assigned to teach. In addition, the teachers are not experienced or trained in teaching methods.

G. The LILCO training program provides insufficient information concerning how trainees are to perform the specific duties and responsibilities assigned to them under the LILCO Plan. Instead, the "training" consists primarily of descriptive statements of job titles, job duties, and chains of command.

CONTENTION 99.C

73. Q. Contention 99.C. alleges that the LERO classroom training sessions have been conducted by individuals who are not experienced in or knowledgeable about the subject areas they are assigned to teach. Does this present a problem in the LERO training program?

A. [Berger, Cordaro, Daverio, Varley] No. First, it must be remembered that, with the exception of the classes for traffic guides on how to use signals to guide traffic, the videotapes and workbooks provide the detailed substantive information that the trainees are to learn. The instructors are present to ensure orderly class conduct and proper class sequencing and to answer any questions concerning the subject matter presented. For the classroom

sessions that have been conducted to date using the videotape format, each instructor was prepared for the class session prior to entering the classroom for the actual presentation.

74. Q. How were the instructors prepared for the classroom presentation?

A. [Berger, Varley] Prior to conducting a classroom training session, each instructor attended a preparation session. The preparation sessions consisted of the instructor viewing the videotape, reading the applicable workbook, and fielding typical questions to demonstrate familiarity with the material. The associated classroom session lesson plan was reviewed with the instructor, the instructor was provided with class attendance sheets, class schedules, facility location directions, and a telephone number at LILCO at which someone could be contacted to resolve classroom questions beyond the instructor's knowledge. Only after all of these items were completed did an instructor make a LERO classroom session presentation.

75. Q. Are the lesson plans designed to provide the instructors with the substantive information they would need to teach a classroom session?

A. [Berger, Cordaro, Daverio, Varley] No. The lesson plans in the LERO training program are not designed to perform the same function that one normally associates with lesson plans which classroom teachers would use, for example, to

cover the material in a textbook chapter. Rather, the lesson plans in the LERO training program are designed to provide the instructors with a general outline of the educational objectives of the classroom training session, a class schedule to be followed in conducting the class activities, and a detailed listing of materials the instructor should possess prior to starting the class. The reason the lesson plans are not designed to cover all of the substantive information that is to be conveyed during the classroom training session is that the videotapes and workbooks are the primary informational, instructional tools in the classroom sessions. (See generally Attachments 8-9, 26 and 27).

76. Q. The contention also states that the teachers in the LERO training program are not experienced or trained in teaching methods. Is this correct?
- A. [Berger, Cordaro, Daverio, Varley] One of the advantages provided by videotape and workbook instruction is the ability to present the LERO training material without the need for "qualified" teachers to be present in the classroom sessions. In the LERO training program, the instructor, in the sense of the person who is organizing and presenting the material to be learned, is the person who prepared the videotape, not the individual present in the classroom. The scripts and workbooks were prepared by individuals who had expertise in the subject area

presented. They were reviewed thoroughly by emergency planning personnel to ensure that the individual training modules were consistent with the entire training program and with the LILCO Transition Plan. The scripts were then reviewed by persons experienced in developing training programs to assure that the content of the videotapes was presented in a manner that would be understood.

As stated earlier, the training sessions provided to traffic guides on the use of hand signals to guide traffic do not follow the videotape and workbook format. Two former police officers, each of whom had experience teaching police officers and one of whom is now a teacher by profession, prepared the lessons and are responsible for teaching the sessions.

CONTENTION 99.C

77. Q. The contention alleges that training consists "primarily of descriptive statements of job titles, job duties and chains of command." Is this true?
- A. [Berger, Cordaro, Daverio, Milet, Varley] No. The LERO training program does not consist primarily of descriptive statements of job titles, job duties and chains of command; however, such descriptive statements are necessarily part of the LERO training program so that LERO personnel will understand the organizational structure of LERO. (See generally, Attachments 1-6 and 11-24).

78. Q. Why did LILCO consider it valuable for LERO workers to understand the organizational structure of LERO?

A. [Berger, Cordaro, Daverio, Varley] In any organization it is valuable for all members of that organization to have a basic understanding of the structure of the organization, the position that an individual member of an organization has within that structure, and how the structure functions to implement decisions made by the senior members of the organization. This concept holds true for LERO. If all of its members have a basic understanding about how the organization makes and implements protective actions, then LERO has the capability to respond quickly and accurately as well as possessing the flexibility to adapt to unexpected situations that may arise. Being able to respond rapidly and flexibly to emergency situations is vital to an emergency response organization such as LERO.

[Mileti] The results of a study funded by the Nuclear Regulatory Commission to Oak Ridge National Laboratories that I completed in 1982 are clear. The effectiveness of emergency response for nuclear power plant emergencies can be expected to be best if organizational emergency preparedness addresses three things. First, emergency jobs must be specified both within and between organizations, and people need to know what their job is and how to do it. Second, this "system" of jobs -- both within an

organization and among different organizations -- is a "response network" that should be integrated. People need to understand how their job fits into their organization's work and how their organization's work fits into the overall emergency response. Finally, it is important for all aspects of organizational emergency preparedness to maintain some degree of flexibility to respond to the exigencies of an emergency.

79. Q. Does the LERO training program provide information concerning how trainees are to perform the specific duties and responsibilities assigned to them under the LILCO Transition Plan?
- A. [Berger, Cordaro, Daverio, Varley] Yes. The LERO training program does provide job specific training to LERO trainees. As is discussed at length earlier in this testimony, the LERO program is three-part. First, the classroom sessions are where LERO trainees receive basic information about LERO and about what their job will be. Second, the drill program then provides the trainee with the opportunity to practice his emergency job. Finally, the exercise program, which integrates the various components of the Local Emergency Response Organization, shows the LERO worker how his job function fits in with the entire LERO organization. In short, the LERO training program does not expect that upon completion of classroom training a trainee will be asked to perform his job;

rather, the job-specific training initiated in the classroom is given practical application and is critiqued in drills and exercises. Many LERO trainees perform every aspect of the jobs that they will be performing during an emergency during every drill that they attend. These drills have enabled LERO trainees to gain practical experience in performing their assigned emergency functions.

The training that monitoring and decontamination personnel receive illustrates how the training program works to provide job-specific training. Monitoring and decontamination personnel complete the general modules, including Module 1 (General Overview), Module 2 (Site-Specific), Module 3 (Radiation Protection), Module 5 (LERO Notification), Module 8 (Communications), Module 9 (Personnel Dosimetry), and Module 10 (Personnel Monitoring). (Attachments 11-15, 16 and 17). In addition, monitoring and decontamination personnel complete a job-specific workbook module, entitled "Personnel Monitoring." (Attachment 20). During their job-specific classroom training, the monitoring and decontamination personnel receive written information about proper personnel monitoring techniques, equipment operation, and decontamination procedures, as well as demonstrations of the monitoring equipment used by LERO, such as the RM-14 meter with the HP-270 probe. In addition, monitoring and

decontamination personnel participate in the drill program. During tabletop drills entitled "Monitoring Tabletop," the monitoring and decontamination personnel were provided an opportunity to review the applicable implementing procedures and discuss methods of facility setup and operation. (Attachment 21). As of March 1, 1984, there have been 11 drills in which monitoring and decontamination personnel have participated in which the decontamination area has been activated. This activation has required decontamination personnel to set up the decontamination area, including roping off "clean" areas and "contaminated" areas; has required them to monitor LERO personnel, vehicles, and equipment that have returned from drilling field positions; and has required them to perform decontamination on individuals and equipment that have been mocked-up as contaminated. (See Attachments 4 and 5).

80. Q. What type of "hands on" experience is provided in the LILCO classroom training sessions to give trainees practical instruction about their jobs?

A. [Babb, Berger, Cordaro, Daverio, Varley] "Hands on" experience was provided for all LERO personnel in the proper use of personnel dosimeters and dosimeter chargers. (Attachment 26). LERO personnel who are required to use radiation detection equipment at the relocation centers and emergency worker decontamination facility also were

provided with "hands on" experience in the operation and maintenance of that equipment during classroom training sessions. (Attachment 27). Traffic guides will receive "hands on" experience in traffic direction during an in-the-field session in which LERO traffic guides practice directing traffic through different intersectional configurations. (Attachments 23 and 24).

81. Q. Do the tabletop drills include any "hands on" experience in performing assigned emergency functions?
- A. [Berger, Cordaro, Daverio, Varley] During the tabletop drill sessions, participants were called upon to demonstrate their familiarity with the implementing procedures by discussing their responses to situations posed by the instructor. The tabletop drill participants were required to cite the specific steps that they would be required to take as outlined in the applicable procedure and, where warranted, were required to complete the necessary forms that are a part of a particular procedure. (See, for example, Attachment 21).
82. Q. There has been considerable discussion about LILCO's ability to train traffic guides to perform their job responsibilities. How are traffic guides trained to perform their job responsibilities?
- A. [Babb, Cordaro, Daverio, Varley] Each traffic guide participates in a total of five classroom sessions. The early classroom sessions, which include Modules 1, 2, 3,

5, 8, 9, and 10 (Attachments 11-15, 17 and 18), provide each individual with general emergency planning concepts and specifics of a LERO response to an accident at Shoreham. The information in these sessions, while fundamental in nature, is essential to providing each traffic guide with an understanding of his role in a LERO response and the sequence in which activities such as activation of an emergency response organization, notification of the public, or the escalation of a radiological incident through emergency classifications can occur. In following sessions, the material becomes more specific in nature, providing the traffic guides with the detailed knowledge required to protect themselves radiologically while in the field. The final classroom sessions (in particular, Module 12, Traffic Control, and Module 8A, Mobile Radio Operation) present the traffic guides with specific details concerning their LERO responsibilities.

83. Q. Under the LERO training program will traffic guides be given any additional instruction beyond the classroom sessions, drills and exercises that have already been discussed?
- A. [Babb, Cordaro, Daverio, Varley] Yes. In addition to the training that has already been discussed, LERO traffic guides will be given 10 hours of additional training that has been designed to qualify these guides to direct traffic should an evacuation of the Shoreham EPZ be ordered.

This additional training will be divided into three sessions.

The first session, which was conducted by a retired New York City policeman, included three hours of orientation on the accepted methods of directing traffic through hand signals and gestures. This classroom presentation also included a general overview of the potential duties of LERO traffic guides during an evacuation of the Shoreham EPZ. (Attachment 22).

The second session, which will last four hours, will involve traffic guides actually directing traffic under four different intersectional configurations. These configurations include a signalized intersection with traffic on all four approaches, a "T" intersection with a Stop sign, and two intersections having traffic approaching at right angles to one another. The traffic guides will direct traffic at each intersection, and their performance will be evaluated. During this training session, LERO traffic guides will be exposed to situations which will require them to start and stop traffic, to give priority to emergency vehicles, and to move away from their post for some reason and then return. (Attachment 23).

The final session, which will last 3 hours, will be similar in content to the second session, except that it will be conducted in darkness. (Attachment 24).

84. Q. Dr. Babb, in your opinion, at the end of this training session will LERO traffic guides be adequately trained to direct traffic during an actual evacuation?

A. [Babb] Yes. This training program, combined with periodic retraining exercises, will give LERO traffic guides the practical skills they will need to direct traffic during an evacuation.

CONTENTION 100

85. Q. Please summarize the issues raised by Contention 100.

A. [Berger, Cordaro, Daverio, Varley] Contention 100 and its subparts allege that the LERO drill and exercise program is inadequate to prepare LERO personnel to perform their LERO job tasks because not all field personnel are accompanied to their posts by an instructor, trainees do not perform the full range of their duties during drills, and the drills contain no "terminal performance standards." Contention 100 and its subparts reads as follows:

Contention 100. In violation of 10 CFR § 50.47(b)(15), 10 CFR Part 50, Appendix E, Section IV.F, and NUREG 0654, Section II.O, the LILCO drill and exercise programs are inadequate and do not prepare or train LERO personnel to perform properly or effectively their assigned functions under the LILCO Plan. As a result, there is no assurance that adequate protective measures can and will be implemented in the event of a radiological accident at Shoreham, in violation of 10 CFR § 50.47(a)(1). The specific deficiencies in LILCO's drill and exercise programs are as follows:

B. During drills, LERO field personnel trainees are not accompanied to their posts by instructors. Therefore, whatever activities they may have performed during the so-called "drill" have not been supervised, observed, evaluated, graded, or critiqued. This renders the "field drills" meaningless as "training."

D. Contrary to the requirements of 10 CFR Part 50, Appendix A [sic], Section IV.F and NUREG 0654, Section II.0.2, most LERO trainees are not required to perform their LERO jobs during training drills. For example, traffic guides did not direct traffic, and bus drivers did not drive buses over bus routes. Thus, LILCO's drill program has not provided LERO personnel with an opportunity to practice their emergency duties and responsibilities.

G. The LILCO drills contain no terminal performance standards, and, consequently, there are no objective, observable criteria to be used by instructors in evaluating the performance of individual trainees.

86. Q. The contention alleges that the drill and exercise program is inadequate and does not prepare trainees properly for their emergency roles. Do you agree with this statement?

A. [Berger, Cordaro, Daverio, Varley] No. The LERO training program should be viewed as a "three-phase" program for training and evaluating LERO personnel. The "first phase" of the program consists of the classroom training sessions. It is in this first phase of the program that each trainee is provided with the basic knowledge required to understand emergency planning response concepts, the specifics of how LERO is organized and responds, and the details of individual

job responsibilities. It is not intended that a trainee could leave the classroom training sessions and immediately carry out his responsibilities.

The "second phase" of the training program is drills. The initial drills conducted for LERO personnel were limited in scope to ensure that each trainee had an opportunity to be involved with and practice his responsibilities. The earlier drills were designed to highlight and exercise very discrete aspects of a LERO response. Examples of this include:

- EOC/ENC Activation and Operation Drill: In this drill, LERO focused on only those staff members assigned to the EOC/ENC and allowed each staff member to become familiar with his area of response actions, under the guidance and supervision of a drill controller. (Attachment 1).
- Transportation Coordination Drill: In this drill, LERO focused on those LERO personnel at a staging area who are involved in providing bus transportation. All the aspects of the activities which occur at a staging area, transfer point and on bus routes were exercised. Drill controllers were available to provide assistance and guidance to drill participants. (Attachment 2).

As the drill program progressed and the individuals within LERO became more familiar with their jobs, the scope and length of the drills increased, and the organization was exercised as a whole.

The "third phase" of the LERO training program involves exercises. In this final phase, LERO personnel

are required to carry out their job functions under simulated accident conditions with no aid or prompting from the exercise controllers. It is at this point that all LERO individuals are expected to function in a knowledgeable and independent capacity. (See Attachments 5 and 6).

87. Q. What has been your observation of the LERO trainees' ability to perform their jobs during drills?

A. [Varley] My personal observations related to the performance of LERO personnel stems from my position as a Lead Drill Controller during 20 of the LERO drills conducted in October, November, and January. These drills included:

- Accident Management Tabletops
- EOC/ENC Activation Drills
- Personnel Monitoring and Decontamination Drills
- Transportation Coordination Drills
- Traffic Guidance Drills
- EOC/ENC/Staging Area Drills
- EOC/ENC/Staging Area/EWDF Drill

During these drills LERO personnel were required to react to various accident situations resulting in the need to implement protective action responses. It is my opinion that LERO, as a whole, could and did institute the proper response actions for the situation presented. During these drills, it was my observation that the individuals in LERO were serious about their responsibilities, diligent in carrying out their response actions, and responsive to making the entire organization as effective as possible.

[Daverio] Based on my observations as a LERO observer at approximately 15 drills, I concur with Mr. Varley's evaluation; LERO could and did institute the proper response actions for the situation presented.

88. Q. In your opinion as emergency planners and trainers, do the drills provide a realistic experience to trainees and prepare trainees for their emergency roles?
- A. [Daverio, Varley] The LERO drills and exercises conducted to date have been, in our opinion, structured and run in such a manner as to provide the LERO participants with a realistic experience but that did not require the involvement of the public or various outside organizations.

CONTENTION 100.B

89. Q. During drills are trainees who are dispatched into the field to perform their LERO jobs accompanied to their posts by instructors?
- A. [Berger, Cordaro, Daverio, Varley] Yes. Controllers do accompany some trainees to field positions during drills to observe and provide instruction to the drill participants. Examples of this include, among others, controllers at each bus transfer point to observe the activities of the bus drivers and transfer point coordinators operating at that transfer point and controllers at each staging area parking lot to assist and evaluate installation of portable radios.

90. Q. If trainees are not accompanied to their posts by controllers, how can LILCO assure that they can adequately perform their job?

A. [Babb, Berger, Cordaro, Daverio, Varley] Due to the sheer number of people deployed in the field, it is physically impossible to accompany each person to his final destination in the field. Instead controllers are positioned in key areas to monitor response actions being conducted by the field personnel at those locations and to monitor the feedback from drill participants at remote locations. In addition, individuals sent into the field are asked to complete forms (Attachment 25) which provide a means of monitoring that the particular activities undertaken were actually completed.

An example of how the positioning of controllers at key positions provides a review of the field drill is as follows: During drills conducted within the past months, a controller was positioned at each bus transfer point to monitor the activities of the transfer point coordinators and the bus drivers operating from that transfer point. The controller was able to oversee the dispatching of each bus driver on a route and the return of each bus driver upon completion of that route. This visual verification, coupled with the completed forms (Attachment 25), indicated that field personnel carried out their activities as anticipated. It was felt that there was little additional

benefit to be gained from assigning a controller to accompany each bus driver on his route because the route maps are quite simple to read and the routes are easily run. Thus, actual monitoring would be nothing more than a verification that a bus driver did, in fact, run the entire route, and even this fact could be substantiated by the route times logged by each driver on his form.

In addition to participation in the LERO drills conducted to date, traffic guides and bus drivers have received or will receive "in the field" experience for certain aspects of their job which cannot be exercised during the drills without impacting the public. LERO bus drivers have participated in a bus driver training and licensing program which provided them with actual "on the road" experience driving buses in the presence of an instructor. This program was conducted through local bus companies and required each LERO bus driver to meet the same standards as the bus company's own bus drivers as well as to pass the New York State licensing tests for a Class 2 bus driver license. LERO traffic guides will participate in a program with an instructor which will allow them to gain experience in directing traffic flow through intersections in a simulated environment. This program will require each traffic guide to actually stand in the intersection and, through the use of hand signals, guide

traffic through the intersection as the traffic guide would do during an evacuation. The program calls for the traffic guides to practice guiding traffic both during daylight and darkness to allow each traffic guide to practice the skills necessary to effectively carry out his LERO job responsibilities under varying conditions. (See Attachments 23 and 24).

CONTENTION 100.D

91. Q. Are you familiar with the regulations cited in Contention 100.D?
- A. [Cordaro, Daverio, Varley] Yes. The regulations and the guidelines cited in the contention cover training of emergency response personnel.
92. Q. As emergency planners and trainers, is it your understanding that the regulations and guidelines concerning training contemplate that offsite emergency response organization drills should include practical drills in which individuals perform their emergency jobs?
- A. [Cordaro, Daverio, Varley] Yes. Generally speaking it is our understanding that the regulations and guidelines suggest that practical experience in performing the emergency job is desirable during the drill program. However, the regulations do not require that every single aspect of an emergency job be drilled during the drill program.

93. Q. What is your basis for that statement?

A. [Cordaro, Daverio, Varley] The basis for our statement is the language in 10 C.F.R. Part 50, Appendix E, Section IV.F.1 which states: "A full-scale exercise which tests as much of the licensee, State and local emergency plan as is reasonably achievable without mandatory public participation shall be conducted." It is our understanding of this regulation that, for example, LERO traffic guides could not direct traffic during a drill because it would require public participation in the drill. Likewise, bus drivers do not drive buses over bus routes and route alert drivers do not use the public address system because it is felt that this may cause public confusion and alarm if a large numbers of buses were to be seen driving through residential neighborhoods or if public address systems were to broadcast.

94. Q. If the traffic guides do not direct traffic, the bus drivers do not drive buses over their routes, and the route alert drivers do not use the public address system during LERO drills, how does the LERO drill program provide LERO personnel with an opportunity to practice their emergency duties and responsibilities?

A. [Babb, Cordaro, Daverio, Varley] As is discussed above, LERO workers need not practice every aspect of their job at each drill. In the case of traffic guides and bus drivers, special classroom and in the field lessons have been set up to provide LERO traffic guides with experience

in guiding traffic and LERO bus drivers with experience in driving a bus. While route alert drivers do not use their public address systems, route alert drivers do drive routes or parts of routes in areas covered by sirens. By driving the routes, route alert drivers gain experience in map reading, marking the route alert maps to indicate the areas covered, and familiarity with some of the areas that the sirens cover.

CONTENTION 100.G

95. Q. The contention includes the term "terminal performance standards." What is your understanding of the meaning of that term?
- A. [Berger, Cordaro, Daverio] Actually, the term generally used is "terminal performance behavior." Terminal performance behavior defines the behavior that the trainee could not do before but should be able to perform at the end of the training program. For example, the terminal performance behavior of a grade school reading class is that the child who could not read at the outset of the class can read at the close or termination of the class.
96. Q. Does the LERO training and drill program expect terminal performance behavior?
- A. [Berger, Cordaro, Daverio, Varley] Yes. The terminal performance behavior for LERO and the objective of the LERO training program is the ability of the LERO

organization to function as an emergency response organization and to demonstrate that terminal performance behavior in a FEMA-graded exercise.

97. Q. Do the LERO drills and exercises test for terminal performance behavior?

A. [Berger, Cordaro, Daverio, Varley] No. But the LERO drills and exercises are not the termination of the training program and, therefore, are not the time at which terminal performance behavior should be tested. However, the LERO drills and exercises are not devoid of an evaluation process by the controllers. The drills and exercises focus on critiques of the LERO workers' behavior to identify what they are doing wrong and what they are doing right to achieve the goal of the terminal performance behavior. The critiques are aimed at increasing the proficiency at which LERO workers perform their job skills.

98. Q. Do the LERO drills contain any objective or observable criteria to be used by instructors in evaluating the performance of individual trainees?

A. [Berger, Daverio, Varley] Yes, as illustrated in Attachments 5 and 6, the later drill and exercise scenarios used in LERO training program contain evaluation criteria which were utilized to evaluate performance. The evaluations made during the drills and exercises focused on all of the key areas involved in a LERO response. Although individual responses were observed and evaluated it was the

intention of the evaluation process to determine whether overall response actions were conducted effectively. As an example: "Operations at the Staging Area" were evaluated during the LERO drills. The evaluation was based on whether all of the various activities involved in "Staging Area Operations" such as activation, briefing and dispatching of personnel, communications, and equipment processing were effectively conducted at the staging area. If these activities were effectively performed, then that particular aspect of LERO's response was considered adequate. While a controller is evaluating "Staging Area Operations," he is also necessarily evaluating individual performances as well. Thus, if a particular individual is not fulfilling his responsibilities associated with achieving effective "Staging Area Operations," that fact is noted and becomes a topic for critique discussion and comment. Should an individual's performance be so poor as to impact the effectiveness of the operation and render the resulting evaluation inadequate, that individual would then be highlighted for further evaluation and possible removal from LERO. To date there have been no instances of this type of poor performance.

99. Q. Is it possible to "flunk out" of the LERO training program?

A. [Cordaro, Daverio, Varley] If "flunk out" is understood to mean a LERO member being released from LERO due to the inability to carry out his responsibility, the answer would be yes. Workbook review pages were reviewed by the classroom instructors to determine if an individual was not absorbing the material. Controllers observed the actions of the drill participants to ensure that the individuals were carrying out their responsibilities as outlined in the implementing procedures. In no case did the instructors, observers or controllers observe any LERO worker who had not attained a level of understanding of the training materials such that he could not adequately perform his LERO job.

100. Q. Is there any provision in the LERO training program for evaluating the abilities of personnel who have completed training?

A. [Berger, Cordaro, Daverio, Varley] Yes. The LERO training program provides for self-testing and self-evaluation in the form of the workbooks that are to be completed by each trainee at the close of the classroom session. In addition, the drills and exercises provide an additional basis for evaluating the abilities of personnel who have completed the classroom training program. During the drills and exercises, controllers and observers

observe the actions of LERO workers and critique those actions, thereby evaluating the ability of LERO workers to perform the job to which they are assigned. Finally, the annual FEMA-graded exercise will provide an evaluation of the LERO training program and of the abilities of the personnel who have completed that training program to function as an emergency response organization.

101. Q. Is it your understanding that the regulations and guidelines require that formal critiques of the drills and exercises be given?
- A. [Cordaro, Daverio, Varley] Yes. 10 C.F.R. Part 50, Appendix E, Section IV.F.3, states that "all training, including exercises, shall provide for formal critiques in order to identify weak areas that need corrections. Any weaknesses that are identified shall be corrected."
102. Q. How do drill and exercise controllers and observers critique the drill and exercise participants?
- A. [Berger, Cordaro, Daverio, Varley] The critique process for drills and exercises was discussed in our testimony on Contention 44.F. Briefly, during the early stages of the drill program, drill observers and controllers provided critiques to drill participants while they performed their LERO tasks to correct inappropriate actions and to reinforce appropriate performance. In later intergrated exercises, the observers and controllers record their observations. At the end of the exercise, a meeting of the

controllers and observers is held during which the comments are collected and discussed. The comments that result from that meeting form the basis for the post-exercise critique for participants. Critique sessions are conducted soon after the completion of the exercise to make the session as meaningful to the participants as possible.

ATTACHMENTS

- ATTACHMENT 1 Local EOC/ENC Activation Drill
- ATTACHMENT 2 LILCO Local Emergency Response Organization Traffic Guidance Drill, Rev. 0
- ATTACHMENT 3 LILCO Local Emergency Response Organization Transportation Coordination Drill, Rev. 0
- ATTACHMENT 4 LILCO Local Emergency Response Organization Personnel Monitoring and Decontamination Facilities Drill, Rev. 0
- ATTACHMENT 5 LILCO Local Emergency Response Organization EOC/ENC/All Staging Areas/EWDF Drill, Rev. 0
- ATTACHMENT 6 LILCO Integrated SNPS/LERO Drill EOF/EOC Activation, Rev. 0
- ATTACHMENT 7 Lesson Plan: Coast Guard Emergency Preparedness Training
- ATTACHMENT 8 Lesson Plan: Ambulance Personnel - Emergency Preparedness Training
Lesson Plan: Ambulance Personnel - Radiation Protection Training
- ATTACHMENT 9 Lesson Plan: Helicopter Personnel - Radiation Protection Training
- ATTACHMENT 10 Letter dated January 20, 1984 from Charles A. Daverio, LILCO, to Captain E. W. Weigand, U.S. Coast Guard
- ATTACHMENT 11 Lesson Plan I, Emergency Preparedness Overview - General Knowledge (Module 1 - script)
- ATTACHMENT 12 Lesson Plan I, Emergency Preparedness Overview - Site Specific (Module 2 - script)
- ATTACHMENT 13 LERO Organization, Script No. 1, Radiation Protection (Module 3)
- ATTACHMENT 14 LERO Organization, Module No. 5, LERO Notifications
- ATTACHMENT 15 LERO Organization, Module No. 8, Emergency Communications

ATTACHMENT 16	LERO Organization, Module No. 8a, Portable Radio Installation and Operation
ATTACHMENT 17	LERO Organization, Module No. 9, Personnel Dosimetry Demonstration
ATTACHMENT 18	LERO Organization, Module No. 10, Radiological Monitoring and Decontamination
ATTACHMENT 19	LERO Organization, Module No. 12, Traffic Control
ATTACHMENT 20	LERO Training Program Workbook (bound separately as Volume 3)
ATTACHMENT 21	LILCO, Local Emergency Response Organization Decontamination Tabletop Drill, Rev. 0
ATTACHMENT 22	Lesson Plan: Traffic Direction and Control
ATTACHMENT 23	Syllabus, Lesson Plan: Traffic Direction and Control
ATTACHMENT 24	Syllabus, Lesson Plan: Traffic Direction and Control During Darkness
ATTACHMENT 25	Forms from drill participants
ATTACHMENT 26	Lesson Plan: Modules 8 and 9
ATTACHMENT 27	Lesson Plan: Modules 3 and 10
*ATTACHMENT 28	Videotape, Module 1
*ATTACHMENT 29	Videotape, Module 3
*ATTACHMENT 30	Videotape, Module 8A
*ATTACHMENT 31	Videotape, Module 14

*Supplied to the Atomic Safety and Licensing Board, the State of New York, the Federal Emergency Management Agency, and the Nuclear Regulatory Commission under separate cover.

Suffolk County is already in possession of these videotapes.

UNITED STATES OF AMERICA
 NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

LILCO'S AMENDMENTS TO DIRECT
 TESTIMONY ON TRAINING CONTENTIONS 39.A, B., 40, 41,
 44.D, E, and F, 98, 99.C and G, 100.B, D, and G

The following amendments to LILCO's April 2, 1984 direct testimony on training Contentions 39.A, B. 40, 41, 44.D, E, and F, 98, 99.C and G, 100.B, D, and G should be made:

<u>Question Number</u>	<u>Page/Line</u>	<u>Correction to Testimony</u>
Purpose	1, line 3	"effectivenss" should be "effectiveness"
1	2, following line 6	Insert the following: "[Renz] My name is William F. Renz. My business address is Long Island Lighting Company, 175 East Old Country Road, Hicksville, New York, 11801."
2	3, line 3	after the word "and" insert the following language: "Captain assigned to office of Chief of Uniformed Patrol"
2	5, following line 14	Insert the following: "[Renz] I am employed by the Long Island Lighting Company as Offsite Emergency Preparedness Coordinator in the Nuclear Operations Support Department and Manager of the Technical Support Division of the Local Emergency Response

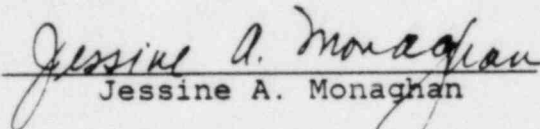
Implementing Organization (LERIO). My professional qualifications are being offered into evidence as part of the documents entitled 'Professional Qualifications of LILCO Witnesses.' My familiarity with the issues raised by these Contentions stems from my work in developing and implementing the LILCO Transition Plan, particularly my work in developing the communications system, and my work in reviewing the materials used in the LERO training program, particularly those modules concerned with communications training."

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|----|----------------------------|---|
| 3 | 6, line 5 | change "Duquesne Power & Light" to "Duquesne Light Company" |
| 3 | 6, line 10 | change "station's" to "Station's" |
| 3 | 6, line 15 | delete space after "/" |
| 3 | 6, line 16 | add "Company" after "Light" |
| 3 | 6, line 18 | change "Louisiana Power and Light" to "Louisiana Power & Light Company" |
| 5 | 14, line 12 | delete comma after "sessions" |
| 7 | 19, line 15 | delete comma after "instruction" |
| 10 | 25, line 1 | delete comma after "skills" |
| 11 | 26, lines 6-9 | delete sentence beginning "If desired ..." |
| 13 | 27, line 12 | add comma after "ensure" |
| 22 | 32, after line 30 | add "Module 8A - Mobile Radio Operations" |
| 23 | 34, line 16 | change "There" to "there" |
| 23 | 35, lines 1, 12-13, and 16 | change "helicopter companies" to "the helicopter company" |

- | | | |
|----|------------------------|---|
| 27 | 42, line 19 | insert "respond to" between the words "to" and "some" |
| 28 | 43, line 6 | delete "must" and substitute "to" |
| 31 | 47, line 10 | delete "that" after "is," |
| 31 | 52, line 9 | add a comma after "D.C." |
| 34 | 55, line 7 | add "Daverio" to answer |
| 39 | 61, line 17 | delete comma after "provided" |
| 40 | 63, line 6 | add "are" after "verifications" |
| 41 | 63, line 15 | delete comma after "Plan" |
| 44 | 67, lines 30
and 34 | change "States" to "states" |
| 44 | 67, line 33 | change "Federal" to "federal" |
| 46 | 68, line 8 | Change "State" to "state" |
| 48 | 69, line 6 | change "analysis" to "analyze" |
| 57 | 76, lines 1-2 | change "observers" to "observers'" |
| 71 | 86, line 4 | change DOE-RAP "teams" to "Teams" |
| 90 | 103, line 2 | change "contollers" to "controllers" |

Respectfully submitted,

LONG ISLAND LIGHTING COMPANY


Jessine A. Monaghan

Hunton & Williams
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DATED: June 11, 1984

12-4-Wal

1 MS. MONAGHAN: The LILCO Panel is now ready
2 for cross examination.

3 JUDGE LAURENSEN: Mr. Miller?

4 MR. MILLER: Yes, Judge Laurenson.

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5 CROSS EXAMINATION

6 BY MR. MILLER:

7 Q Gentlemen, I have some questions first of all
8 -- some brief questions regarding qualifications. Do you
9 all have your blue volume of Professional Qualifications?
10 Because we are going to be looking at that.

11 Mr. Babb -- we will do this alphabetical. It is
12 easiest for me. Will you turn to your portion of the
13 LILCO Professional Qualifications which is Tab 1.

14 A (Witness Babb) Tab 1? Okay.

15 Q Do you have that, sir?

16 A Right.

17 Q At the bottom of the first page, Mr. Babb, there
18 is a statement that says my supplementary technical training
19 and education has included the following courses, and there
20 are a number of courses listed. Do you see that?

21 A Yes, I do.

22 Q Can you tell me, sir, are any of these courses
23 specifically related to the training of non-police personnel?

24 A The first one would be. It is broad in its
25 instructional content, and the intent of the Traffic

1 Institute of Northwestern would be to apply the material
2 learned there to any phase of that particular subject, which
3 is traffic control devices and methods.

4 Q Is that the only one, sir, that would be applied
5 to non-police personnel?

6 A Generally, the answer would be, yes.

7 Q The first one, Mr. Babb, the Traffic Control
8 Devices and Methods, would non-traffic involved people take
9 that course, to your knowledge?

10 A There were some foreign students, counselor,
11 in the particular class that I attended, and I cannot testify
12 as to whether those foreign students were foreign police
13 personnel or civilian personnel.

14 Q If you look, sir, at page 2 of your testimony,
15 you mention that you were an instructor for six years in
16 the New York National Guard.

17 Do you see that?

18 A Yes, I do.

19 Q Were any of the subject areas that you were
20 an instructor for, related to offsite emergency response
21 to a radiological emergency?

22 A Not to a radiological emergency, no.

23 Q Now, looking Mr. Babb, at the last paragraph
24 on page 2, you discuss your employment in the Suffolk County
25 Police Department. Is it fair to say that your police

1 background was primarily in the field of traffic?

2 A Yes.

3 Q It was not in the field of training, is that
4 right?

5 A It would include training, yes. I was a trainer
6 from the very first day of the inception of the Suffolk
7 County Police Department as a traffic personnel -- as a
8 traffic police personnel. A secondary function of mine
9 would have been, and was, to train recruits and others
10 in the Police Academy. This is a common practice.

11 Q Yes, sir. With respect to your primary duties
12 like police officer, with your tenure at the Suffolk County
13 Police Academy, did you at any time have primary duties
14 related to training?

15 A Yes.

16 Q Can you tell me what they were?

17 A I would be called upon, on occasion, to train
18 civilian personnel such as school crossing guards, auxiliary
19 police, volunteer fire people, personnel such as that.

20 Q And you consider that a primary duty in your
21 job as a police officer?

22 A At the time of performing that particular subject,
23 inasmuch as I would devote my entire resources and knowledge
24 to it, the answer would be yes, it would be my primary
25 function.

1 Q Mr. Babb, you were at the Suffolk County Police
2 Academy, correct?

3 A Yes, I was.

4 Q Could you tell me, sir, your opinion of the
5 Suffolk County Police Academy?

6 MS. MONAGHAN: Objection . It is not relevant
7 to the scope of the contentions here.

8 MR. MILLER: Judge Laurenson, I submit that it
9 is relevant because the testimony offered by the County
10 is, in part, offered by Suffolk County police officers who
11 have either presently or formerly associated with the
12 Academy.

13 This genetleman also was associated with the
14 Academy, and I think it is relevant. Looking at qualifications.

15 JUDGE LAURENSON: Objection is overruled.

16 WITNESS BABB: I would say, counselor, that during
17 my tenure with the police department, and my direct association
18 with the police academy, I felt that the Suffolk County
19 Police Academy was a first class institution.

20 BY MR. MILLER: (Continuing)

21 Q Do you have any reason, Mr. Babb, to believe the
22 case to be otherwise today?

23 A That is speculative, Counselor, is it not? And
24 I would have to respond speculatively, would I not?

25 Q I am asking you if you have an opinion?

1 A That means that would be a speculation. Would
2 you permit that?

3 Q I will permit it, yes, sir.

4 A Having a past traffic background, I am obviously
5 critical of performance of officers that I perceive in the
6 field. And, on occasion, I might have some self-criticism
7 about some of the officers, and then I could, conceivably,
8 attribute that to, perhaps, some defects in their present
9 training.

10 But that is speculation.

11 Q Do you know Lt. John Factor, Mr. Babb?

12 A I have had the good fortune of having been
13 associated with Lt. Factor for some years, yes.

14 Q What is your opinion of Lt. Factor's qualifications
15 as a trainer?

16 A First class.

17 Q Do you know Deputy Inspector Cosgrove?

18 A I have not had that pleasure.

19 Q How long were you at the Police Academy, Mr.
20 Babb?

21 A Approximately a year and a quarter, something
22 like that, as a full time member of the Academy staff.

23 Q Could you tell me why you were at the Academy
24 about a year and a quarter?

25 A Yes. When I was promoted to Captain, there was

1 no line budget item in the Highway Patrol for a Captain.

2 So, consequently when I was promoted to the rank
3 of Captain, I spent a short time, which was customary at
4 that time, for Captains in what was called command 40, which
5 is a supervisory position, which I have indicated here, and
6 then there was an opening in the Police Academy for an
7 Executive Officer, which called for the rank of Captain
8 in the Police Academy, and I was requested by the Commanding
9 Officer of the Academy, and given the opportunity of either
10 remaining where I was in this uniform control command, or
11 going over to the Police Academy and assuming the position
12 of Executive Officer , and I selected the latter.

13 And then approximately a year later there was
14 a line budget item created in the Highway Patrol, and my
15 commanding officer there requested my presence back again
16 in the Highway Patrol, to which I returned.

17 Q You left the Academy, sir, in late 1970, would
18 that be right?

19 A I believe it was around late '70, yes. I can't
20 be sure of the exact month.

21 Q Have you had any training duties or responsi-
22 bilities in any capacity since leaving the Suffolk County
23 Police Academy?

24 A Yes. I was called upon by the New York State
25 Bureau of Municipal Police to supervise a prototype part

1 time police academy right here on Long Island.

2 A prototype to train part time police officers,
3 of which there were many throughout the State of New York,
4 and at that particular time neither the Suffolk nor the
5 Nassau Police Academies were willing or able to assume that
6 responsibility of training part time police officers, so
7 the people in Albany asked me if I would supervise it, and
8 it was a part time program for about four months.

9 It was conducted over in Oyster Bay.

10 Q Other than this training of part time police
11 officers, is there anything else, Mr. Babb, since approxi-
12 mately 1970?

13 A In what respect, counselor?

14 Q In terms of involvement, duties, responsibilities
15 as a trainer?

16 A As a trainer opposed to an educator?

17 Q Yes, sir.

18 A I can't think of any at the moment, counselor.
19 If I do, I shall.

20 Q Mr. Babb, from your last comment I take it that
21 you do draw a distinction between an educator and a trainer,
22 is that correct?

23 A Yes, it is, sir.

24 Q Would you tell me what, in your opinion, is the
25 distinction between the two?

1 A I think a trainer, to sum it up, in one word,
2 is, 'how' to do something. I think an educator, to sum
3 it up into one word, is, 'why' you are doing it.

4 Q And is it fair to say, Mr. Babb, that since
5 approximately 1972, when you joined the Criminal Justice
6 Department at Farmingdale, you have been an educator, is
7 that right?

8 A With that exception I just mentioned about the
9 prototype academy, yes.

10 Q Mr. Babb, on page 2 of the LILCO testimony,
11 there are some courses, instructional areas you call them,
12 set forth.

13 Are those the courses you teach at SUNY Farming-
14 dale?

15 A Is that in the same book, counselor? Is that
16 in the same book?

17 Q No, sir. I am looking now at the LILCO testimony
18 on page 2.

19 A That is correct, yes.

20 Q Mr. Berger, would you please look at Tab 3 of the
21 LILCO Professional Qualifications Book? Let me ask you
22 to begin, Mr. Berger, in general is it fair to say that your
23 career has been spent in training corporate personnel?

24 A (Witness Berger) That's correct.

25 Q When did you leave Impell, sir?

1 A March of this year.

2 Q And your new position with American Financial
3 Corporation, that again would be in corporate training,
4 is that right?

5 A That is correct.

6 Q You state, Mr. Berger, on page 1 of the Professional
7 Qualifications Book, that while with Impell you were
8 responsible for over one thousand employees engaged in
9 consulting to major utilities in the United States and
10 Europe.

11 Was it just utilities that you were engaged
12 in this consulting work?

13 A To the best of my knowledge the majority of the
14 consulting that Impell was engaged in was to utility
15 organizations.

16 Q You go on, Mr. Berger, in that same paragraph,
17 you say: In this capacity, I completed needs analyses
18 at all levels in the company, designed lesson plans,
19 instructional technology and media support and developed
20 para-trainers for on-going programs.

21 Do you see that?

22 A Yes, I do.

23 Q Could you tell me -- would you define, 'lesson
24 plan' for me?

25 A Sure. Lesson Plan is a document that is included

1 in an instructional program that essentially outlines for
2 the instructor the sequence of events that is going to
3 occur in the classroom.

4 Q Outlines for the instructor.

5 A Yes. Or trainer. The term is used interchange-
6 ably.

7 Q Under that definition, Mr. Berger, would you say
8 that the LILCO training program has utilized lesson plans?

9 A To the best of my recollection, in the guide
10 there are lesson plans included.

11 Q In the guide. What is that?

12 A The text materials used in the program.

13 Q So to the best of your knowledge there are
14 lesson plans?

15 A Yes.

End 12 16
Reb fols.

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1 Q You consider lesson plans, Mr. Berger, a valuable
2 tool to the trainer or instructor?

3 A There have been occasions that I have taught
4 classes without lesson plans.

5 Q Yes, sir. With respect to my question, do you
6 consider lesson plans a valuable tool in training?

7 A They can be a valuable tool, yes.

8 Q Can you tell me what a paratrainer is?

9 A A paratrainer is someone who perhaps is a
10 subject matter expert but does not have any background in
11 training or development. And is, therefore, used in the
12 classroom to instruct, very similar to the term such as
13 paramedic.

14 Q Did the LILCO training program use any
15 paratrainers?

16 A Not to the best of my knowledge.

17 Q Let me ask you, Mr. Berger, would you consider
18 Dr. Mileti a paratrainer?

19 A No, I would not.

20 Q Your definition, someone who has the subject
21 matter background but is not a trainer?

22 A Dr. Mileti is a qualified instructor at a
23 university so, therefore, I don't consider him to be a
24 paratrainer.

25 Q He would be an educator, in your opinion?

1 A He would be an educator in my opinion.

2 Q Do you agree with that, Dr. Mileti?

3 A (Witness Mileti) I would like to think that
4 among the things I do is help educate some people. I am
5 sure I might also do other things.

6 Q Do you consider yourself a trainer, Dr. Mileti?

7 A Certainly not my major activity. My major
8 activity is as a researcher and teacher.

9 Q Let me ask you, Mr. Berger, who on this panel
10 do you consider a trainer? What about yourself?

11 A (Witness Berger) I consider myself a trainer.

12 Q Who else?

13 MS. DONAGHAN: Judge Laurenson, I think we need
14 to define what Mr. Miller is -- how Mr. Miller is
15 defining the term trainer. One of the witnesses has given
16 his definition of the word trainer, but I am not sure that
17 that is consistent with what Mr. Miller thinks a trainer is.

18 MR. MILLER: I think we are doing just fine.

19 JUDGE LAURENSON: I think you are using
20 Mr. Berger's definition of trainer, right?

21 MR. MILLER: Yes, Mr. Judge.

22 JUDGE LAURENSON: Is that the way you understand
23 the question, Mr. Berger?

24 WITNESS BERGER: Sir, in industry, a trainer
25 can be someone -- the term is used fairly loosely.

1 It can be someone who has a background in
2 training and development. It can also be someone who
3 is a subject matter expert and, therefore, is put into
4 a classroom perhaps to teach. It is used interchangeably.

5 The credential is not necessarily looked at.

6 JUDGE LAURENSEN: Maybe you ought to clarify
7 that. I recall Mr. Babb defined it one way as how to do
8 something.

9 WITNESS BERGER: In terms of industrial
10 education, generally a trainer is someone who is in a
11 classroom who is teaching a skill. That individual does
12 not necessarily do research in training and development
13 or training methodology or subject matter methodology,
14 for that matter.

15 BY MR. MILLER:

16 Q Mr. Berger, to keep it simple for me, Mr. Babb's
17 definition had an appeal in that it was very straightforward.
18 Now, Mr. Babb, let me paraphrase -- you correct me if
19 I am wrong -- a trainer would be someone who teaches how
20 to do something, and an educator would be someone who
21 teaches why you are doing it.

22 Fair?

23 A (Witness Babb) Fair.

24 Q Now, Mr. Berger, adopting that definition of
25 trainer, someone who teaches someone how to do something,

1 who on this panel, in your opinion, is a trainer?

2 A (Witness Berger) Well, on the basis of
3 Mr. Babb's qualifications, I certainly would have to
4 include Mr. Babb, Dr. Miletì, myself, Mr. Varley,
5 Mr. Daverio -- the entire panel.

6 Q And when you said earlier that Dr. Miletì would
7 be an educator and not a trainer, how were you using the
8 word "trainer" then?

9 A Well, I said that Dr. Miletì would be an
10 educator. I used the term from the standpoint that in
11 addition, perhaps, to doing training, Dr. Miletì also
12 falls into the qualifications of an educator in that he
13 does work at a university and does teach courses at a
14 university and also does research.

15 Q It sounds like the distinction between educator
16 and trainer has become kind of blurred, Mr. Berger, would
17 you agree?

18 A Not that I am aware of.

19 Q Is anyone on the panel a certified trainer?
20 Certified or licensed?

21 (No response.)

22 A (Witness Babb) Counselor, I am not quite sure
23 what you mean by certified.

24 Q Well, for example, I know that certain members of
25 the Suffolk County Police Academy are certified by New York

1 State as trainers.

2 Now, I am using it in this sense: Is anyone
3 on this panel certified or licensed by any authority,
4 any regulatory agency, any state, as a trainer?

5 A (Witness Daverio) If I can define it and then
6 answer your question, as part of the on-site program, I
7 have done training courses for our emergency on-site plan.
8 We have to show the NRC, when they come in and do on-site
9 emergency planning appraisals, that our trainers are
10 qualified to teach what they are teaching.

11 My background would probably fall into the
12 paratraining that Mr. Berger talked about where I have
13 an expertise in emergency planning and did training for
14 on-site personnel in that area. So at least the NRC
15 accepted me as a trainer in that sense.

16 I don't know if that is certification in your
17 definition.

18 Q In the sense of on-site training, correct,
19 Mr. Daverio?

20 A Emergency planning training.

21 Q On-site?

22 A It also includes communications with the off-site
23 people. It includes other things that also might affect
24 some -- some off-site aspects are included in the on-site
25 training program.

1 A (Witness Mileti) If I might add something to that,
2 and that is, in terms of certification in the sense that
3 a certificate is issued, I have a certificate to teach
4 in the California Community College system. In Colorado
5 there are no counterparts to that teach in universities.
6 I do have tenure at a university, and I suspect that is
7 harder to get than a certificate.

8 A (Witness Babb) Counselor, if I may comment,
9 I suspect that, although I have never checked with Albany,
10 the fact that I was a trainer at the Suffolk Police
11 Academy and also that I was called upon by the issuing
12 agency which issues the certificates to supervise a part-time
13 prototype police academy, I would suspect that Albany
14 considers that I am a certified police trainer, although I
15 have never pursued it.

16 A (Witness Varley) I would like to add also that
17 during my career with the United States Navy, the Navy
18 certified its instructors before allowing them to go into
19 the classroom. And with my employment with Westinghouse
20 Hanford, the instructors that worked for Westinghouse
21 Hanford also had to be approved and I guess you would
22 consider it certified by the Department of Energy people
23 that oversaw the contracts for Westinghouse Hanford.

24 So in that respect I guess I, too, had
25 certification in those two particular instances.

1 Q Mr. Varley, that was with respect to your
2 training engineers; is that correct?

3 A I don't know which particular instance you
4 are referring to.

5 Q I was referring to the Westinghouse Hanford.

6 A Westinghouse Hanford I provided training courses
7 both in the operation of a nuclear power plant and also
8 in their emergency preparedness program and general employe
9 training program as well.

10 Q Was that on-site?

11 A The Westinghouse Hanford Emergency Preparedness
12 program was an on-site program, yes.

13 Q Mr. Berger, could you tell me what you mean
14 by cross training? It is referred to on page 2 of the
15 qualifications towards the bottom.

16 A (Witness Berger) Cross training as it applies
17 to the sentence that you have indicated, Mr. Miller,
18 refers to the fact of taking an employee who is performing
19 one function, one job function, and teaching them how to
20 perform a different job function.

21 Q Would you say that the LILCO training program
22 for LERO involves cross training?

23 A Yes, in a broad context.

24 Q If I understand your definition, it teaches someone
25 who performs one job function how to perform another job

1 function, correct?

2 A That is correct.

3 Q And you have, for example, a meter reader which
4 under the LILCO training program ideally will be trained to
5 direct traffic. So that is cross training?

6 A Correct.

7 Q Have you ever seen it in this kind of a context
8 before in your career?

9 A Ever seen what, please?

10 Q This kind of cross training as LILCO is utilizing.

11 A I have seen some very unusual cross training
12 opportunities, yes.

13 Q Is the LILCO program what you would characterize
14 as unusual?

15 A Not necessarily so.

16 Q Have you ever seen something like this before?

17 A Have I ever seen what, please?

18 Q Have you ever seen the kind of cross training
19 involved in the LILCO training program before?

20 We can go through the positions one by one if
21 you want.

22 A I understand.

23 I believe that there are other emergency plans
24 that utilize individuals whose primary role is not necessarily
25 that of an emergency responder.

1 Q Do you believe that there are other emergency plans
2 where utility workers perform off-site emergency response
3 functions?

4 A I am not familiar with all the utility emergency
5 plans throughout the United States, so that would be
6 speculative on my part.

7 A (Witness Renz) If I could expand on that answer.
8 Yes, the Indian Point emergency response plan, the local
9 plan is supplemented by utility personnel, particularly
10 in the Rockland County plan.

11 Q How is the Rockland County plan supplemented
12 by the utility personnel off-site?

13 A They use utility resources in the form of
14 utility personnel both from the New York Power Authority
15 and from Consolidated Edison in order to provide for
16 certain personnel in at least the Rockland EOC and in other
17 areas such as bus drivers.

18 Q Bus drivers and the EOC, correct, Mr. Renz?

19 A Those are the two examples that come to mind, yes.

20 Q To your knowledge, is the Rockland County
21 Indian Point situation a temporary situation?

22 A What is your definition of temporary?

23 Q Not permanent.

24 Q I am not familiar enough with what has
25 transpired in the last few months to know that there is any

1 end in the near sight. Perhaps Dr. Cordaro can expand on
2 that.

3 A (Witness Cordaro) It is hard to say at this
4 point in time whether it is temporary or permanent. It
5 depends on developing situations.

6 Now, I understand that the Rockland County
7 municipality has agreed to participate in the plan now
8 and this may change aspects of the plan.

9 I don't think we are that sure right now how
10 that changes the plan. And we are also not sure of what may
11 occur down the line which may cause this perhaps
12 temporary arrangement to remain permanent.

13 It depends on too many additional developments
14 which have to take place out in time to specifically
15 state right now whether it is temporary or permanent.

16 A (Witness Renz) If I could add to that, I
17 just realized that the two examples I cited, bus drivers
18 and personnel in the EOC, which were provided by utilities,
19 were not because of a lack of county resources. It was --
20 in the EOC it was a dose assessment expertise, and I don't
21 know if that is permanent or temporary.

22 But with regard to the bus drivers, it was my
23 understanding that they were going to be training
24 utility employees to serve that function for some time to
25 come.

1 Q Do you know why it is, Mr. Renz, that at
2 Indian Point utility workers had to serve as bus drivers for
3 an off-site emergency response?

4 MS. MONAGHAN: Objection. For awhile the
5 questioning was relevant to the professional qualifications
6 of Mr. Berger in particular. But I think it has gone
7 pretty far afield from that and certainly doesn't relate
8 to any of the contentions at issue. I object on that
9 basis.

10 JUDGE LAURENSEN: Sustained.

11 BY MR. MILLER:

12 Q Mr. Berger, you also mention pre- and post-testing
13 on page two of your qualifications.

14 A (Witness Berger) That's correct.

15 Q Could you tell me why it is that you include
16 pre- and post-testing in designing training programs?

17 A Sure. There are some occasions when you perhaps
18 would be putting individuals through a program, Mr. Miller,
19 when it wouldn't be necessary to do so because they already
20 possess the skill that you are trying to teach. The
21 purpose of a pre-test is to determine the skill level of
22 the individual and not require them to go through a
23 training program which is essentially designed to teach
24 them a skill which they already have.

25 Post tests essentially does the same thing. It is

1 It is to determine the amount of skill that the individual
2 has acquired as a result of a total training program.

3 Q Is post testing a way to evaluate performance?

4 A It is one method.

5 Q Is it fair to say that pre-testing is basically
6 screening of your trainees?

7 A No, not at all. It is not used with that intent.
8 Pre-test is used -- once again, I will restate it --
9 it is used to determine the amount of knowledge that an
10 individual has prior to entering a training program so that
11 you are not requiring that individual to be instructed
12 in a skill that they already possess.

13 If you had an individual who has considerable
14 amount of ability, reading or otherwise, there is no reason
15 to require that individual to go through a training
16 program if they already possess the skill.

17 Q What is the disadvantage from the standpoint
18 of a trainer, Mr. Berger, to requiring a trainee to go
19 through training for a skill which he already possesses?

20 A Well, there could be a motivational issue.
21 Someone who is not going to attend a class because they
22 feel they already possess the skill.

23 Q Is there any pretesting done under the LILCO
24 training program?

25 A Not to the best of my knowledge.

1 Q Mr. Berger, do you still have any involvement in
2 the LILCO training program?

3 A Only as a curiosity.

4 Q As a curiosity?

5 A Well, I keep abreast, try and keep abreast of what
6 is occurring.

7 Q While you were involved with the LILCO training
8 program, how long were you involved with the LILCO
9 program?

10 A It seems to me from about March of last
11 year through perhaps November. February, March, somewhere
12 in that time frame.

13 Q And it states on page 3 of the testimony,
14 Mr. Berger, that your role was that of video tape
15 producer and director for the instructional media portion
16 of the program.

17 Do you see that?

18 A Yes, I do.

19 Q Was that your sole involvement?

20 A No.

21 Q What other job functions did you have when
22 you were working for IMPELL on that LILCO training program?

23 A Basically that of the instructional designer
24 for the program, helping to establish the methodology for
25 the instruction that would occur in the classroom portion of

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the program.

Q When you say designing the methodology, is that the concept of video tapes and workbooks and the classroom instruction?

A That's correct.

Q Did you have any involvement, other than in the classroom training portion of the LILCO program?

A My involvement ended with the classroom portion. It did not include the other portion of the training program which are the drills and exercises.

Q Did you have responsibility, Mr. Berger, for supervising or preparing the classroom instructors used in the LILCO program?

END 13

#14-1-SueT 1

2 A (Witness Berger) Only to the extent, Mr. Miller,
3 of preparing the video tape portion and textual portions
4 of the materials that would be reviewed by the instructors
5 As it applies to actual classroom preparation of the
6 instructors or classroom orientation, I did not. That was
7 a function that was performed by another IMPELL employee.

8 Q Was that Mr. Behr?

9 A That was Mr. Behr.

10 Q Did you write the video tape scripts, Mr. Berger?

11 A I did not write the scripts. I did review the
12 scripts.

13 Q Mr. Varley, did you write the scripts?

14 A (Witness Varley) I was involved in writing
15 several of the scripts. Yes.

16 Q Let's talk about the video tape scripts for a
17 second. Mr. Berger, the scripts were written in part by
18 Mr. Varley, I gather, and then reviewed by yourself and
19 then what was done?

20 A (Witness Berger) The chain of events was a
21 little more sophisticated than that. Mr. Varley, or one
22 of the writers, of which there are a total of five, would
23 write the script. It would be sent over, reviewed by LILCO
24 personnel as well as Dr. Mileti, as well as counsel. Their
25 comments perhaps incorporated or suggestions incorporated,
and after that process had been completed I would receive a

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1 copy of the script for what would be termed visualization.

2 Q Dr. Mileti, in commenting on the video tape
3 scripts, were your comments -- is it fair to say your
4 comments were recommendations in some cases?

5 A (Witness Mileti) My comments went to two things.
6 One, to comment from a social scientific point of view to
7 see if I thought a few words needed to be inserted about
8 human behavior wherever I thought it was appropriate, or to
9 change some words about human behavior wherever that might
10 have been appropriate.

11 And in addition to that, anything else that came
12 to mind as I was reading them for that reason, I also
13 commented on. My comments certainly were my recommenda-
14 tions.

15 After discussing with whomever wrote that parti-
16 cular script, it became clear that some of my recommenda-
17 tions were from left field but most of them I think ended
18 up being pretty good ones, and they were taken to heart.

19 Q Some of the recommendations or comments were not
20 adopted, though; is that fair to say?

21 A Oh, of course. Some of them shouldn't have
22 been. They were bad ideas.

23 Q And you also reviewed, didn't you, Dr. Mileti,
24 the LILCO workbooks?

25 A Yes, I did.

#14-3-SueT 1

2 Q Is the same true for your comments and recommenda-
tions regarding the workbooks?

3 A Yes.

4 Q Some were not adopted, some should not have been
5 adopted?

6 A To the best of my recollection, yes. I do recall
7 having ideas and I recall that most of them, I'm happy to
8 say, were good ones. And some of them weren't.

9 And in conversations in discussing those comments,
10 I found out why and agreed.

11 Q Your comments with respect to human behavior,
12 Dr. Mileti, were those comments all followed by LILCO?

13 A I can't recall if all of them were or all of
14 them weren't. I do recall that the comments I thought after
15 discussing with the person who wrote the workbook, knew
16 about the workbook, the kind of people that were going to
17 read it, et cetera, I felt satisfied that the comments that
18 I made that should have been taken were taken and used, and
19 others weren't.

20 And in recalling that, I don't distinguish between
21 the workbook and the script. I mean, it was just things that
22 I read so I can't recall which was which.

23 Q Let me ask you one that I remember seeing, Dr.
24 Mileti. There is a comment I think on the transportation
25 workbook regarding bus drivers which said that, something to

#14-4-SueT

1 the effect: What are you going to tell the people left on
2 the corners.

3 Do you recall that comment?

4 A Vaguely. Do you have a copy that I might look
5 at?

6 Q Do you recall a comment, Dr. Mileti, where you
7 discuss some concern regarding the fact that LILCO families
8 might evacuate to the relocation center for emergency workers
9 and their families and how this might affect evacuation by
10 the general population who had been advised perhaps to
11 shelter at home?

12 A I remember that one a little more clearly but
13 not very clearly.

14 Q Do you remember what happened to these comments?
15 Were they adopted, were they followed, were any changes
16 made?

17 A Well, I would have to say I did this a year
18 ago, it literally was last Summer. And I do remember both
19 of those comments, but not clearly enough to comment on
20 them today without seeing it.

21 It -- I don't know what else I can say.

22 Q Do you remember a comment in the public informa-
23 tion workbook that said: Rewrite so not to put you to
24 sleep.

25 A I don't remember that one, but I remember making

#14-5-SueT

1 several of those kinds of comments. And I even remember
2 using stronger words than that in reference to others.

3 Q Is that because you generally found the work-
4 books boring?

5 A No. In fact, I found some of them interesting
6 and I learned quite a bit by reading some of them, about
7 things I didn't know about.

8 Q Why your comment: Rewrite so not to put you to
9 sleep?

10 A Well, that's hard to recall without seeing that
11 particular script or workbook.

12 Q Well, you say you recall writing that several
13 times.

14 A I remember writing that vaguely, yes. I do
15 remember that that was a criticism I had of more than one.
16 I --

17 Q I'm trying to get at, what was the point of
18 the criticism? What did you mean by that comment?

19 A Well, I remember there was one comment, and I
20 don't even remember what workbook it was for, or if it was
21 for a workbook or it was a script, but one of the comments
22 that I had was that it read like a FEMA regulation instead
23 of something that was training somebody.

24 (Laughter.)

25 I even objected to the verb tenses in it and

#14-6-SueT

1 suggested that that might be changed. I remember making a
2 comment about another one that was exceptionally long,
3 pursuing this line that you started. I don't remember the
4 topic of the workbook. And I remember saying that I thought
5 you needed to -- it didn't seem very readable to someone
6 who might just have finished high school, and I remember
7 making a comment that it should be rewritten because I
8 thought it was not the kind of thing the average person
9 could read or get information from.

10 I remember talking to, I think it was Ron Varley
11 on -- I'm not sure who it was, to be honest with you. I
12 would have to see which one it was. And I remember this one
13 in particular, because the person I talked to said: Well,
14 that's not meant to be read by people who probably just
15 have a high school education. It's aimed towards people
16 in command and control and, by and large, they have a better
17 education and it's probably better off that it's written at
18 a more sophisticated level. They wouldn't be insulted by
19 it, et cetera.

20 That's one of the comments that I made that I
21 think maybe was not taken to heart, nor should it have been.
22 It shouldn't have been rewritten to a lower reading level.
23 It should have used more sophisticated language.

24 Q I take it, Dr. Mileti, from what you are saying,
25 that you don't recall whether specific comments were adopted

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by LILCO?

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A No, that's not true. I recall some of them, I'm sure, and I don't recall others. Again, that was a dozen and a half workbooks and a dozen and a half scripts, and it was over a year ago.

Q Mr. Berger, are you aware of the fact that LILCO has fairly recently revised video tapes used in its training program?

A (Witness Berger) I'm aware that there are revisions, yes.

Q Would it be fair to say that these revisions in some cases are substantial revisions?

A I don't know to the extent of the revisions, Mr. Miller.

Q Is anyone on the panel familiar with the revised video tapes?

A (Witness Varley) Yes, I'm aware of the revisions.

Q Would it be fair to say that in some cases the revisions are substantial?

A My definition of substantial would be that there were complete rewrites of the entire workbook or the entire script, and in that sense, no, I wouldn't say that they are substantial.

Q Would you say that the revisions, in all cases,

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1 have been insignificant, then?

2 A That's not what I said. I said that they
3 weren't substantial based upon complete revisions and
4 complete rewrites of page by page. I think that there were
5 improvements and enhancements to the material that identified
6 changes that had occurred since the original revision of
7 the emergency plan and implementing procedures. And the
8 revision was necessary to bring the training materials in
9 line with the revision to the plan and procedures.

10 And I think that that's going to be an ongoing
11 process that ensures that the training materials are kept
12 in line and reflect exactly what the plan and procedures
13 intend to do.

14 Q Mr. Berger, on Page 3 of the testimony, you
15 say that you were responsible for identifying the visual
16 images that would best represent the information in the
17 scripts directing the actions of the video tape production
18 crew on location and editing the original footage into the
19 final presentation master tapes.

20 Do you see that?

21 A (Witness Berger) Yes, I do.

22 Q Did you personally do all these things?

23 A You betcha.

24 Q Did you have a staff at all working under you?

25 Is this a one-man operation on the video tapes?

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1 A Oh, no. There is a production staff. The
2 actual video tape crew, Mr. Miller, consisting of a cinema
3 photographer, engineer and grip, were vended. ADM Pro-
4 ductions provided support for that.

5 I had myself as director-producer. I also had
6 an assistant that would keep track of our scenes, Alice
7 Behr. And I also had one other assistant, one other pro-
8 duction assistant in the person of Charles McCloud (phonetic),
9 an IMPELL employee.

10 Q Dr. Cordaro, in looking through your resume I
11 did not see the word training anywhere, and let me just ask
12 you, is it fair to say that you have had no background or
13 involvement in training?

14 A (Witness Cordaro) No.

15 Q Would you explain to me what background or
16 involvement you have had in training?

17 A Well, first of all, obviously from the resume,
18 from the standpoint of teaching college courses, both at
19 the undergraduate and graduate level, I view that as some
20 aspect of training, as an educator. In my corporate back-
21 ground, I had occasion to train a number of people. In
22 some cases, my successors in the jobs I had at the corpora-
23 tion; and, in other cases, people who work for me who
24 required training in specific disciplines or activities
25 that had to be carried out.

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2 Q Do you draw a distinction, Dr. Cordaro, between
an educator and a trainer?

3 A I don't draw as sharp a distinction as some
4 might. I think an educator is more involved in the class-
5 room and presenting the underlying foundations and principles
6 which are later implemented and applied from the trainer's
7 prospective. I think the trainer is a more of a how-to
8 individual, someone in the field, someone demonstrating
9 equipment, more along those lines.

10 So there is somewhat of a distinction. I don't
11 think it's as sharp as all that. I think there is an
12 overlapping area where an educator is a trainer and maybe
13 a trainer is somewhat of an educator also.

14 Q Dr. Cordaro, putting to one side the college
15 courses, whether you see that as an educator or as a
16 trainer, is it fair to say that your other background or
17 involvement in training did not involve participation in
18 a formal training program?

19 A I didn't head up a formal training program,
20 per se that I can recall. I've participated in formal
21 training programs, however.

22 One that comes immediately to mind is our
23 emergency restoration. I trained people to do the same
24 job that I was trained to do in the electrical emergency
25 restoration organization. And I also trained people

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2 specifically to do jobs, nuclear-related and related to
3 environmental science and environmental studies.

4 Q When you say in the testimony, Dr. Cordaro,
5 on Page 4 that your role in emergency planning for Shoreham
6 is to ensure that the needs and requirements of emergency
7 planning are met, does that include determining training
8 needs and requirements?

9 A Yes.

10 Q Have you done so?

11 A Yes.

12 Q Can you give me some examples of the kind of
13 training needs and requirements you have been involved
14 in?

15 A Well, at all stages of the development of our
16 program to establish LERO through LERIO, the training
17 methods that were going to be employed, and the concepts
18 that were going to be utilized in training were submitted
19 to me for my review and approval or comments. And I did
20 so.

21 Q Mr. Berger, would you consider what Dr. Cordaro
22 just said to constitute a training needs analysis?

23 A (Witness Berger) I consider a training needs
24 analysis when you have an individual who is working at
25 the training needs of any particular population. In this
particular case, I believe regulation states what your

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1 people must do. And in essence already sets the needs,
2 the training needs.

3 COURT REPORTER: I'm sorry. I could not hear
4 you.

5 WITNESS BERGER: I said I believe in this
6 particular case that the regulation states what are the
7 training needs of the population.

8 BY MR. MILLER: (Continuing)

9 Q My question was, do you consider Dr. Cordaro's
10 statement regarding training needs to constitute a train-
11 ing needs analysis?

12 A I will state it one more time. And that is, in
13 this particular case where you have an individual such as
14 Dr. Cordaro who is observing for training needs, I would
15 say that constitutes a needs analysis.

16 MR. MILLER: Judge Laurenson, this probably would
17 be a good time to take the afternoon break, the first
18 break.

19 JUDGE LAURENSEN: All right. We will take a
20 recess now.

21 (Whereupon, the hearing is recessed at 3:50
22 p.m., to reconvene at 4 o'clock p.m., this same day.)

23 end #14

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(4:00 p.m.)

JUDGE LAURENSEN: We are back on the record.
Mr. Miller?

BY MR. MILLER: (Continuing)

Q Let me ask a question of the entire panel.
Are any of you gentlemen members of any professional training
organizations or societies?

A (Witness Berger) I am.

Q Could you tell me which one or ones?

A I am a member of ASTD, American Society of
Training and Development. I am also a member of AECT,
American Education Training Association.

A (Witness Babb) I am a member of the Criminal
Justice Educators Association of New York State.

A (Witness Mileti) I am a member of the American
Sociological Association and a variety of other associations
like that for sociologists, and one of the things that
sociologists do is teach.

Q Yes, sir, training society organizations is
my question.

A They don't have the word training in the title,
but certainly part of the things we do are train the next
generation of sociologists, some of which don't take
academic jobs. For example, our whole Ph. D program in
sociology at Colorado State University is devoted to

1 developing Ph.D sociologists to go into the applied world.
2 We train them and give them skills to do that.

3 Q (Witness Varley) I am also a member of the
4 American Nuclear Society Training Division.

5 Q What would that be, Mr. Varley, with respect
6 to nuclear engineer training?

7 A No, the training division within American Nuclear
8 Society covers a broad range of training topics, including
9 emergency planning training.

10 Q Offsite emergency planning training?

11 A Those issues are discussed as well as onsite, yes.

12 Q Mr. Daverio, other than your duties as Assistant
13 Manager of LERIO, have you had any other involvement or
14 responsibility in any way connected to training for an offsite
15 response to radiological emergency?

16 A (Witness Daverio) To some extent.

17 Q Could you tell me what that would be?

18 A Yeah . It really falls into two fashions. One,
19 was when the Suffolk County Planning Department was working
20 on their plan with LILCO. I was the prime contact to
21 discuss all aspects of emergency planning with that depart-
22 ment, including training, and had discussions with them
23 concerning training of the County people.

24 I also, people who worked for me, attend New
25 York Power Pool meetings of a subcommittee which deals with

1 New York State REP group, Radiological Emergency Preparedness
2 Group, concerning all aspects of emergency planning for the
3 State of New York, including training of county and state
4 people.

5 So, in that context I have participated in
6 discussions on offsite emergency planning other than as
7 LERIO as you said it.

8 Q Other than participating in discussions, Mr.
9 Daverio, anything else with respect to offsite emergency
10 training?

11 A As I mentioned earlier, some of the onsite
12 training that I have done, and coordinating was responsible
13 for, I talked about some aspects of offsite planning,
14 because a good onsite plan has to understand an offsite
15 plan.

16 Q Have you actually trained offsite emergency
17 response personnel, Mr. Daverio?

18 A Yes.

19 Q Can you tell me -- have you trained various groups,
20 or whom have you trained?

21 A I have trained LERO people.

22 Q Traffic guides? What kind of groups are you
23 talking about?

24 A No. I was the prime instructor for one of the
25 accident management table tops in which I was talking to the

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1 senior coordinators in the EOC concerning onsite planning
2 and its interface with offsite planning.

3 Q Anything else?

4 A That is the only table top or class. I was
5 involved in drills and exercise, but as to a formal classroom
6 setting, that was the only one I actually gave the instruction.
7 I have monitored others.

8 Q Dr. Mileti, have you actually trained any LERO
9 workers?

10 A (Witness Mileti) I think I have contributed
11 to their training.

12 Q Have you conducted any classes?

13 A Well, I did make a video tape, and the reason I
14 made a video tape is that LERO wanted me to come out and
15 conduct classes, but they wanted me to do it at a time when
16 I was giving classes at Colorado State University and
17 couldn't, so what we did was have me conduct the equivalent
18 of one class where I answered some questions for people
19 in LERO who would, in an emergency, drive buses, and they
20 asked me questions that were questions that they, as well
21 as others who would drive those buses in an emergency
22 had, and I tried to answer some of them for them.

23 And it is my understanding that that tape has
24 been shown to others who might also drive buses. So, in
25 that regard I feel like I have contributed to their training.

1 And beyond that, I have also -- I feel responsible for
2 training and giving information, teaching, whatever it is
3 you want to call it, a variety of other people that have
4 jobs in LERO.

5 For example, John Weismantle. Had extensive
6 conversations with him over a two year period. More
7 intense in the beginning than now about things that I thought
8 he needed to know. And others inside of LERO as well.

9 Q Is it fair to say, Doctor Mileti, that for the
10 most part your involvement in the LERO training program
11 is as set forth on page 5 of the LILCO testimony?

12 It basically says you reviewed and commented
13 on 19 training video tapes, as well as accompanying work-
14 books, and have prepared a video tape to answer some questions
15 for LERO bus drivers?

16 A Yes, I have done that, but I think also having
17 discussions with people in LERO like John Weismantle, that
18 I just described in addition to what is listed here.

19 Q And these discussions, Doctor Mileti, were with
20 LERO personnel such as Mr. Weismantle, regarding the performance
21 of LERO jobs and tasks, is that correct?

22 A In part, yes. Particularly in reference -- as
23 you might already know, to public emergency information, which
24 I feel is one of the most important things to plan for in
25 an emergency.

1 Q Yes, sir. I don't understand how discussions
2 regarding public information constitutes training?

3 A Well, let me try to give you an example . I
4 spent a great many hours on a number of different occasions
5 discussing with Carole Clawson -- I am surprised that I
6 remembered her name, but I do remember Carole's name -- about
7 how and what an EBS message, in my opinion, should look like,
8 and how they might best be worded and the topics they needed
9 to address, and Carole had a wealth of experience before I
10 ever encountered her, and I would like to believe she knows
11 more now about emergency information than she did when we
12 began.

13 I might also add that I learned some things from
14 her based on her experience.

15 Q What did you train Ms. Clawson to do, for
16 example?

17 A I think I trained her to understand that a variety
18 of different concepts needed to be addressed in an EBS
19 message. For example, consistency of information internal
20 to the EBS message, as well as the sorts of things one might
21 take into account when those sample messages are altered to
22 conform to a particular situation, as they might arise
23 in an emergency.

24 Q (Witness Berger) Mr. Miller, might I add also
25 that one on one, or OJT training is an acceptable practice

1 in the industry.

2 Q Dr. Mileti, I am trying to see if we can't keep
3 as much as possible the distinction between educating and
4 training, and if you will, for the moment, go back to Mr.
5 Babb's definition of educating being the teaching of why
6 you are doing something.

7 Now, wouldn't your discussions with persons like
8 Mr. Weismantle and Ms. Clawson fall into the category of
9 educating rather than training those individuals.

10 A (Witness Mileti) I don't think so, and to be
11 honest with you don't agree with your distinction or Mr.
12 Babb's distinction between educating and training.

13 For the life of me, I am having a real difficult
14 time trying to understand the difference. For example, when
15 I go and teach a class at the university, and I teach the
16 theory of something, that in your terms might be education,
17 or it might be training, on the other hand when I teach
18 someone how to turn a computer terminal on, how to access
19 a statistical package that we use in the social sciences,
20 is that educating or is it training? I really have a
21 difficult time distinguishing between education and training.

22 I understand the difference between teaching
23 people theory and teaching people mechanical skills. That
24 makes sense to me. But the distinction on the basis of
25 education versus training is not clear with me.

1 Q Let's try this distinction, Doctor Mileti. Let
2 me begin with Doctor Cordaro.

3 Doctor Cordaro, when LILCO hires a nuclear
4 engineer for Shoreham, I assume that person -- let's assume
5 that LILCO hires that person out of school. That person,
6 you agree, would be educated, correct?

7 A (Witness Cordaro) Well, he would have a degree.
8 A bachelor's degree in nuclear engineering, which would have
9 indicated that he took a certain prescribed course of study,
10 and had some basic foundations in nuclear engineering.

11 Q Now, would you put a person out of school with
12 a new degree in nuclear engineering, directly into your
13 control room?

14 Or would you want to have trained that person
15 beforehand?

16 A Of course not. We wouldn't put him in the
17 control room in the capacity of being a control room
18 operator.

19 Q So you would want to train that person before?

20 A Might put him in the control room to observe
21 what was going on in the control room, and possibly learn
22 from that experience, but we wouldn't put him at the
23 controls of the reactor.

1 Q Observation, Dr. Cordaro, I think we can all
2 agree, would include part of training. What I am wondering
3 is this: Would you agree with me that you would want not
4 only someone educated as a nuclear engineer but someone
5 trained to work as an engineer at the Shoreham facility
6 before you would place that person in a position of responsi-
7 bility in your control room?

8 A If he had responsibility in the control room,
9 he would have to have a license from the NRC and that would
10 call for a specific amount of training and for him to have
11 certain qualifications. It would be impossible for us
12 to do so, to put an unlicensed individual in charge of
13 the control room.

14 Q I am just trying to draw a distinction, if we
15 can, between educating and training.

16 A (Witness Daverio) I think the problem we are
17 having is a panel is, you can't make the clear distinction
18 that someone in college is only being educated. I have
19 taken courses that I would consider training. I learned
20 how to operate a reactor in the school I went to because
21 we had a reactor.

22 If you consider that training, I was trained
23 at a college.

24 The distinction you are making is not as fine
25 as someone going to college can only be educated and not

1 trained. It depends on the course.

2 Even if you take Dr. Babb's definition, it depends
3 on the curriculum and the subject matter being taught
4 as to, even under his definition, whether it is being
5 training or being educated.

6 So I think you can't make as fine a distinction
7 as you are trying to, Mr. Miller.

8 Q Mr. Renz, is it fair to say that your primary
9 area of responsibility regarding the LILCO transition
10 plan is in the area of communications?

11 A (Witness Renze) I would say that is a primary
12 area, yes.

13 Q And I gather from the errata sheet filed today
14 that your primary area of responsibility regarding
15 training is in the area of communications training; is
16 that right?

17 A No. I wouldn't term it that way. I would
18 say that my primary responsibility in the area of training
19 is, as being a manager of one of the other divisions within
20 LERIO, is being responsible for the review of certain
21 materials that are generated and instituted by the training
22 division.

23 Q Do you conduct any training classes for LERP?

24 A I have sat in on table tops, and I have answered
25 questions that have arisen during those table tops. I have

1 not, to my recollection, been designated a trainer or
2 instructor or educator at any of those table tops.

3 Q Mr. Renz, we have learned that LILCO is
4 presently working on revisions to the LILCO plan.

5 Can you tell me at this time whether any of those revisions
6 will be with respect to training aspects of the LILCO program?

7 A I am sorry. Can you repeat that question?
8 I didn't think you were finished with it.

9 Q I am finished.

10 I am trying to determine from you whether any of the
11 revisions that are being made to the LILCO transition
12 plan will include revisions to training aspects of the
13 LILCO plan?

14 A I would like to confer before I respond to that.
15 (Witnesses conferring.)

16 Any future revisions to the plan or procedures
17 content of those revisions might at some point enter the
18 training program. The revision of the program itself, I
19 don't think we are contemplating that right now as far as
20 the number of modules we institute or the types of drills
21 we institute.

22 We are considering changes to the drill matrix,
23 adding certain positions to be trained in additional
24 areas. But beyond that, as far as I know, that is the only
25 area.

1 Q Are you considering these changes to the drill
2 matrix because of problems which have arisen in the
3 context of the drills that have been conducted to date?

4 A I don't think so. I think any additions to
5 or revisions to the drill matrix would be enhancements
6 to the program as opposed to serious revisions as a result
7 of problems.

8 A (Witness Daverio) I might be able to add.
9 The types of changes we are looking at right now would
10 be for consistency. We might give one job classification
11 a training sessions that a class that does the same type
12 work doesn't get. So we are looking at that to see if
13 there is any consistency changes. And we have identified
14 one area where we are going to make some changes.

15 The other area that we are looking at is in
16 implementing an annual drill program. We are looking at
17 running drills quarterly. We say right now we are going
18 to run an annual drill program, but we have three shifts.
19 S. that means we have to run it three times annually.
20 So rather than doing it in one block one time a year, we
21 are now looking at doing a set of drills every quarter so
22 that every three months we are running a complete drill
23 program.

24 Those are the types of refinements we are looking
25 at, going into the annual maintenance program and the things

1 required to make the annual maintenance program work better.

2 Q Mr. Renz, as part of your job, is it accurate
3 to say that you supervise and coordinate the work performed
4 by IMPELL?

5 A (Witness Renz) No. None of the people in my
6 division are employed by IMPELL.

7 Q Well, is the statement on page 2 of your resume
8 inaccurate then?

9 It says, "As manager of the technical division
10 of LERIO, I also supervise and coordinate the work performed
11 by emergency planning consultants such as IMPELL."

12 A It was just pointed out to me, we do maintain at
13 present our procedures word processing unit at IMPELL,
14 and to that regard I do supervise that type of work.
15 I do have personnel from other consulting firms reporting
16 to me at the present time.

17 Q I don't think I understand, Mr. Renz. The
18 words in your resume, "supervise and coordinate," are they
19 related to the fact that you have word processing machines
20 at IMPELL?

21 (Witnesses conferring.)

22 A Yes. IMPELL right now is responsible for the
23 physical maintenance of the procedures. My group is
24 responsible for the technical content of the procedures.
25 People that work for me interface with or I directly

1 interface with members of IMPELL as well as the other
2 consulting firms mentioned in that passage.

3 Q IMPELL is the only consulting firm mentioned
4 that is a training consultant to LILCO, correct?

5 (Witnesses conferring.)

6 A Other than specialized instances like Dr. Babb
7 or others, yes.

8 Q So with respect to training, could you tell me
9 what is involved in your supervision and coordination
10 of IMPELL?

11 A I don't believe the resume says anything in
12 regard to my supervision or coordination of IMPELL with
13 regard to training.

14 Q You supervise and coordinate IMPELL in ways
15 other than in ways related to training?

16 A Yes, as I stated earlier.

17 MS. MONAGHAN: I think that that has already
18 been asked and answered with respect to what Mr. Renz'
19 relationship is with the IMPELL corporation.

20 BY MR. MILLER:

21 Q Mr. Varley, if you will look please at your
22 attachment and resume which is attachment 18 to the
23 professional qualifications book.

24 A (Witness Varley) I have that in front of me.

25 Q You helped write the LILCO planned procedures; is

1 that right?

2 A I helped write certain portions of the plan and
3 procedures, that is correct.

4 Q You say that you are the assistant project
5 engineer, I gather for IMPELL, regarding the LILCO
6 training program; is that correct?

7 A That's correct.

8 Q Who is the project engineer?

9 A Mr. Dennis Beh..

10 Q Have you been an instructor in the training
11 classes?

12 A Training classes for LERO?

13 Q Yes.

14 A That's correct.

15 Q You have been an instructor?

16 A Yes, I taught classes to the United States
17 Coast Guard in New Haven, and I also conducted table top
18 training sessions for the LERO management.

19 Those were termed accident management table tops.

20 Q You also helped develop the IMPELL training
21 proposal to LILCO; is that right?

22 A That's correct. I had input into that proposal.

23 Q Can you tell me, Mr. Varley, was that proposal
24 adopted by LILCO as presented by IMPELL?

25 A I don't know the specifics of that proposal

1 cif hand. And there are several proposals that we could be
2 talking about.

3 There was a proposal to do training, and there
4 was also a proposal to do the drill and exercise program.
5 So I guess you would have to be more specific.

6 If I could review the proposal in its entirety,
7 then I could comment on whether it was adopted in whole
8 or in part.

9 Q Let me ask you first about the training proposal
10 by IMPELL. Do you recall any aspects of that proposal
11 that were not adopted by LILCO?

12 A Not without reviewing the proposal, I couldn't
13 comment.

14 Q Is your answer the same with respect to IMPELL's
15 proposal for drills?

16 A Yes, it is.

17 Q Maybe we will come back to that.

18 Let me ask you, Mr. Varley, how you would define
19 a lesson plan? It is on page 3 of your resume.

20 Q I believe there are several different types of
21 lesson plans that can be developed, depending upon the
22 application and what you are trying to accomplish in the
23 classroom.

24 I have seen lesson plans that were written that
25 were very specific and detailed, that covered step by step

1 everything that the instructor was due to convey to his
2 students. I have also seen lesson plans that were
3 developed as a guideline for an instructor or a teacher,
4 however you want to use the term, to go into a classroom
5 to use as a mental checkoff to make sure that he
6 conducts the classroom session in a proper sequence.

7 So there are various formats for a lesson plan,
8 and it depends upon the application and the desires of the
9 particular institute that is conducting the training
10 program.

11 Q You say on page 3 of your resume, Mr. Varley,
12 that "while acting as training engineer, my responsibilities
13 included administering examinations, evaluating students
14 and their progress."

15 Do you see that?

16 A That's correct.

17 Q I gather when you say "administering
18 examinations and evaluating students," you are talking
19 there about testing; is that right?

20 A I think you are looking at two different items.
21 One is administering examinations. That is one form
22 of testing. Personal observation and witnessing an
23 individual perform a function is another form of
24 evaluation of students.

25 Q In administering examinations, was that administering

1 a written test?

2 A Administering written tests, yes, and also
3 oral examinations.

4 Q And the purpose of doing that was what?

5 A To determine particular qualification for a
6 function.

7 Q Mr. Varley, or really, let me direct this to
8 the panel, I want to see if we can agree to some
9 definitions.

10 Drill and exercise. Could you define for
11 me a drill and distinguish it from an exercise? Anyone
12 on the panel.

13 A A drill is a supervised instructional period
14 in which you put the people in simulated real life
15 situations or an environment in which you expect those
16 individuals to perform.

17 You provide stimulus that would allow those
18 individuals to carry out certain activities, and an
19 observer or controller is there to witness the process
20 through which those individuals go to accomplish that
21 function.

22 If at any time the individuals errs or fails to
23 understand a step in a procedure, for example, the observer
24 or controller has the latitude to instruct that
25 individual in the proper steps to take to accomplish the

1 function.

2 Whereas in an exercise, an exercise is designed to
3 evaluate the individual's performance without the controller
4 or observer stepping in and prompting him to be able to
5 complete that task.

6 Q From a training perspective, Mr. Varley,
7 is it important to keep the distinction between a drill
8 and an exercise in mind?

9 A I think when you conduct a drill versus conducting
10 an exercise that it is inherent within the preparation and
11 conduct of that activity that those two things are
12 distinct and separate from one another.

13 Q Now, could we get a definition of module
14 versus workbooks and video tapes?

15 A Yes. A module, as outlined in our plan and
16 procedures, is a particular segment of information that
17 you want to relay to the students.

18 In the case of the LERO program, what we call
19 a module would be the presentation of let's say
20 transportation topic. The students would observe a
21 video tape. They would complete a workbook. That would
22 be a module on transportation.

23 There are certain modules in which we only wish
24 the students to see a video tape, or there were certain
25 modules in which we only wanted them to complete a workbook.

1 So you have to look at the particular topic and determine
2 whether both a workbook and a video tape are required or
3 one or the other.

4 But in all cases a module was the presentation
5 of a selected topic's material.

6 Q In terms of the LILCO training program, is a
7 module the classroom session, whether it be made of workbooks
8 or video tapes or both? Is that --

9 A I think some of your confusion may arise from
10 the difference between a module and a session. A session
11 could combine several modules.

12 What we found in conducting the LERO training
13 program was that certain job categories required more than
14 one module to be presented and that we could, in fact,
15 combine several modules in a given training session to
16 expedite the training process.

17 So you could, for example, have a training
18 session in which modules one and two were presented at the
19 same time.

20 So we called that a training session that
21 incorporates several training modules.

22 Q Would it be fair to say that the modules under the
23 LILCO program were generally comprised of both a workbook
24 and a video tape?

25 A You could say that generally, yes. And that a

1 training session would tend to incorporate several modules.

2 Q What about the distinction between controller
3 and observer under the LILCO plan? Is there one?

4 A To the extent when you get to exercises, yes,
5 there is a difference between a controller and observer.

6 The term controller and observer sometimes gets
7 loosely defined in discussions, but in essence, a
8 controller has more responsibility during the course of
9 conducting an exercise than does an observer.

10 An observer is put in place merely to witness
11 the performance of an individual or a group of individuals
12 in the conduct of carrying out their responsibilities.
13 A controller has the additional responsibility of
14 insuring that the exercise is conducted in a safe and
15 efficient manner and has the responsibility of interceding
16 should the exercise lead to a dangerous situation or
17 get so far afield from its intended objectives that a correct-
18 ive step is necessary to keep it in line.

END 16

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Q Under the LILCO program, are controllers and observers used in drills as well as exercises?

2
3 A I guess I would answer yes to that.

4 Q Is it fair to say that observers are generally
5 LILCO personnel?

6 A No, I wouldn't say that.

7 Q Are they either LILCO or IMPELL personnel?

8 A They could be from many different sources.

9 Q Let's take them one at a time. The drills
10 that have been conducted to date, have you had observers
11 other than from LILCO and IMPELL?

12 A Yes, we have. We have had observers from Stone
13 and Webster. We have had observers from the Department of
14 Energy. We have had observers from, I believe, it was
15 Orange County.

16 Mr. Daverio may have a few others in mind.

17 Q And is --

18 A (Witness Daverio) We have had an observer from
19 Nassau Red Cross. That's the only additional one I can
20 think of.

21 Q And the same would be true for exercises, Mr.
22 Varley?

23 A (Witness Varley) Is what the same as being
24 true?

25 Q That you have had observers during exercises other

#17-2-SueT

1 than observers that are either LILCO or IMPELL personnel?

2 A Yes, that's true.

3 Q The same people that you have mentioned?

4 A Generally, yes.

5 (Witness Daverio) They all wouldn't be the
6 same at -- in other words, not everyone of those people we
7 listed was at every drill, but at least one time each of
8 those organizations was represented.

9 Q Now, a controller -- are controllers for drills
10 always IMPELL personnel?

11 A (Witness Varley) No, I don't believe they were.

12 Q Are they the same types of people you just named
13 from these different organizations?

14 A I believe it was probably limited to either a
15 LILCO employee, a Stone and Webster employee or an IMPELL
16 employee.

17 Q And the same would be true for controllers during
18 exercises?

19 A Yes, that's true.

20 Q Observers -- let me make sure I understand this.
21 Observers are people who watch or witness a performance,
22 correct?

23 A That's correct.

24 Q Do they also evaluate the performance?

25 A Yes, they do.

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Q The controllers of the drills and exercises, Mr. Varley, who do they report to?

A The drill is structured such that you have a lead drill controller, or in an exercise a lead exercise controller, at each facility. And then there is one individual who is identified as the overall lead controller in conducting the drill or the exercise.

What you try to do is you try to structure within the exercise conducting organization a chain of command, such that you have control over the ability to conduct that drill or exercise in a safe and efficient manner. So, the hierarchy would be that you have observers and controllers at each facility. For that particular facility, you have a lead drill controller, and then ultimately you have a senior individual who is a lead drill controller who the facility lead drill controllers would report to.

Q Is the same true on the observers side?

A No. The observers also would report to the lead drill controller at each facility.

And, then there are also instances where you have observers and controllers that may rove from one facility to another, but they know who would be the lead drill controller at each facility.

Q Is the lead controller for a facility always an IMPELL person?

#17-4-SueT

1 A I don't know if that would be true or not. In
2 some instances, it could have been Stone and Webster, or
3 it may have even been a LILCO employee.

4 Q What about the lead controller for the drill or
5 exercise? Would that person always be an IMPELL person?

6 MS. MONAGHAN: Objection. I'm going to object
7 to this line of questioning. I think it is pretty far
8 afield from what Mr. Varley's professional qualifications
9 are, which is what I think we are still about on voir dire.

10 And I don't really see how it relates to anything
11 that has been raised by the contentions.

12 MR. MILLER: Well, Judge Laurenson, if you want,
13 I can say I'm asking questions about Page 95 that relate
14 to the drill scenarios and evaluation criteria, objective
15 criteria. I mean, these are questions I want to ask and
16 they seem to fit here.

17 I am trying to develop an understanding of
18 the background as to how drills and exercises are conducted
19 under the LILCO training program.

20 MS. MONAGHAN: If Mr. Miller was concerned about
21 a background, perhaps he should have done that during Mr.
22 Varley's deposition. It's not the time now to get background;
23 it's the time to litigate these contentions.

24 JUDGE LAURENSEN: For the limited purpose of
25 establishing a background, we will permit this line of

#17-5-SueT 1

questioning.

2

The objection is overruled.

3

WITNESS VARLEY: I believe, if I understood your

4

question properly, you were asking me who filled the role

5

of the lead controller for a drill and exercise, and was

6

that an IMPELL employee or others.

7

I believe to date all of our drills or exercises,

8

the lead controller has been an IMPELL employee.

9

BY MR. MILLER: (Continuing)

10

Q Who do you report to, Mr. Varley?

11

A Are you referring to who do I report to as far

12

as being a consultant with LILCO, or with IMPELL?

13

Q Well, within IMPELL, who do you report to?

14

A I report to Mr. Gary Rhoads.

15

Q Is the answer different with respect to LILCO?

16

A Yes, it is.

17

Q Who do you report to in that respect?

18

A Mr. Daverio and Mr. Weismantle.

19

Q Mr. Varley, let me ask you first of all, how

20

long have you been the Manager of the Training Division

21

of LERIO?

22

A Since the LERIO group was formed last April or

23

May I believe.

24

Q But you are an IMPELL employee, correct?

25

A That's correct.

#17-6-SueT 1

2 Q Do you know, Mr. Varley, whether classroom
instruction was supervised or monitored?

3 A Could you define --

4 MS. MONAGHAN: Objection. That contention was
5 not admitted by the Board. It's not relevant to the scope
6 of the contentions that have been admitted, as to whether
7 or not the program was monitored by LILCO.

8 MR. MILLER: I'm not sure what contention we are
9 talking about. I'm talking about Mr. Varley's background
10 and IMPELL's involvement as a training consultant to LILCO.

11 I'm asking whether as part of that background
12 information if Mr. Varley has information regarding class-
13 room supervision.

14 JUDGE LAURENSEN: At this point, we are at a
15 very preliminary stage, and so I think we should allow a
16 little leeway here, but if we get into an area concerning
17 testimony that has been stricken or other objectionable
18 items I think that we would be called on to sustain similar
19 objections.

20 But I think for the purpose of background,
21 the objection would be overruled now unless you can point
22 to a specific Order that this is in conflict with concern-
23 ing a strike --

24 MS. MONAGHAN: I refer the Board to the Board's
25 Order ruling on contentions of March 19, 1984, in which

#17-7-SueT

1 the Board denied admission of Contention 2.D which stated:
2 LILCO has failed to monitor properly or effectively the
3 classroom performance or effectiveness of the LILCO train-
4 ing instructors.

5 That was denied on the basis of the Waterford
6 decision.

7 JUDGE LAURENSEN: The problem that presents,
8 though, and that we encountered last week in ruling on the
9 motions to strike that were presented is that merely because
10 we did not admit a contention does not preclude presenta-
11 tion of evidence if it is related to some admitted conten-
12 tion.

13 And that's the test we have to apply here. But,
14 as I said, this appears to be a very preliminary background
15 question now. So I think for this limited purpose, the
16 objection is overruled.

17 BY MR. MILLER: (Continuing)

18 Q Do you remember the question, Mr. Varley?

19 A Could you repeat it, please?

20 Q Did you, to your knowledge, Mr. Varley, during
21 the LILCO training program, are the, and have the, classroom
22 sessions been monitored or supervised in any respect?

23 A Yes, they have.

24 Q Can you tell me how?

25 A Yes, sir. Each of the instructors, before being

#17-8-SueT

1 allowed to go into the classroom to teach, was given
2 preparation sessions by Mr. Dennis Behr in which the material
3 that was to be presented had to be reviewed by the instructor.
4 The instructor had to review the applicable portions of the
5 plan and procedures that that training material applied to.
6 And he also had to go through a question and answer session
7 with Mr. Behr to ensure that the instructor was well versed
8 on the material to be covered for that particular session.

9 In addition, from time to time, either myself,
10 Mr. Daverio or sometimes Mr. Behr, would drop in on training
11 sessions to make sure that they were progressing smoothly
12 and properly.

13 In addition, Mr. Weismantle, as a member of the
14 LERO organization, had to attend all of the training ses-
15 sions. And he, in fact, monitored the training sessions
16 in that respect as well as participated in them.

17 We also got feedback from senior LILCO management
18 on the progress of the training program through the classes
19 that they were attending.

20 So, in my definition of supervision and monitor-
21 ing, yes, they in fact were supervised and monitored quite
22 closely.

23 Q These dropping into the classrooms by yourself
24 or Mr. Daverio or Mr. Behr, how often would you say that
25 happened?

#17-9-SueT 1

2 A I can only speak for myself. And I attended
3 several classes early in the program to make sure that the
4 instructors were following the format for the particular
5 class session and that there weren't any problems as far
6 as the instructor capabilities or student attitudes, things
7 along those lines.

8 (Witness Daverio) I think on monitoring of the
9 program, at the time we started the program we went to a
10 lot of classes, a lot of different types of classes, tried
11 to see each of the types of classes being run. As the pro-
12 gram ran and we felt more comfortable with how things were
13 going, because the instructors stayed the same, we didn't
14 change instructors, we felt more comfortable with the pro-
15 gram and we monitored less at that time.

16 Q Did you ever stay for the entire class session,
17 Mr. Daverio?

18 A I have stayed for some entire class sessions,
19 yes. Not all the time.

20 Q Mr. Varley, did you ever stay for the entire
21 class session?

22 A (Witness Varley) Yes, I did.

23 Q How many times do you think you did that?

24 A I stayed once for a full session and then on
25 several other occasions I attended for partial sessions.

Q Did you ever submit any kind of a formal evaluation

#17-10-SueT

of the classroom performance by the instructor, Mr. Varley?

2 A There was no requirement and no need to do a
3 formal evaluation.

4 Q Did you ever submit a formal evaluation regard-
5 ing classroom instruction, Mr. Varley?

6 A No, I did not.

7 Q Mr. Daverio, did you?

8 A (Witness Daverio) No, I did not.

9 MR. MILLER: Judge Laurenson, why don't we
10 take the second break at this time? It would be a good
11 place.

12 JUDGE LAURENSON: All right. We will take a
13 recess now.

14 MS. MONAGHAN: Judge Laurenson, before we all
15 disappear, I need to ask Mr. Miller if it's possible for
16 Dr. Babb to leave for his class, or if Mr. Miller has
17 further questions for him this afternoon.

18 MR. MILLER: Judge Laurenson, let me just make
19 a statement. I cannot say whether I have other questions
20 for Mr. Babb this afternoon.

21 I can say that I've been advised today that as
22 many as three witnesses on this panel have problems during
23 this week with attending this proceeding, and that causes
24 me great concern. I think it's LILCO's problem frankly,
25 and I think they need to find a way to solve it.

#17-11-SueT1

1 In terms of today, I am willing to let Mr. Babb
2 leave here. In fact, if he would like to leave now -- and
3 if I come across questions, I will save them.

4 As you know, we have gone through this before.
5 It means you put things to the side, you come back to
6 areas, you have to revisit areas. I'm not sure it's really
7 the efficient way to proceed if we can find a way to avoid
8 it.

9 But, Mr. Babb, why don't you go to your class
10 if it's okay with the Board. And I think LILCO ought to try
11 to find some way to resolve this problem.

12 JUDGE LAURENSEN: Well, I think when you are going
13 to have a panel of witnesses on the stand for a whole week
14 we have to be flexible in allowing some to come and go. I
15 don't think it's reasonable to expect that they can, all of
16 them, take a full week and devote it to this testimony.

17 So, I think to the extent that we can accommodate
18 their schedules we should do so and just try to be as
19 flexible as we can.

20 So, yes, you may leave. You may now
21 leave. We will see you tomorrow morning.

22 (The witness, Dr. Babb, stood aside.)

23 We will take a ten minute recess.

24 (Whereupon, the hearing is recessed at 4:55 p.m.,
25 to reconvene at 5:06 p.m., this same day.)

#17-12-SueT 1

JUDGE LAURENSEN: Mr. Miller.

BY MR. MILLER: (Continuing)

2
3 Q Mr. Varley, would you turn to Page 6 of the
4 LILCO testimony, please?

5 A (Witness complying.)

6 Q Let me ask this first question of the entire
7 panel. Looking at Question and Answer 3, does the panel
8 acknowledge that Dr. Cordaro, Mr. Renz and Mr. Babb have
9 no prior experience with training programs for emergency
10 response organizations?

11 A (Witness Renz) I certainly do not.

12 Q I asked because there are, as you can tell,
13 the answer goes on for some pages, and various portions are
14 sponsored individually by Messrs. Daverio, Miletì, Varley
15 and Berger. But I see nothing for Dr. Cordaro, Mr. Renz
16 and Mr. Babb.

17 A (Witness Cordaro) Well, I have been present at
18 drills carried on by other utilities as part of their
19 training programs in emergency response. But on an informal
20 basis where I just observed what went on.

21 Other than -- also, in the emergency response
22 area, I do have experience with training programs for
23 emergency responses for electrical emergencies but not
24 radiological emergencies.

25 (Witness Renz) In regards to some familiarity

#17-13-SueT 1

2 with training programs for radiological emergencies, in
3 our on-site program I helped develop a number of lesson
4 plans. I served as an instructor for certain lesson
5 plans given to participants of our on-site organization.

6 I have attended other exercises within the
7 State of New York and served in an official observation
8 capacity for other utilities in viewing their on-site
9 response as well as the State of New York in viewing a
10 local response on a number of occasions, the most recent
11 of which was the State implementation of their compensating
12 measures plan for Rockland County.

13 Again, in that response I served as an observer
14 for the State of New York. I have attended meetings and
15 work shops, training work shops, organized and sponsored
16 by the New York State Disaster for Preparedness Commission.

17 One that comes to mind in attendance at that
18 one was other members of the New York State Power Pool
19 Subcommittee on Emergency Preparedness, members of various
20 counties that fall within ten miles of other nuclear plants
21 within the State. And, of course, members of the radiologi-
22 cal emergency preparedness group for the State of New
23 York.

24 Q Would it be fair to say, Mr. Renz, that the
25 things you have mentioned just weren't important enough to
warrant a response to Question 3 of the testimony?

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A No. I believe that would have been an oversight on my part.

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1 Q Mr. Varley, let's start with you. You give
2 the first page and a half in answer to Question 3. Am I
3 correct in assuming that this page and a half answer all
4 goes to your involvement -- previous involvement with on-
5 site training programs?

6 A (Witness Varley) Are you implying that everything
7 that I stated here was solely directed toward onsite? Is
8 that your implication?

9 Q Well, I am asking. I am asking if your prior
10 experience, which you discuss on pages 6 and 7, is the
11 prior experience going to onsite training programs?

12 A As an emergency planning engineer during this
13 period, some of my primary responsibilities were related to
14 onsite activities, but did not preclude some involvement in
15 offsite activities as well.

16 Q Are those involvements on offsite emergency
17 planning activities set forth anywhere on pages 6 and 7?

18 A I believe if you would look down about the 7th
19 line, it says that I was responsible for directing the
20 activities of onsite and offsite personnel.

21 Q And that is with respect to the Beaver Valley
22 Power Station?

23 A That is correct.

24 Q Anything else on those pages related to offsite?

25 A While working on Louisiana Power and Light project,

1 although it is not spelled out here specifically, I also
2 had the opportunity to preview some of the training that
3 was to be done for offsite organizations that responded
4 to the Waterford 3 site.

5 Q Yes. I believe maybe we discussed that at
6 your deposition.

7 A That was correct.

8 Q That was reviewing offsite training for
9 professional emergency response workers such as police, is
10 that right?

11 A I don't believe they are all professional
12 emergency response workers, no. Some were bus drivers.
13 There is also the parish officials who would respond to
14 their emergency operations center as well.

15 Q And your role in this activity for Louisiana
16 Power and Light was with respect to reviewing materials,
17 is that right?

18 A That is correct.

19 Q Now, with respect to Beaver Valley, what was
20 exactly your role and responsibilities for the offsite
21 training program?

22 A We had a contract with Duquesne Power and Light
23 to assist them in the conduct of their annual observed
24 exercise, and in the preparation work that goes on before
25 that exercise was to occur.

1 My involvement with respect to the offsite aspect
2 of that were one, to attend various meetings with offsite
3 agencies in the preparation of that exercise scenario to
4 ensure that their objectives were adequately addressed , and
5 that the scenario was developed to allow them time to exercise
6 their responsibilities.

7 I was also involved in witnessing and providing
8 comment to a drill that was performed by the Hancock County
9 Emergency Operations Center staff prior to the annual
10 exercise, and I also worked with some of the offsite
11 personnel to ensure that the materials that they were
12 preparing were, in fact, accurate and reflected the
13 cohesiveness between the onsite and the offsite organizations.

14 Q That latter function, Mr. Varley, was that a
15 review function on your part?

16 A Yes, it was.

17 Q Mr. Varley, have you ever taught offsite emergency
18 jobs in -- during the course of your experience that is
19 talked about on pages 6 and 7?

20 A No, I have not. My experience with teaching
21 offsite is with the LERO organization.

22 Q And the LERO organization was your first
23 experience in that regard, correct?

24 A First application of teaching to an organization
25 with specific defined offsite responsibility.

1 Q Mr. Varley, have you ever heard the term, 'skills
2 training?'

3 A Skills training? I believe I understand what
4 skills training would be. I am not sure that I can say
5 that I have heard the term before.

6 Q What would be your understanding of skills
7 training?

8 A The application of the ability of an individual
9 to perform skills. You would take an individual and
10 either through classroom training or on the job training
11 provide the individual with the capability to perform a
12 skill that he obviously didn't possess prior to that
13 training program.

14 Q Teaching someone how to perform a specific task
15 or job?

16 A I guess that would be a fair representation,
17 yes.

18 Q Have you ever had to provide specific skills
19 training to persons that before such training were
20 inexperienced with respect to those skills?

21 A Definitely.

22 Q Can you give me an example?

23 A I can give you numerous examples .

24 Q Just one would be fine.

25 A Going back to my experience in the Navy, we had

1 to train individuals on how to operate pieces of equipment
2 in which they had never operated that equipment before.

3 Q With respect to an offsite emergency response,
4 have you ever had to teach specific skills training to
5 inexperienced personnel?

6 A Let's take an example such as training an indi-
7 vidual to operate a particular piece of radiation monitoring
8 equipment. Whether that application was for an onsite or
9 offsite, there is no difference in the ability to teach
10 an individual to operate that equipment.

11 So, I would say there was a parallel between
12 teaching someone onsite to operate a radiac and someone
13 offsite to operate a radiac, yes, that is true.

14 Q Well, other than dosimeters, radiation monitoring
15 equipment, any other specific skills training you provided
16 for an offsite emergency response?

17 A Yes. The parallel can also be drawn with accident
18 management capabilities. The ability to diagnose and make
19 decisions on accidents is similar whether it is an onsite
20 response or an offsite response, and in that respect I have
21 performed both; onsite activities with Duquesne Power and
22 Light, with Louisiana Power and Light, with Westinghouse,
23 and applied that to the application of accident management
24 skills for LERO.

25 Q Is it fair to say, Mr. Varley, that your experience

1 with respect to the skills training has been in the context
2 of onsite?

3 A I don't think it is necessarily fair to try and
4 differentiate that strictly, the difference between an onsite
5 response and an offsite response.

6 Q Yes, sir. But we are here discussing LILCO's
7 offsite response, so that is what my questions are going to.

8 Now, with respect to offsite response, is it fair
9 to say that your involvement -- previous involvement in
10 skills training has been in the context of onsite response?

11 A With respect to where those personnel carried
12 out their job function, onsite would be correct.

13 Q Mr. Berger, did you design the LILCO training
14 program?

15 A (Witness Berger) Aspects of the program, yes.

16 Q And as your testimony states, it was your first
17 opportunity to participate in the design of such a program,
18 correct?

19 A That is correct as it applies to design, although
20 I have reviewed materials that are used in emergency planning
21 programs for Cooper Station, Diablo Canyon.

22 Q You mentioned the term, Mr. Berger, on page 7
23 of the testimony, 'adult educator.' You have been an
24 adult educator for over fifteen years. Do you see that?

25 A That is correct.

1 Q Can you define for me briefly what an adult
2 educator is?

3 A I made the distinction between someone who,
4 perhaps, is educated to the extent of preparing to conduct
5 or design training programs for primary and secondary school,
6 versus adult education, because some of the design strategy
7 and technologies are different, and my career as an educator
8 in industry both at corporate and plant level, for plant
9 level employees, has totally been in adult education.

10 Q Do you consider adult education in some ways to
11 be more difficult than education of school children?

12 A Having had the opportunity at least in the private
13 sector to teach six graders, I sometimes question that.

14 Q Different problems, though, correct?

15 A Exactly.

16 Q Can you give me some of the typical problems
17 that face the adult educator?

18 A Primarily it is an issue of in adult learning
19 we have come to understand that there must be some value
20 to the person being educated. The individual must see
21 how they fit into the overall context of the training, and
22 therefore, there must be some intuitive satisfaction
23 derived from the training, where in the case of children
24 they might be attending a training program or school
25 program because of peer pressure or parent pressure.

1 Q Is it fair to say, Mr. Berger, then that adult
2 educators face a problem in ensuring that the student or
3 trainee is motivated to perform and to learn what is being
4 taught?

5 A I think it is difficult for an adult educator
6 to motivate. I think it is important for an adult educator
7 to show the logic of, or reason for the training, which in
8 fact then becomes the motivation point.

9 Q Mr. Berger, you have a statement that starts at
10 the bottom of page 7 and continues over to page 8, which
11 ends up by saying tests to determine mastery of skills.

12 Do you see that statement?

13 A Yes, I see it.

14 Q Have you ever participated or designed a training
15 program in which testing to determine mastery of skills was
16 not included?

17 A Yes.

18 Q Could you tell me what program that would be?

19 A Very often supervision and management skills,
20 because they are, what we might call, at least in educational
21 terminology, effective skills. There is no perceived method
22 to test the acquisition of that skill.

23 Q In the context of where there would be a perceived
24 method to test, have you ever participated or designed a
25 training program that did not include testing for mastery of

1 skills?

2 A Not to the best of my knowledge.

3 Q .. And when you say test to determine mastery of
4 skills, how do you determine such mastery?

5 A It depends upon the skill .

6 Q Let's take a traffic guide?

7 A Perhaps two ways, although one being better
8 than the other. One would be observation, and the other
9 would be pen and pencil test. I would perceive in this
10 particular case observation being better than pen and pencil
11 -- or pen and paper test.

12 The difference, Mr. Miller, is one of cognitive
13 knowing what to do, versus psycho-motor skills, actually
14 being able to perform the skill. I might know what to do,
15 but as an educator I would like to see the skill performed.

16 Q Is knowing what to do, Mr. Berger, the same as
17 knowing how to do it?

18 A Well, if the building were on fire, I would know
19 that I would have to get out of the building. I am not
20 sure I would know how to.

21 Q So there can be differences?

22 A Might.

23 Q Now, Mr. Berger, in the LILCO program do you
24 believe that there were tests to determine mastery of
25 skills?

1 A There is a test.

2 Q And what is the test?

3 A The FEMA-graded exercise.

4 Q Is that the only test, in your opinion, that
5 would determine mastery of skills?

6 A That is the ultimate test.

7 Q The ultimate?

8 A Whether or not the organization can, indeed,
9 perform the behavior that is expected.

10 Q Is it the only test?

11 A You could put in other tests.

12 Q But does the LILCO program have such other
13 tests?

14 A Well, there are many critiques, if you will, that
15 occurs as part of the drill program, where the individuals
16 are expected to perform the skills, and are observed and
17 critiqued in the performance of the skill.

18 Q Do you consider those to be tests to determine
19 mastery of skills?

20 A Yes, I do, because as you will recall, I mentioned
21 that there are, perhaps, two forms of testing; one pen and
22 paper, and the other one being observation of the skill.

23 I consider the observation of a psycho-motor
24 skill to be a harder test than pen and paper.

25 Q With respect to the classroom session of the

1 LILCO training program, Mr. Berger, do you think there
2 are tests to determine mastery of skills?

3 A There was, to the best of my knowledge, a self-
4 check exercise at the end of each one of the module sections.

5 Q Yes, sir. And would you consider that a test
6 to determine mastery of skills?

7 A Yes, it is. It is considered a test.

8 Q Were these tests graded?

9 A I am not aware that they were.

10 Q You can have a non-graded test, which would
11 constitute a test to determine mastery of skills then, is
12 that what you are saying?

13 A That is possible.

14 Q In that kind of a situation, Mr. Berger, where
15 the test is ungraded, for example, how do you know whether
16 the skill has been mastered?

17 MS. MONAGHAN: Objection. I think this gets
18 into the area of whether or not the LILCO program had to
19 include graded testing, and it is not. It goes beyond the
20 scope of the contentions that were admitted by the Board.

21 JUDGE LAURENSEN: Sustained.

22 WITNESS VARLEY: I would like to add something
23 to that. With regard to the review pages that were at the
24 end of the modules. To make sure there was not a misunder-
25 standing about exactly what that document was there for,

1 part of the educational process that we designed into this
2 program was the ability for an individual to view a video
3 tape, to read a workbook module, and then to reinforce what
4 he saw in the video tape and in the workbook module, review
5 questions that he could work through to determine if, in
6 fact, he had the proper answers to those questions.

7 If the individual did not have an understanding
8 because the question showed him that he did not have an
9 understanding, then he had the opportunity in the classroom
10 to go back and either pull that information out of the work-
11 book module, or to ask the instructor for clarification
12 because he simply didn't understand, or simply missed that
13 particular concept.

14 That is the primary intent of what those review
15 pages were put in there for.

16 BY MR. MILLER: (Continuing)

17 Q Mr. Varley, are you saying that under the LILCO
18 program, the trainees themselves determine their mastery
19 of skills in the classroom setting?

20 A (Witness Varney) I don't think that we ever
21 consider the classroom setting the completion of the
22 training program.

23 Q That is not my question, Mr. Varley.

24 A That is what you are leading to.

25 Q No -- just answer my question please.

1 A Will you repeat your question, please?

2 Q My question is: Are you saying -- is it your
3 testimony that under the LILCO training program that trainees
4 themselves determine whether they have mastered a skill?

5 A They are not trying to determine whether they
6 have mastered the skill. The intent of the review module
7 was to reinforce the material that they just saw on the
8 video tape, and that they have worked through in a workbook.

9 It is a reinforcement tool. It is not a
10 determination of a mastery of skills, because at that point
11 we are not trying to have that individual master a skill.

12 At the completion of the training program is
13 when the mastery of skill is involved. Classroom training
14 is not the completion of the training program.

15 Q And would you agree with Mr. Berger that the
16 real test for determining mastery of skills under the
17 LILCO program comes in the FEMA-graded exercise?

18 A The final outside observed evaluation of whether
19 in fact LERO training program was satisfactory to implement
20 the emergency plan and procedures, yes, the annual FEMA
21 observed exercise.

22 A (Witness Berger) Mr. Miller, a number of the
23 skills that are being taught in the program would be
24 classified as psycho-motor skills, that being that the
25 person must be able to do something; manipulate something,

1 perhaps, with their hands.

2 In the classroom portion of the program, we were
3 teaching, if you will, building block concept and in the
4 classroom portion we were teaching the cognitive portion
5 of the skill, simply to have the participant, if you will,
6 understand what the expected behavior was.

7 The practice of that skill occurs in the drill,
8 so it is the second stage of the instruction.

9 So, perhaps to administer if you will, in your
10 context, a test at that point, right in the middle of the
11 instructional phase would have served no purpose. At the
12 end of the classroom instruction we were simply looking
13 for whether or not the participant understood, if you will,
14 the expected behavior prior to going into the second phase
15 of the instruction, which is the drill portion of the
16 program.

End 18 17
Reb fols.

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1 Q Mr. Berger, are you -- well, should a LERO member
2 trainee go into the second phase you are talking about, the
3 drills, if he hasn't mastered an understanding of the first
4 phase -- that is, the classroom training?

5 A The individual, as Mr. Varley stated, was given
6 an opportunity to review the text materials or question
7 the on-site classroom instructor if indeed he or she did
8 not understand the materials prior to progressing into the
9 second phase.

10 Q Yes, sir. Back to my question. Should an
11 individual go into the second phase, the drills, of
12 the LILCO training program, if he or she has not
13 mastered an understanding of the first phase -- that is,
14 the classroom training?

15 A The second phase will indeed reiterate the
16 skill to the individual several times. If the individual
17 does not totally, if you will in your context, comprehend
18 the skill as a result of phase one, that would be observed
19 on phase two. The individual would have several
20 opportunities in phase two to pick up the skill, if indeed
21 it is not understood in phase one.

22 Q So are you saying that --

23 A It is a continuum.

24 Q Right.

25 Are you saying that it makes no difference whether

1 the individual has mastered or learned his skill in
2 the classroom setting; he should nevertheless go on to the
3 second stage or the drills?

4 A Mr. Miller, it doesn't make a difference at
5 that point in time. It does make a difference. But it
6 makes no difference at that point in time.

7 A (Witness Varley) I would like to add that I
8 think you are confusing the issue again that classroom
9 training is not there to provide a mastery of skill. It
10 is there to provide an awareness and an introduction into
11 what LERO is and what the individual's job responsibilities
12 are.

13 He cannot come away from the classroom training
14 with a mastery of skills. It is not intended at that point
15 in the program that we provide that.

16 Q Well, Mr. Varley, even accepting your understanding
17 of the LERO program, how is it that LILCO knows whether the
18 trainee has realized an understanding of LERO and the
19 information presented to him in the classroom?

20 A It becomes quite obvious when you run drills
21 and exercises. Let's take, for example, a transfer point
22 coordinator. If a transfer point coordinator has not
23 learned what the LERO organization is, what his job
24 responsibilities are and how he is to perform those
25 job responsibilities, the ability of that individual to

1 dispatch busses on bus routes at sequence times and the
2 ability to coordinate and contact with other people within
3 LERO, he obviously can't do those things and it is
4 obvious at that point that he has not mastered his skill.

5 To date we have not found anybody that could
6 not do that.

7 Q Well, we are going to talk about that later, too,
8 I think.

9 With respect to the drills then, determining
10 whether people have learned their skills, is it your
11 testimony that every -- each and every individual is
12 evaluated and critiqued during the drills?

13 A Each and every individual has an opportunity
14 to perform during the drills and exercises. What we are
15 evaluating is LERO's ability to implement the plan and
16 procedures as they have outlined.

17 Q But the ability to perform doesn't answer my
18 question. My question is, is each and every individual
19 critiqued, evaluated during the drills?

20 A To the extent of what his responsibilities are
21 within that drill, that is correct.

22 Q Now, are you saying then that drill instructors
23 or observers or controllers accompany traffic guides to
24 their traffic posts?

25 A I don't believe that level of detail is necessary.

1 Q Do they?

2 A Do they what?

3 Q Do they accompany traffic guides to their posts?

4 A We have had controllers accompany traffic
5 guides to their posts.

6 Q Each and every traffic guide?

7 A No. There is no need for that.

8 Q Do instructors or observers or controllers
9 accompany bus drivers when they drive routes?

10 A We have had controllers ride with bus drivers,
11 yes.

12 Q Every bus driver?

13 A There was no need for that.

14 Q So they didn't do it; is that correct?

15 A I believe I stated there was no need for
16 every bus driver to have an observer ride with him, no.

17 Q Do they go -- do instructors or controllers
18 or observers go with each and every route spotter?

19 A It is the same situation. We don't feel that
20 that is necessary.

21 Q Do they go with every route alert driver?

22 A No, they don't.

23 A (Witness Daverio) I would like to add,
24 Mr. Miller, you also have to look at the whole training
25 program.

1 Dr. Babb does put each one of the training
2 guides through a traffic guidance session where he individually
3 has evaluated their performance.

4 Each bus driver has had to go through New York
5 State licensing to a class two level. That is all part
6 of the LERO training program to get up to a level. We
7 don't have every, as Mr. Varley said, every bus driver
8 every time they go out have someone with them. But every
9 one had to be licensed by New York State and pass a test
10 in a bus.

11 Q Well, let's say the traffic guidance drills,
12 till Mr. Babb returns -- let me just go back, Mr. Daverio,
13 to your last comment. It is a fact, isn't it, that
14 very, very few of the bus drivers and the traffic guides
15 and the route spotters and the route alert drivers and
16 the road crew members are accompanied to their posts or
17 in their vehicles, when they participate in LILCO drills;
18 isn't that true?

19 A I don't know what you mean by "very few." It is
20 not a majority.

21 Q Well, let's take -- let's assume for a minute
22 that you have a drill and there are 20 traffic guides that
23 are going to report and go out to a traffic post.

24 Of those 20, how many would you think would be
25 accompanied by a drill instructor or a controller or observer?

1 (Witness conferring.)

2 A No more than a handful, a couple, within that
3 range. We don't send them out with a significant number.

4 Q So one out of ten maybe?

5 A I don't know for sure, but that may -- it may
6 even be a lower number than that. That wasn't what I
7 was talking about. I was talking about that the bus
8 drivers all have had to have a New York State inspector
9 with them when they passed their driving test.

10 That is part of our training program. When --
11 there are other ways of monitoring their performance.
12 As Mr. Varley said, they have got to go to a transfer
13 point, they have got to run a route, they have got to come
14 back, they have got to report in.

15 We monitor all that and you know what type of
16 performance they are doing.

17 A (Witness Renz) I would like to add to that
18 also. In regard to exercises at other facilities,
19 even for a FEMA grade exercise, FEMA will come in and,
20 although you have a multitude of maybe bus routes,
21 as I recall, at the last Indian Point exercise, they
22 exercised eight such routes where they put eight FEMA
23 controllers on busses to get an indication or a general
24 feel for the adequacy of that portion of that response.

25 And I believe what we do is similar in that context.

1 Q Why do you think FEMA did that, the FEMA graded
2 exercise did that, Mr. Renz, put the individuals on the busses?

3 A To get an indication of the adequacy of that
4 portion of the response. And my statement was in the context
5 of in order to get an indication of the adequacy of that
6 response, they put a very limited number of observers on to
7 watch the entire operation of the bus driver which
8 includes reporting to what they have, which would be
9 synonymous to our staging areas, receiving any kind of
10 equipment that they might receive, the procedure for
11 dispatching it to the field, actually driving through a route,
12 coming back, and going through their debriefing and whatever
13 procedures that are left to go through at the close of
14 the exercise.

15 Q But you don't do anything like that in the
16 LILCO drill program, do you?

17 Do the bus drivers drive busses during your drills?

18 Q We monitor those areas that have the most
19 activity which is reporting to the staging areas, pick
20 up your dosimetry, other equipment, going through other
21 procedures associated with that, having drivers report
22 to transfer point coordinators, be dispatched, come back
23 to a decontamination center for emergency workers, those
24 types of areas.

25 They do not drive busses in every drill, and I

1 would have to defer as far as how often they do, but they
2 have driven busses in order to obtain a New York State
3 driver's license.

4 Q Well, do they drive busses in any drill?

5 A (Witness Daverio) None of the drills that LERO
6 has run to date have bus drivers driven busses during that
7 drill, but it is our intention to have them drive it during
8 the FEMA exercise. We don't feel it is necessary during
9 our drill to rent a bus and pay the additional expense
10 to have them drive it. We drive them with our cars.
11 We verify the routes and we verify the times.

12 They drive the busses to get their New York
13 State license.

14 Q How do you verify the routes and the times,
15 Mr. Daverio? Don't you do that through drill
16 participant forms where the bus drivers tell you the time it
17 took them to drive a route?

18 A I would like to have Mr. Varley add, but also
19 we have an observer every transfer point. They have got
20 to go to a transfer point. They pick up their route
21 at a transfer point. They run their route and they return
22 to that transfer point.

23 Q How do you know they drive the route?

24 A We can tell that from many different ways. One
25 is, we get comments back on the maps on things that they

1 think should be improved. So we know they have been through
2 the routes.

3 Also we know the time it should take and we
4 know about when they are coming back.

5 Q Does every bus driver, when he completes a drill,
6 give you a comment on the map that has been provided to him?

7 A Not every bus driver.

8 A (Witness Varley) I think what you have to look
9 at is the overall process of what does a bus driver do.
10 A bus driver, after completing his briefings at the
11 staging area and arriving at a transfer point, is required
12 to follow the directions of the transfer point coordinator.

13 The transfer point coordinator, in fact, has
14 a schedule for dispatching and returning busses. The bus
15 drivers are given their particular individual bus route
16 map to run and are dispatched at the intervals required
17 by the procedures. An observer is there to make sure
18 that the transfer point coordinator does, in fact, follow
19 that schedule and that the bus drivers do leave and return
20 on the indicated times.

21 We have collected comments in the early drills
22 that required that the bus drivers tell us how long it
23 took to run the route for several reasons, and we also
24 received marked up comments on the particular route maps
25 where each bus driver, if there was a particular problem,

1 a street was wrong, the turn was wrong or something along
2 those lines, he very much brought that back and identified
3 that to us.

4 I don't think there is anybody that has observed
5 a drill doubts, did a bus driver in fact run his route.
6 They are all very ambitious people, and they are all
7 very conscientious people, and they do in fact run their
8 routes. There is no reason to believe they wouldn't
9 run their route.

10 Q Mr. Varley, my point is that the vast majority
11 of the bus drivers are not observed while they are driving
12 their routes, even assuming they are driving their routes;
13 isn't that correct?

14 A The vast majority of bus drivers do not have
15 a controller or an observer with them when they run their
16 routes, and again, we don't feel that there is a need for
17 that.

18 Q And indeed, the bus drivers don't drive busses,
19 they drive cars. Correct?

20 A Again, as Mr. Daverio pointed out, we don't feel
21 that there is a need for a bus driver to drive a bus
22 every time he runs a particular route. That's, in some
23 light, a waste of money to rent busses to do that type of
24 thing.

25 Q I understand that you don't consider there is a

1 need. This might go faster if you can just give me
2 yesses or nos. I am not instructing you to do that, but
3 I understand you don't think there is a need for it.

4 The answer is, they don't drive busses; isn't
5 that right?

6 A I believe I stated that several times in
7 response to your questions.

8 Q Dr. Mileti, would you look at page 8 of the
9 testimony, please?

10 A (Witness Mileti) Yes, I have it.

11 Q Have you ever taught off-site emergency response
12 skills, Dr. Mileti, with respect to a radiological emergency?

13 A Yes, some.

14 Q And would those be the examples you gave me
15 earlier such as talking with Mr. Weismantle?

16 A No. There would be others, other people at
17 other places. For example, with Carroll Wilcox, who
18 is another name that I remembered, the director of
19 emergency preparedness for Coffey County in Kansas. I
20 spent several days with him talking about and his practicing
21 writing emergency broadcast system messages and his
22 assistant. And I have forgotten the assistant's name.

23 And then I have done other things in terms of
24 what would be construed as off-site response, but not for
25 nuclear power plants, for other kinds of hazards.

1 Q Did you train this individual you have just
2 mentioned with respect to what he is required to do in the
3 event of a radiological emergency?

4 A I don't know if he is legally required to do it
5 in a radiological emergency. I suspect there is a legal
6 requirement to get good public emergency information out.

7 Q Yes, sir.

8 Did you train him?

9 A I helped him learn how to write a good public
10 emergency broadcast system message, and he could do a
11 better job now than before he met me.

12 Q Is that the extent of the training of emergency
13 response skills with respect to a radiological emergency
14 that you have performed, Dr. Mileti?

15 A No. I have chatted with a few other people at
16 other places. Now, I must say that in terms of the
17 things that I might be able to train someone to do,
18 emergency public information is what I know best. So that
19 is perhaps why I have limited my, if you want to call it,
20 training to that kind of task.

21 But I have certainly done that in other places.
22 For example, with county people out in San Luis Obispo
23 County around Diablo Canyon Nuclear Power Plant. But I have
24 to say. not to the extent that I did in Coffey County with
25 Carroll Wilcox.

1 Q So I gather, Dr. Mileti, where you say on page 8
2 that you have never been formally involved in a training
3 program for an emergency response organization prior to
4 LERO, you are excluding these informal chats you have had
5 with individuals?

6 A Well, I didn't have a formal role in something
7 called a training program like I have had in the LERO
8 program, and certainly not in terms of making comments
9 on all aspects of emergency response, as I have had with
10 the LERO program, but in more limited areas of my expertise.

11 Q Let me ask you, Dr. Mileti, how do you determine
12 the effectiveness of your teaching at Colorado State
13 University? Do you do it by testing?

14 A There are many ways that I determine the
15 effectiveness. The bottom line, in terms of what the
16 chairman and the dean like, is to keep students out of
17 their offices complaining.

18 That is one way. Another way is this last year
19 I won the Professor of the Year in college, got a little
20 plaque and award for that. I suspect I am effective because
21 of that.

22 Another way is standardized forms that are passed
23 out, teacher evaluations that are passed out. I don't
24 think much of them because I think they are popularity
25 contests.

1 And another way is with the feedback I get back
2 from those who counsel undergraduates about what courses
3 to take and whether or not they think I am a good professor
4 or not.

5 Q My question wasn't clear, Dr. Mileti.
6 I wasn't asking about how you are evaluated. I am asking
7 how you evaluate the effectiveness of your teaching with
8 respect to your students.

9 A You mean how much they learned?

10 Q Yes.

11 A In a variety of different ways.

12 Q Would testing be one of those ways?

13 A Of course. Universities require final exams
14 be given. I would be breaking a state law if we didn't
15 give some form of a final exam.

16 Q Now, Dr. Mileti, beginning at the bottom of page
17 8 and continuing through the first half of page 9, you
18 mention a number of presentations that you have made.
19 Let me just ask you, did any of these involve an off-site
20 emergency response to a radiological emergency?

21 A Some of them did and some of them didn't.

22 For example, many of them, as you can see, might
23 have had to do with earthquakes, and there are some concerns
24 in the State of California about the coincidence of an
25 earthquake in a radiological emergency.

1 So as I recall, the one that I gave in
2 Montebello to the Southern California Emergency
3 Services Association chatted a bit about radiological
4 hazards in an earthquake emergency.

5 And I believe one to the Governor of California
6 included that as well, and his staff, Governor Brown,
7 when I worked for the state, was particularly concerned
8 about radiological emergencies at a particular site in
9 California.

END 19

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#20-1-SueT₁

1 Q Would radiological emergency have been the
2 primary function of any of these presentations, Dr.
3 Mileti? **

4 A What to do in an emergency was the primary
5 function.

6 Q Not in a radiological emergency, just what to
7 do in an emergency?

8 A Many of the things you might do in an emergency
9 overlap.

10 Q You mentioned, Dr. Mileti, on Page 9 also that
11 you've had some -- or, you have some familiarity with the
12 training activities for other nuclear power plants.

13 Could you just list for me the other plants?

14 A Just the catalogue, no comments?

15 Q That's what I would like.

16 A Okay. Diablo Canyon, Wolf Creek, Waterford 3,
17 and Three Mile Island.

18 Q Let's go to Page 12 of the testimony, please.
19 Mr. Berger, let me ask you, Answer 5, I suppose it's fair
20 to say Answer 5 sets forth kind of the broad overview of
21 the LERO training program; is that right?

22 A (Witness Berger) I believe so.

23 Q The last sentence, Mr. Berger, which talks about
24 each LERO member is provided the opportunity to gain
25 practical, in the field, experience in carrying out his

#20-2-SueT 1

LERO job responsibilities, talking about the drills and exercises.

2

3

..
Is it your testimony that each LERO member is provided the opportunity to gain practical experience under simulated emergency conditions in the course of the LERO drill program?

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A That's my understanding.

8

Q That's your understanding.

9

A I have not observed a LERO drill.

10

Q Okay. And you were not involved in the drill and exercise aspects of the training program, correct?

11

12

A Well, that's not totally true. At the time the program was designed, we knew that there would be a training component that would include drills and exercises, Mr. Miller.

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But in the involvement and the design of the program, I was not here at the time the drill portion of the training program began.

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Q Mr. Varley, let me ask you, you've been involved in the drill program, so is it your testimony that each member of LERO is provided the opportunity to gain practice, in the field experience in performing his LERO job responsibilities?

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A (Witness Varley) Yes, it's true.

25

Q Is it your testimony that those opportunities

#20-3-SueT 1

are realistic opportunities?

2 A Yes, they are, within the realm of what's
3 possible.

4 Q And when you say within the realm of what's
5 possible, could you clarify what you mean?

6 A Yes. Let's take the example of the traffic
7 guides that you brought up earlier. It's not possible for
8 a traffic guide to, once he arrives at his post, to get out
9 of his car and physically direct traffic in the normal
10 day-to-day activity. So, to the extent that he can be
11 processed -- that he can be notified, mobilized, processed
12 through a staging area, utilize his equipment and utilizing
13 the directions he has been given to report to a traffic
14 control point, and arrive at that point, and conduct com-
15 munications back to the staging area, to the most practical
16 extent that we can allow an individual to do those things,
17 we do in fact do that.

18 Q Is it your testimony that in every case, to the
19 extent practicable, LILCO allows the LERO trainees to
20 practice in the field under realistic conditions?

21 A To the best of my knowledge, yes.

22 Q Well, what about bus drivers not driving buses?

23 A Again, to the practical extent of LILCO having
24 to go out and rent some hundred and ninety buses for each
25 bus driver to drive a particular route, no.

#20 4-SueT

1 Q So, in that case, the reason it's not practical
2 is because of the cost to LILCO?

3 A Not only cost, but there is not that much
4 benefit to be gained from an individual doing that. He,
5 in fact, runs his route using the map that he would use in
6 a real emergency.

7 It's just that the mode of transportation that
8 he happens to be in at the time is not a bus but his car.

9 Q Well, Mr. Varley --

10 A And we already know that the individual can drive
11 a bus. He has a license to do that.

12 Q Mr. Varley, you've added another factor now.
13 Before it was to the extent practical, and now it seems
14 like you are saying the second factor to be considered
15 would also be using the judgment as to whether it would be
16 necessary or not; is that right?

17 Is that what you are telling me?

18 A I don't know if there is a difference between
19 that and practical.

20 Q Is it a fact, Mr. Varley, that the bus drivers
21 in participating in drills not only drive private vehicles
22 but also car pool in running their routes?

23 A To the extent that some individuals don't come
24 to the drill with their own personal vehicle, yes, that's
25 true.

#20-5-SueT

1 MR. MILLER: Judge Laurenson, this would be a
2 good stopping point for the day with me.

3 JUDGE LAURENSEN: All right. At this point,
4 the panel of witnesses are excused for the day. We will
5 resume with the witnesses at 9 a.m.

6 (The panel of witnesses stood aside.)

7 Do you have some other matters you want to bring
8 up, Mr. Miller, today?

9 MR. MILLER: The one procedural matter, Judge
10 Laurenson, and let me just throw it out for the Board's
11 consideration.

12 Last week, as you will recall, I think on Friday
13 we had the discussion regarding the use of exhibits and
14 especially the problems that maybe will tend to arise when
15 an exhibit, which is an excerpt of a report or something
16 with a number of pages, is put into the record even though
17 only one small portion, perhaps only a sentence, is referred
18 to during cross examination by counsel.

19 If I understand correctly, the Board's position
20 now on the use that such exhibits would be they can be
21 used to the extent they are cited or relied upon by a
22 witness to the extent that they are cross-examined upon by
23 counsel, and to the extent that any other material within
24 that exhibit would be relevant to the portions cited or
25 cross-examined upon. I'm not sure. That's my recollection.

#20-6-SueT

1 JUDGE LAURENSEN: I don't have the transcript
2 from Friday in front of me. But that sounds like about
3 what I said, or what I thought I was saying.

4 MR. MILLER: Judge Laurenson, let me just offer
5 the comment that I think there is a real danger of the
6 standard suggested by the Board being fairly wide ranging
7 and open to a number of different interpretations. The
8 standard of relevant to something cross-examined upon or
9 relied upon by a witness seems to me to leave kind of wide
10 open what the parties to this proceeding should do with
11 such exhibits during the preparation of findings, and even
12 more than that how other parties to the proceeding should
13 be able to respond or use such exhibits in terms of their
14 cross-examination, in terms of a decision whether to offer
15 rebuttal testimony.

16 And I guess the proposal I would offer to the
17 Board would be that a party, when they are introducing such
18 exhibits and only using a very small portion, again perhaps,
19 for example, a sentence, should be under -- the party offer-
20 ing the exhibit should be under the obligation to make a
21 statement and demonstrate to the Board what other portions
22 of the exhibit should be considered relevant for purposes
23 of findings, cross-examination, rebuttal testimony, what-
24 ever.

25 And I suggest to the Board that if this procedure

#20-7-SueT 1

2 is adopted it begin with LILCO revisiting those exhibits
3 from last week and making an offer to the Board as to
4 what portions of those numerous reports and articles
5 offered by Mr. Christman should be considered relevant to
6 any purpose in this proceeding.

7 JUDGE LAURENSEN: It seems to me after twelve
8 weeks or so of hearing that it's going to be pretty hard
9 to go back through all these different exhibits that we
10 have received in evidence and require that kind of a
11 showing, isn't it?

12 MR. MILLER: It would be very difficult, Judge
13 Laurenson, to go back twelve weeks. And I'm not suggesting
14 that. I think that would be impractical for everyone con-
15 cerned.

16 I -- my comments are provoked by last Friday's
17 introduction by Mr. Christman of the articles that we had.
18 And it seems to me that it would not be impractical to
19 begin this process with those exhibits and continue the
20 process in the future for any party, if a party is offering
21 a number of pages into the record when only a very small
22 segment of the proffered exhibit is being referred to,
23 relied upon, cross-examined upon.

24 JUDGE LAURENSEN: Let me hear the other party's
25 position on this.

MR. CHRISTMAN: First, Judge, I found the passage,

#20-8-SueT

1 if you would like to look at it. It's Page 10,970.

2 Second, I think we did insert certain excerpts
3 from documents that were relied on by the County's
4 witnesses back in December. It seems a little bit late
5 to bring up a new rule like this, the import of which I
6 don't fully understand. I think it would be preferable to
7 stay with the Board's ruling of Page 10,970 of the transcript
8 and not require me to go back and try to make some sort of
9 a proffer now, a week after the exhibits were offered.

10 I mean, those exhibits were in just about every
11 case relied upon by the County. They had their chance to
12 cite them for whatever reason they wanted to as precisely
13 as they wanted to in the testimony, and then I had the
14 opportunity to ask certain questions about those and put
15 certain portions of them into the record. And I think my
16 citing to them in findings or whatever should just follow
17 your ruling, and that ought to be the end of it.

18 Now, the County, of course, has a chance to
19 respond to findings in their reply findings or answering
20 findings, and they can make any point they want to at that
21 point I think.

22 JUDGE LAURENSEN: Does anyone else wish to be
23 heard on this?

24 MR. ZAHNLEUTER: There is a need for a
25 clarification at this point, because I think it becomes a

#20-9-SueT

1 suspicious matter and even an unfair matter when a docu-
2 ment is admitted into evidence and only one sentence has
3 been referred during the cross-examination, yet there are
4 some other pages in that document that are admitted into
5 evidence.

6 In other words, the whole document is not ad-
7 mitted. There is more than just this sentence that was
8 referred to, and there are a few other stragglers. And I
9 think it's a suspicious and an unfair matter when they get
10 into the record and we don't know for what purpose or how
11 they will be referred to in the future.

12 MR. CHRISTMAN: Well, the County cited those
13 documents in its own testimony. It chose not to put them
14 into evidence.

15 I said last week that I didn't object if the
16 County wanted to come back and put the entire document into
17 evidence, and that still seems to be reasonable if they
18 want to put the whole document into evidence. On the other
19 hand, if the County wants to come up now and put excerpts
20 from those documents of its own into evidence, for whatever
21 reason, then I may have an objection to that.

22 But as far as putting the whole thing in, if the
23 County is worried about that, let them pay to put the entire
24 documents into the record. It shouldn't be bound in the
25 transcript; put them in as exhibits or something like that.

#20-10-SueT 1

We can't really object fairly to that.

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But all of this other complicated business is
I think a waste of time.

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MR. MILLER: Judge Laurenson, let me just
respond. We cited articles, specific portions for specific
reasons. Let me also point out, I was raising an issue for
the Board's consideration. It's a proposal which I have put
on the table.

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I'm not sure the Board has to make a decision
tonight.

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JUDGE LAURENSEN: That's one good sign anyway.
Mr. Bordenick.

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(Laughter.)

14

MR. BORDENICK: I agree that the Board doesn't
have to make a decision tonight. And I think the Board's
ruling last Friday was eminently reasonable. I don't
know why we want to go back and pick out the most recent
incident of this type of practice when it has gone on in
this proceeding and in the proceeding before the Health
and Safety Licensing Board.

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It just seems to me that we would be spinning
wheels to revisit the whole question. And I think the
Board's ruling on Friday is reasonable.

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The parties file their proposed findings. They
can make whatever arguments they want to make. And the

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#10-11-SueT 1

2 Board will have whatever it is that the parties want to
3 argue in black and white in front of them. They can rule
4 at that time.

5 JUDGE LAURENSEN: I think the reason we made
6 the statement we did on Friday was in response to the
7 County's request that we set some guidelines. So, without
8 the benefit of any legal research, we gave you our off-the-
9 top-of-the-head view of what rule should apply to this.

10 And I think the way we left it was that if any-
11 one could find rules of evidence to the contrary you were
12 certainly welcome to bring them to our attention and educate
13 us. And I still think that is probably the best way to go.

14 I haven't heard any legal argument that there is
15 some rule of evidence that this contravenes. And if there
16 is, then I think you can submit a written brief and every-
17 body can take a look at the rules, and then we can have a
18 nice research project here and get to the true answer.

19 But, to start going back into December -- and
20 a lot of these articles I do recall from December with the
21 first three contentions that we heard where some of the
22 same witnesses were on the stand as we had last week, and
23 many articles came in. I don't recall now whether they
24 were the full articles or they were excerpts or just exactly
25 how they came in, or with any qualification. But it's going
to be a lot of work to have to go back at this point to

#20-12-SueT 1

start trying to put limitations on them.

2 So, I think we will leave it the way we did on
3 ..
4 Friday unless someone can convince us that that was an
5 erroneous ruling.

6 The only other question that I have is that I
7 found on my desk when I got in yesterday a motion from
8 LILCO to file surrebuttal testimony on Phase 2 emergency
9 planning Contention 67. And I thought I would raise the
10 question of how the parties want to handle that.

11 Does the County intend to file a written reply?
12 Do you want to submit oral argument? Or, how do you pro-
13 pose to deal with that?

14 MR. MC MURRAY: Well, I was in the process of
15 writing a little outline which was going to be turned into
16 a written response. So, my answer is that the County
17 intends to reply in writing.

18 MR. BORDENICK: As does the Staff.

19 MR. CHRISTMAN: Judge, let me just add that if
20 there is going to be a lot of oral argument on that, we
21 ought to -- it would be nice if I could get the people who
22 are responsible up here for it. I wouldn't anticipate it
23 would be much required.

24 But if you want to hear a lot on it, I need to
25 get Don Irwin up here I think, or at least come up to speed
 on what he is arguing.

#20-13-SueT1

2 JUDGE LAURENSEN: We didn't necessarily want
3 to hear any. I just wanted to find out how we were going
4 to proceed.

4 (Laughter.)

5 MR. CHRISTMAN: And I just wanted you to know
6 that I have only the dimness understanding of that particu-
7 lar pleading because it's -- you know, this division of
8 labor we have, that happens to fall in somebody else's
9 division.

10 JUDGE LAURENSEN: If the parties intend to file a
11 written response then we will just decide it based upon the
12 written filings rather than set down oral argument on this.
13 I think we understand the issues involving surrebuttal and
14 Mr. Lieberman and so forth.

15 MR. MC MURRAY: It's my understanding, Judge
16 Laurenson, that -- if I've counted correctly -- the County's
17 response would be due on Thursday.

18 JUDGE LAURENSEN: Right.

19 MR. BORDENICK: I think the Staff's response
20 is -- this is from memory -- going to be filed on or before
21 next Monday, the 18th.

22 JUDGE LAURENSEN: All right. Any other pro-
23 cedural matters to take up before we adjourn for the evening?

24 (No response)

25 All right. We will reconvene at 9 tomorrcw

#20-14-SueT 1

morning.

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(Whereupon, the hearing is adjourned at 6:10
**
p.m., June 12, 1984, to reconvene at 9 a.m., Wednesday,
June 13, 1984.)

* * * * *

END

CERTIFICATE OF PROCEEDINGS

This is to certify that the attached proceedings before the
NRC COMMISSION

In the matter of: Long Island Lighting Company

Date of Proceeding: Tuesday, June 12, 1984

Place of Proceeding: Hauppauge, New York

were held as herein appears, and that this is the original
transcript for the file of the Commission.

Rebecca Eyster

Official Reporter - Typed

Rebecca Eyster

Official Reporter - Signature

Myrtle Traylor

Official Reporter - Typed

Myrtle Traylor

Official Reporter - Signature

Garrett Walsh

Official Reporter - Typed

Garrett J. Walsh

Official Reporter - Signature