

**ORIGINAL**  
UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

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In the matter of:

LONG ISLAND LIGHTING COMPANY

(Shoreham Nuclear Power Station  
Unit 1)

Docket No. 50-322-OL-3

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Location: Hauppauge, New York

Pages: 11,548-11,830

Date: Thursday, June 14, 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) :  
 :  
 -----X

Court of Claims  
 State of New York  
 State Office Building  
 Room 3B46  
 Veterans Memorial Highway  
 Hauppauge, New York 11787

Thursday, June 14, 1984

The hearing in the above-entitled matter resumed  
at 9:00 a.m., pursuant to recess,

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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## 1 APPEARANCES:

2 On behalf of LILCO:

3 JAMES N. CHRISTMAN, ESQ.  
4 JESSINE MONAGHAN, ESQ.  
5 Hunton & Williams  
6 Main Street  
7 Richmond, Virginia

8 On behalf of the NRC Staff:

9 BERNARD BORDENICK, ESQ.  
10 ORESTE RUSS PIRFO, ESQ.  
11 Office of the Executive Legal Director  
12 U.S. Nuclear Regulatory Commission  
13 Washington, D. C. 20555

14 On behalf of Suffolk County:

15 CHRISTOPHER M. MC MURRAY, ESQ.  
16 MICHAEL S. MILLER, ESQ.  
17 Kirkpatrick, Lockhart, Hill, Christopher & Phillips  
18 1900 M Street, N.W.  
19 Washington, D. C. 20036

20 On behalf of the State of New York:

21 RICHARD J. ZAHNLEUTER, ESQ.  
22 Special Counsel to the Governor  
23 Executive Chamber  
24 Room 299  
25 State Capitol  
Albany, New York 12224

26 On behalf of FEMA:

27 STEWART M. GLASS, ESQ.  
28 Regional Counsel  
29 26 Federal Plaza, Room 1349  
30 New York, New York 10278

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

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Witnesses

Cross Examination

Harry N. Babb  
Gary J. Berger  
Matthew C. Cordaro  
Charles A. Daverio  
Dennis S. Mileti  
William F. Renz  
Ronald A. Varley

11,566

EXHIBITS

Identified

Received

Suffolk County EP-63  
and EP-64

11,557

Suffolk County EP-66

11,657

11,662

(9:02 a.m.)

## P-R-O-C-E-E-D-I-N-G-S

JUDGE LAURENSEN: Okay. The hearing is now resumes. We are back on the record.

I understand that the County has a procedural matter to raise first?

MR. McMURRAY: Yes, Judge Laurenson. Thank you. This will be very brief.

On June 4th, LILCO filed a motion to file surrebuttal testimony on Contention 67. The County had, of course, ten days to respond to that. That response would be due today.

However, I would like to request from the Board that the County be permitted to file its response early next week. The reason for this is that I have been up here, at trial. The logistical problems of getting a Motion written and filed down in Washington with the Board, while I am up here, is quite difficult.

Also, the Board has indicated that it will not be able to reach the issue until next week, since it is going to be up here. In addition, I understand that the Staff does not intend to file until Monday, and also New York State will not be filing until Monday, because it not receive service by hand. It received service by mail.

I have attempted in good faith to get this Mction

1 out, but I just don't see that it is going to be possible --  
2 and therefore -- a response, rather.

3 Therefore, I would like to request that we file  
4 our response next week.

5 JUDGE LAURENSEN: On Monday, are you talking  
6 about?

7 MR. McMURRAY: Monday will be fine if that is  
8 what the Board orders.

9 JUDGE LAURENSEN: Is there any objection to  
10 that?

11 MS. MONAGHAN: Yes, LILCO objects to the County  
12 having additional time to file their Motion. There has  
13 been a repeated practice of the County waiting until the  
14 last minute to request an extension of time, and the  
15 cumulative effect of this is to continually delay, and  
16 LILCO opposes on that basis.

17 If Mr. McMurray needed an extension of time  
18 in which to file this Motion, he should have been able  
19 to ask for that earlier than waiting until the 11th hour  
20 to do it.

21 JUDGE LAURENSEN: We have already established  
22 I think earlier that the Staff isn't going to file their  
23 response until Monday, so how is this going to result in  
24 a delay if the County files at the same time as the Staff?

25 MS. MONAGHAN: It will not result in a delay



1 on the ruling, Judge Laurenson.

2 It is LILCO's position, however, that the  
3 Commission's rules permit a ten day response time, and that  
4 the County is well aware of the Commission's rules, and  
5 that if they are not able to comply with that that they  
6 should not be permitted to wait until the last minute to  
7 make that determination.

8 This has been a continual practice.

9 JUDGE LAURENSEN: Let me ask the Staff. Do they  
10 have an objection?

11 MR. BORDENICK: Judge Laurenson, I have no  
12 objection, and a I don't see how LILCO can be prejudiced  
13 by this request. I did want to clarify one thing.

14 The Monday date that Mr. McMurray mentioned,  
15 that is from memory. I am going to be checking with me  
16 office and I will get you a precise date. I think it is  
17 Monday. It is whatever the time limits set out in the  
18 rules would be, and I think that is Monday, but it could  
19 well be a day or two after that. I will get clarification  
20 of that later in the monring, if necessary, but essentially  
21 I have no objection to the County's Motion.

22 I think they possibly could have made this Motion  
23 a little earlier, but given the circumstances of their  
24 counsel being here at the hearing, I think the Board could  
25 well take that into account. In any event, I don't see

1 any prejudice to the Applicant under all the circumstances.

2 MR. ZAHNLEUTER: The State has no objection,  
3 and the State also intends to file on Monday.

4 JUDGE LAURENSEN: The request of the County  
5 to file its response to the LILCO Motion to submit sur-  
6 rebuttal testimony by Mr. Lieberman is granted. The  
7 County shall file on Monday.

8 MR. McMURRAY: Thank you, Judge Laurenson.

9 MS. MONAGHAN: Judge Laurenson, we have one  
10 additional matter to raise.

11 Over the evening recess I had the opportunity  
12 to review in detail the exhibits that were provided to the  
13 Board by Suffolk County last evening, and to the Applicant,  
14 and I just would like to make a few additional remarks  
15 about those documents which I think are significant and  
16 important, and might bear upon the Board.

17 MR. MILLER: Judge Laurenson, are you asking for  
18 further argument on the exhibits that we talked about  
19 yesterday?

20 JUDGE LAURENSEN: I don't remember that I asked  
21 for that. I think Ms. Monaghan is offering it.

22 MR. MILLER: Well, that is fine if she wants  
23 to reargue it. We might want to reargue some other points,  
24 too.

25 JUDGE LAURENSEN: I am just wondering -- we did

1 have a substantial airing on both sides.

2 I realize that you may have found other  
3 specific material going through the documents, but I question  
4 whether, whatever there is in the documents is going to  
5 change the basic position of the parties. I don't know  
6 what your argument is going to be, but once you do raise  
7 that, of course, then the County will be entitled, as Mr.  
8 Miller suggested, to submit additional argument.

9 MS. MONAGHAN: I am well aware of that, Judge  
10 Laurenson. The problem that I was presented with  
11 yesterday afternoon was that although I have certainly seen  
12 these documents before, when you are calling certain  
13 documents from a stack of twelve inches of paper, I don't  
14 have total recall of what was in all the paper, and I was  
15 not sure which documents Mr. Miller was going to use from  
16 those.

17 I do have a few comments I would like to make  
18 if the Board would listen.

19 JUDGE LAURENSEN: Does the County oppose this  
20 request?

21 MR. MILLER: Judge Laurenson, we don't oppose  
22 the request. I would point out simply, as you have noted,  
23 that we might want to respond, and we would have that right  
24 to do so, and it is taking up my hearing time, but that is  
25 fine.

1 I would also like to point out, because Ms.  
2 Monaghan has said this on more than one occasion now, that  
3 her estimate of twelve inches of paper given to the County  
4 is rather generous on LILCO's behalf, and in addition, a  
5 lot of that paper, a considerable number of those inches  
6 were blank pages, which of course the County doesn't rely  
7 upon, because apparently they were never used in any way  
8 by LILCO or IMPELL.

9 JUDGE LAURENSEN: Before we get into the question  
10 of additional argument, let me clarify one point that was  
11 somewhat in doubt on the record, and that was whether or  
12 not we are dealing here only with this Exhibit 65, or  
13 whether the County did, in fact, offer 63 and 64. I  
14 think there was a statement that Mr. Miller intended to  
15 offer it, but I am not sure that it was an unconditional  
16 offer.

End 1. 17

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1 MR. MILLER: Judge Laurenson, we would like to  
2 offer 63 and 64 also into evidence.

3 JUDGE LAURENSEN: That is what you said yesterday.  
4 You would like to -- are you offering it?

5 MR. MILLER: We are offering them into evidence.

6 JUDGE LAURENSEN: Okay. In order that, I guess,  
7 we can address all of these at one time, is there an  
8 objection to 63 and 64?

9 MR. PIRFO: No objection from the staff.

10 MS. MONAGHAN: We have no objection to 63 and 64.

11 MR. ZAHNLEUTER: No objection.

12 JUDGE LAURENSEN: All right. Since there is  
13 no objection to the county's Exhibits 63 and 64, they will  
14 be received in evidence.

15 (The documents referred to,  
16 previously marked for  
17 identification as Suffolk  
18 County Exhibits EP63 and 64,  
19 were received in evidence.)

20 JUDGE LAURENSEN: The Board will just confer  
21 for a moment concerning the request of LILCO to file  
22 additional argument.

23 (Pause.)

24 JUDGE LAURENSEN: We have considered LILCO's  
25 request to submit additional oral argument this morning

XXXXXXX

1 concerning the question of the admissibility of Suffolk  
2 County Exhibit EP65. In connection with that, I will say  
3 that the Board has reviewed this document itself along  
4 with our prior orders concerning the discovery that led up  
5 to the formulation of this document, and we find that  
6 at this time further oral argument concerning this is not  
7 necessary.

8 The request is denied.

9 At this point, Dr. Kline will present the Board's  
10 ruling on the admission of Suffolk County Exhibit EP35.

11 JUDGE KLINE: The Board has reviewed Suffolk  
12 County Exhibit 65 and has considered the arguments for  
13 and against its admission into evidence.

14 When the Board ordered LILCO to turn these documents  
15 over to the county, it cautioned against the inference that  
16 these individual evaluations of the drill performance would  
17 be admissible as evidence in this case.

18 We advised the county that in order to be  
19 admissible, it would have to be shown that the evaluation  
20 forms collectively showed some form of pattern of defect in  
21 LILCO's drills or exercises.

22 The county argues that its cross-examination of  
23 LILCO witnesses on these documents does, indeed, show a  
24 pattern which demonstrates lack of realism in LILCO's drills  
25 and exercises and that it has, therefore, met the Board's

1 test and that the documents should, therefore, be admitted.

2 LILCO argues that no pattern has been shown  
3 because no consideration has been given to other evaluation  
4 forms which do not contain evaluations supporting the county's  
5 hypothesis or which might, in fact, contain evaluations  
6 which run counter to the county's view.

7 The state supports the county in this dispute and  
8 argues that the data sheets have some evidentiary value which  
9 the Board should admit.

10 The staff argues that the individual evaluations  
11 show no more than the summary evaluations written by IMPELL  
12 and contained in the county's Exhibits 63 and 64.

13 While they have no objection to the admission of Exhibits 63  
14 and 64, they see no additional evidentiary value in the  
15 raw evaluation forms. And they argue that Exhibit 65 should  
16 not be admitted.

17 The Board notes at the outset that county Exhibit  
18 65 appears to consist of a selected subset of forms  
19 drawn from a much larger collection of such forms which  
20 has been described as forming a stack some eight inches  
21 thick. I understand there is some dispute as to the thickness  
22 of the total document, but that is close.

23 This is not what the Board had in mind when it  
24 said that the form collectively must exhibit a pattern  
25 which might be admissible. We did not think it necessary to

1 state additionally that any purported pattern that might  
2 be shown must be an unbiased one within the statistical  
3 meaning of that term.

4 At a minimum, this would require scrutiny and  
5 summary of the entire available data base and not just of a  
6 selected subset of that base. We reason here by analogy  
7 with the numerous opinion surveys which have previously  
8 been offered into evidence in this case. We have little  
9 doubt that such surveys produced a thick stack of raw data  
10 forms similar to the one produced by the individual  
11 evaluations.

12 Clearly a selected subset of such survey forms  
13 would be inadmissible for the obvious reasons that subsets  
14 could be formed by selection of only those responses  
15 which were consistent with the party's view. No party  
16 has made such an offer, undoubtedly because of the obvious  
17 bias in such a procedure.

18 We understand that the drill and exercise  
19 evaluation forms were not produced as a result of a rigorously  
20 designed statistical survey of worker performance.  
21 We, therefore, express no opinion as to whether statistical  
22 analysis of the evaluation forms is required or could be  
23 done or whether a pattern could be shown in a more subjective  
24 manner.

25 We note that the IMPELL summaries contained in



1 Suffolk County Exhibits 63 and 64 were presented in a  
2 subjective format. We have no way of knowing and express  
3 no opinion as to whether additional alternative hypotheses  
4 could be developed from the same data base used in the IMPELL  
5 summaries. Suffice to say at this stage that valid  
6 hypotheses cannot be generated by the obviously flawed  
7 methodology employed by the county in this instance.

8 To admit the county's exhibit in its present  
9 form would do no more than invite an equally flawed  
10 exhibit from LILCO consisting of a subset of favorable  
11 comments from evaluators. We see no probative value in  
12 such a procedure.

13 Accordingly, for the foregoing reasons, we  
14 deny admission into evidence of County Exhibit 65.

15 JUDGE LAURENSEN: Thank you. Just so the  
16 record is clear, we will also ask that the court reporters  
17 bind into the transcript Suffolk County Exhibits 63 and 64  
18 following this page.

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February 23, 1984  
0630-033-NY-002

Long Island Lighting Company  
175 East Old Country Road  
Hicksville, New York 11801

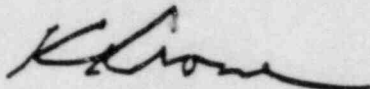
ATTENTION: Mr. Charles Daverio  
SUBJECT: Critique of the LILCO/LERO Joint Integrated Exercise  
of February 8, 1984

Gentlemen:

Attached for your information is the summary critique of the subject drill. This critique package contains highlights and specific areas of concern observed during that drill. The notes and comments of each of the Controllers is not included in the package, but is being retained on file in our office for reference.

Should you have any questions, please do not hesitate to contact either myself or R. Campanelli.

Very truly yours,



Kenneth Krasner  
Technical Specialist

KK/cjc  
Enclosure

cc: J. Weismantle - w/encl.  
C. Crowe - w/encl.

LILCO/LERO

EMERGENCY PREPAREDNESS DRILL CRITIQUE

COMMENTS

FEBRUARY 8, 1984

## EMERGENCY NEWS CENTER

### 1.0 STAFFING

Due to Dr. Catacosinos press conference in Mineola, the LILCO Public Affairs Staff in the ENC was reduced with two of the three Managers in the facility not present. This left the remaining Manager (Emergency News Manager) doing too many things. However, command and control of the facility was established and maintained throughout the exercise. In addition, no log was maintained throughout the exercise. The Security Crew was present in its entirety and should be commended. The Supervisor had excellent control of all security functions in the ENC and handled an apparent FEMA appearance very well. The short staff brought positive comments by the players as they became more involved and had more of an interest in the activities. This became an excellent training opportunity for all players involved, however, I believe a full staff would enable the Emergency News Manager to maintain better control of the emergency and to delegate certain responsibilities freeing him to coordinate all involved in the ENC.

### 2.0 FACILITIES/EQUIPMENT

The Media workspace and press conference rooms were not available for this exercise. However, these areas have been inspected in the past and have proven to be more than adequate for all press/media needs.

A high-speed telecopier was installed prior to this exercise and proved to be an invaluable tool. This telecopier was used by both LILCO and LERO organizations. Information flow between the ENC and the other facilities improved greatly. One recommendation is to verify all transmittals of information over the telecopies. Occasionally, press releases would be transmitted with a page missing. This verification call would eliminate this.

#### Information Release

Information is released to press/media in basically two ways; press releases and press conferences. LILCO press releases were generally well constructed. However, one press release (No. 6) was released with incorrect technical data. Technical advisors are available in the EOF and should be consulted whenever necessary. LILCO press releases were distributed to the media prior to LERO acknowledgment contrary to procedure. In addition, no formal press release was made at the Unusual Event Classification. This information, as well as other information, should be obtained in the Control Room. LERO press releases should be improved. Press releases were distributed to the media, handwritten with sections crossed out. LERO press releases should be redesigned so that they are simply taken off the telecopier, xeroxed, then distributed to the media.



The press conference conducted was better organized than previous exercises. The LILCO representatives were well prepared and presented themselves well. However, it is extremely important to separate LILCO from LERO as the Emergency Communications Director introduced the Director of the Local Response as the Vice-President of Purchasing. The Director needs to be better briefed before attending press conferences.

There was a major contradiction between a LERO press release regarding protective actions and the Director of Local Response's presentation. In addition, a LERO member, accustomed with dealing with the press should accompany the Director to these press conferences and assist him whenever necessary. All persons exposed to the press/media should receive confrontation and public speaking training. This will enable all persons exposed to the media to feel more comfortable in front of the press and will assist them in pressure situations. Future press conference exercises will be videotaped to add realism to the press conference and to act as a training tool.

### 3.0 RUMOR CONTROL

All call boards and Hicksville, Room 210 were not activated for this exercise. Ten rumors were called directly into the ENC. The two operators handled all rumors correctly, notifying LERO when necessary and keeping the News Manager informed at all times and should be commended.

## EMERGENCY OPERATIONS CENTER (EOC)

### 1.0 ACTIVATION AND STAFFING

- The EOC was declared activated at 10:15 a.m. approximately 45 minutes after the people were required to be present (9:30 a.m.). The Manager of Local Response should take a more active part in the activation process and this time could be improved.
- Only one key individual, the Decontamination Coordinator, was not present. His position was filled with a Dosimetry Record Keeper from the Health Services Area.

### 2.0 EMERGENCY OPERATIONS MANAGEMENT

- The roles played by the Director and Manager of LERO are not as was intended in the plan. The Director, due to his previous experience and knowledge, will get much too involved in plant operations and problem solving and this distracts from his decision making role in LERO. The Manager does not mobilize the EOC as is his responsibility and the information flow from him to the EOC is either very skimpy or erroneous. He has a tendency to act on his own and to make decisions which are not agreed to by the Director.
- The briefings given to the EOC staff by the Manager were at times not technically accurate. Some key items were also omitted from the briefings. More information should be disseminated to the EOC as a whole rather than rely on the Lead Coordinators to give it to their staffs second hand.
- Security in the EOC at the start of the drill was lax. Very few identification badges were worn. This situation was improved when the security guard was prompted by a Controller. Toward the end of the drill security again became lax. Two potentially contaminated bus drivers entered the EOC through the wrong door and were directed by the security guard to the clean area of the EWDF. No mention of the potential contamination of the clean areas of the EOC was mentioned to anyone.
- The Emergency Action level status was not displayed to the EOC for some time after the word came from the EOF. This word should be passed along to the EOC as soon as it is received so that plans can be made and formulated.
- The Home Coordinator began calling people at home regarding ambulance assistance prior to any protective action recommendations being made. This could cause confusion especially if no evacuations are recommended.

- When the Director of LERO left for the press conference at the ENC, he was unprepared. He did not take his notes or log book which would have proven helpful during the questioning.

### 3.0 COMMUNICATIONS

- The high speed telecopy presently located in the EOC conference room is in an inconvenient location. The conference room is not continuously manned and occasionally messages were not picked up in a timely fashion.
- There was a technical problem with the tie line between the Port Jefferson Staging Area and the EOC. The EOC cannot transmit over this line, i.e., when it is picked up in the EOC, it does not ring at Port Jefferson.
- The Riverhead tie line in the EOC will ring on the Patchogue set. This used to be on one set, but when the lines were separated, the bells apparently were not.
- Better radio protocol is necessary. Terminology should be standardized.
- General communications in the Health Services Area was lax. Telephones would go unanswered for long periods of time if the person assigned to that desk was not present.

### 4.0 PROTECTIVE ACTION RECOMMENDATIONS AND RADIOLOGICAL CONTROLS

- At 1230 a recommendation was made to evacuate sectors "A through I" and shelter "J". At 1320 a second recommendation was made to evacuate all sectors except Q, P and S. This second recommendation was announced to the EOC before the Director decided to in fact implement it. It was retracted by the Manager of LERO and then repeated once the Director finally decided what to do. This type of premature announcements led to a lot of confusion and unnecessary and, sometimes, wrong actions being taken.
- Personnel monitoring in the EWDF was very lax. Personnel were using poor techniques in monitoring. The process was very rushed and the probe was held too far from the subject.
- There were insufficient personnel assigned to the EWDF to adequately monitor and decontaminate vehicles and personnel. Several EOC security personnel were dispatched to the parking lot to help direct traffic.

### 5.0 PUBLIC ALERTING AND NOTIFICATION

- A lot of time was lost in issuing the EBS message and press release for the Alert because of the confusion whether or not the sirens have to be sounded at the Alert.



## STAGING AREAS

### 1.0 ACTIVATION AND STAFFING

- Several key people in the Staging Area were not drilled in the positions which they were assigned, i.e. a Lead Traffic Guide had been a Traffic Guide. This had a tendency to slow up the drill process and required more prompting and assistance by the Observers.
- At Riverhead 7 vehicles were not available to run the routes for this drill due to lack of leases. As a result, 20 bus drivers were never sent out and 3 traffic control points were not manned.

### 2.0 FACILITIES AND EQUIPMENT

- Whereas the facilities at Patchogue and Riverhead are generally adequate to contain and brief the LERO workers, Port Jefferson is not as well equipped. The turbine floor is not conducive to giving briefings to several hundred people.
- Status boards were provided, but were not used adequately or the information contained thereon was incorrect. At Riverhead, times were not included with events on the status board. Key events such as sounding of sirens was not placed on the status board. Release status at Riverhead was never changed from "High Coolant Activity" which initiated the Alert.
- Two of five Transfer Point Coordinator boxes at Riverhead were not available and this information had to be reconstructed resulting in a 25 minute delay in dispatching these people.
- An insufficient number of dosimeters at Port Jefferson was a problem. Several people were dispatched for the drill into the field without dosimeters. This is a bad habit to get into.

### 3.0 COMMAND AND CONTROL

- The briefings given to the Staging Area personnel during the drill were lacking in specific information, i.e. the Emergency Action Levels, which the site was in, was not being regularly updated, the radiation levels that were expected in the field was not transmitted to the personnel, one bus dispatcher at Riverhead referred to the EAL as "General Alert."
- Personnel in the Staging Areas appeared to be lackadaisical in the attitude toward the exercise. There was no general concern regarding the emergency and when questioned about the condition of the emergency, people did not know.



#### 4.0 DOSIMETRY AND EXPOSURE CONTROL

- Potassium Iodide was ordered to be given to the emergency workers, but not forces were available for proper distribution.
- Route Alert-Drivers were sent out into the field without KI because the order to take it was given after they had been dispatched. If word is to be gotten to them in the field, the only means of communication is via the EOC.
- Workers were not reminded to check their dosimeters periodically and those persons who were observed in the field did not check their dosimeters.
- The Lead Traffic Guide in Riverhead had to be prompted as to what actions to take relative to a pegged 0-200 mr dosimeter being called in from a Traffic Guide.

#### 5.0 COMMUNICATIONS

- General protocol on the two-way radios needs improvement.
- There appears to be some cross talk between the LILCO field teams dispatched from the TSC and EOF (green team) and the Riverhead Traffic Guides.
- The dedicated line between Port Jefferson and the EOC is only capable of transmitting from the Staging Area. It will not ring in Port Jefferson when the phone is picked up in the EOC.
- The use of "This is a Drill" prior to any radio or telephone communication was emphasized and was generally good. This point should be re-emphasized throughout the drill program.



SC EP 64

February 23, 1984  
0630-033-NY-003

Long Island Lighting Company  
175 East Old Country Road  
Hicksville, New York 11801

ATTENTION: Mr. Charles Daverio

SUBJECT: Critique of the LILCO/LERO Joint Integrated Exercise  
of February 15, 1984

Gentlemen:

Attached for your information is the summary critique of the subject drill. This critique package contains highlights and specific areas of concern observed during that drill. The notes and comments of each of the Controllers is not included in the package, but is being retained on file in our office for reference.

Should you have any questions, please do not hesitate to contact either myself or R. Campanelli.

Very truly yours,

A handwritten signature in cursive script, appearing to read "K. Krasner", written in dark ink.

Kenneth Krasner  
Technical Specialist

KK/cjc  
Enclosure

cc: J. Weismantle - w/encl.  
C. Crowe - w/encl.

LILCO/LERO  
EMERGENCY PREPAREDNESS DRILL CRITIQUE

COMMENTS

FEBRUARY 15, 1984

## EMERGENCY NEWS CENTER

Overall, the ENC responded quickly to the information received from the EOF. Rumor Control was excellent; there were problems in five major areas: Equipment, Overall Preparedness for Responsibilities, Organization and Control, Press Release Contents and Handling, and Press Briefings and Conferences.

### 1.0 Equipment

- o Not everyone was familiar with the operation of the Teleram Porta-Bubble or the High-Speed Telecopier.
- o The radio was not thoroughly checked before the ENC was pronounced operational.
- o The LERO telecopier at the ENC was incompatible with EOC's
- o We would recommend training for all ENC staff on correct equipment operations.

### 2.0 Overall Preparedness

- o Some unfamiliarity with procedures existed; the staff felt that the frequency of rotation led to a lack of experience in any particular position.
- o The staff requested more training and suggested more drills for training purposes.
- o The log book was not maintained. It is useful in reviewing drills and training.

### 3.0 Organization and Control

- o There was too much acting as individuals rather than as a team.
- o Few staff briefings were held when press releases or technical information was received by the ENC.
- o Routine tasks (e.g., answering phones) were not delegated to administrative staff.
- o Press releases were not routinely reviewed prior to being distributed and posted (suggest ENM review and initial at all times).

### 4.0 Press Release Contents and Handling

- o The information was too technical and hence too much clarification by the technical advisor was required.



- o It seemed that the press releases were designed to provide both information to the public and technical information to ENC personnel. These functions need to be separated.
- o Technical discrepancies (timeframes) and inconsistencies appeared several times.
- o The press releases and RECS messages were not comparable.

#### 5.0 Press Briefings/Conference

- o The press briefings were held promptly.
- o The LILCO briefings covered off-site protective actions (school evacuations) which should be covered by LERO.
- o The LERO/LILCO delineation is not at all clear.
- o Confrontational interview skills need to be improved.
- o The LERO spokesperson was not up-to-date on the latest accident information.
- o The conference was terminated too early.

#### 6.0 LERO

LERO representatives did not fully understand their responsibilities. LERO provided only one press release. Regular contact with the EOC was not maintained because of telecopier incompatibility.

- The Emergency Support Coordinator (ESC) had good access to his people and kept them well briefed.
- General communications with the EOC were effective. Plant status was current (within 20 minutes).
- Errors were caught and corrected.

## EMERGENCY OPERATIONS CENTER (EOC)

### 1.0 Activation and Staffing

The EOC was staffed and ready for activation in a very timely manner. Two key individuals; the RECS Communicator and the Decontamination Coordinator were not present. Both positions were filled with persons already in the EOC and both performed very well under these adverse conditions.

During the briefing given to the Director and Manager of Local Response, the Director indicated that had he been informed of the occurrence at Shoreham while he was at home or at work, he would have waited until he reported to the EOC to make his supplementary notifications and also confer with the Coordinator of Public Information in issuing an EBS message. The Director should confer with the Coordinator of Public Information when first notified of an Alert and issue an EBS message as soon as possible. This will save considerable time in notifying the schools to implement their early dismissal program.

### 2.0 Emergency Operations Management

The Director and Manager of Local Response conducted operations within the EOC in a manner consistent with the plans and procedures, i.e., the Manager would insure that the personnel in the EOC are performing their job and the Director would be the individual dealing with outside agencies and making the decisions relative to protective action recommendations.

The Director did spend too much time conferring with the EOC, either the Response Manager or the EPA No. 1. In doing this, he was being given a lot of technical information which he was then trying to interpret. Due to his lack of technical knowledge relative to Shoreham, some of the information was being interpreted erroneously and misinformation was being given to the EOC staff. The Director should focus his attention on the level of the emergency - did it escalate and what if any protective actions the site is going to recommend. He should direct his attention then to making a decision on protective actions and informing the public. The technical details should be left to the Manager and/or the Radiation Health Coordinator.

The Manager did a good job of briefing the EOC coordinators and keeping the EOC informed of the status of the emergency.

The Radiation Health Coordinator seemed to be trying to play the part of the Environmental Assessment Coordinator in trying to reclassify the emergency and also in trying to get the EAC to change their mind. He spent a lot of time researching the EPIPs and communicating with the EAC in trying to change the classification from a Site Area to General Emergency. The RHC should have used his own judgement and technical expertise, and if he felt that more severe protective actions should have been recommended, he should have made that known to the Director regardless of the site's recommendations.

The RHC could have done a better job of keeping the Health Services staff informed. It was approximately 45 minutes after the release was terminated that his staff was informed of this fact.

The Evacuation Coordinator was trying to get status reports directly from the Staging Area early in the emergency. This did not work too well as he was in effect bypassing his coordinators. Later on in the exercise, he relinquished this task to his coordinators and the information flow was much better.

### 3.0 Public Information and Alerting

In most cases the EBS messages and the sounding of the sirens was accomplished within the required 15 minutes. (This time is from when a decision is made to sound the sirens for a PAR or an EBS update until the time the sirens are actually activated.) In one instance, however, the Coordinator of Public Information when told to issue an EBS message to update the public, erroneously use the form for a press release. He then used the EBS form, but for a General Emergency with sheltering and evacuation rather than solely for evacuation. This led to the EBS message being issued approximately 45 minutes after the decision was made - 30 minutes late.

The Director was called to a press conference at the Emergency News Center. Prior to leaving, he was briefed by his lead coordinators as to the latest status and he went with his secretary who was keeping his log. This showed a lot of foresight by the Director who by the nature of his normal job has no contact with the media and wanted to be as well prepared as he could be. During the press conference, the Director called back to the EOC to get a further update as to the status of the evacuation.

Approximately 34 sirens were designated to have failed for this exercise. It was approximately 1-1/2 to 2 hours before this information was relayed to the Staging Areas so that they could dispatch Route Alert Drivers. This delay was due in part to information not being available in the EOC relative to which Staging Area is responsible for which siren. In addition, these failures were not reported to LILCO for further investigation.



#### 4.0 Facilities and Equipment

At some point during the exercise, the radio for the road crews developed poor reception. The staff in the EOC utilized the traffic guides to communicate with the road crews.

The Protective Actions Status Board in the EOC indicates recommendations from SNPS and DOE. DOE should be changed to LERO.

#### 5.0 Dose Assessment and Protective Action Recommendations

The RHC did not utilize his DOE/RAP field teams to their maximum advantage. There was long periods of time when the teams were sitting idle and not taking readings or monitoring plume progress. More attention should be given to this area.

The order to take KI was given to the Staging Areas from the Radiation Health Coordinator to the Dosimetry Record Keeper. This information was only disseminated to Port Jefferson (see Section on Staging Areas). This information has to be disseminated through the Dosimetry Record Keepers at the Staging Areas.



## STAGING AREAS

### 1.0 Activation and Staffing

- In all three Staging Areas only two key individuals did not report for the exercise; the Bus Dispatcher at Patchogue and a Transfer Point Coordinator from Port Jefferson. This information was relayed to the EOC. Replacements from another shift were called in and reported in sufficient time to adequately do the job.
- A number of bus drivers, traffic guides and route alert drivers also did not report for the exercise. This, however, did not detract from LERO to perform its function.
- All Staging Areas were fully staffed and activated by around noon.

### 2.0 Facilities and Equipment

- The problem with the physical layout of Port Jefferson is still a hinderance to a smooth running Staging Area.
- Status boards were used more effectively than in the past. A blank status board in Riverhead was used to post the description of each emergency class.
- In Riverhead, the Staging Area Coordinator was not sure on what information, received from the EOC, to post on the status board. A duplicate of the Staging Area status board could be used by the Evacuation Coordinator in briefing the Staging Area Coordinator. This will avoid missed information and also eliminate any wrong interpretation of information.
- There were insufficient maps at Port Jefferson and Patchogue for Relocation Center bus routes.

### 3.0 Command and Control

- Even though in all cases the Staging Area Coordinator assumed control of operations of the Staging Area, there were very few briefings given to their personnel relative to plant and emergency status.
- In one case, due to lack of information from the EOC, the information given to the Staging Area was made up, i.e. the Staging Area was told that an Unusual Event existed when in fact the plant was actually in an Alert.

- There is a symptomatic problem that exists in all three Staging Areas. This is that personnel have been trained in their everyday jobs to solve any problem on their own that comes up. It must be impressed upon the Staging Area staff that the EOC must be kept informed of all problems as they arise.
- The Transfer Point Coordinator at Norwood Avenue distributed packets to bus drivers to run evacuation routes in Zones K and Q. Only Zone K was called to be evacuated. This cause two problems. First, evacuation buses were being run in the streets of a zone where no protective action was recommended, undoubtedly causing confusion among the residents and secondly by using his bus drivers to run extra evacuation routes none were available to run relocation center routes.
- The Lead Traffic Guide at Port Jefferson was very uncooperative with the EOC. He either would not or could not get information requested of him by the EOC.

#### 4.0 Dosimetry and Exposure Control

- Even though all three Staging Areas were given the word to take KI, only Port Jefferson implemented this instruction. In the other two Staging Areas, this request was never acted upon.
- In many cases, it was noted that persons in the field did not check their pocket dosimeters every 15 minutes. This must be emphasized.

#### 5.0 Communications

- Two of three Transfer Point Coordinator radios failed early in the exercise. Word was relayed to them via traffic guides.
- At Riverhead, radios were given out early rather than waiting until personnel had to be dispatched. This saved a lot of time in getting the field people deployed.
- In general, radio protocol and etiquette was very poor. The Lead Traffic Guides and Bus Dispatchers showed poor control over the field people in not trying to correct this situation.

## EMERGENCY WORKER DECONTAMINATION FACILITY (EWDF)

The personnel who staffed the EWDF for this drill were the same as those on the January 28 exercise. The overall performance, however, was dramatically different. For this exercise, the performance can only be classified as poor. Specific items of criticism are listed below:

- Signs in the EWDF were not properly placed, i.e. a clean area sign was placed in a controlled area.
- Dosimetry was not worn by personnel in the parking lot.
- Access was not controlled to the EWDF.
- Use of the procedures was not apparent.
- Monitoring techniques were not adequate. In one instance, a bus driver was diagnosed as having ingested iodine when in fact, his neck was contaminated and a simple decontamination effort would have eliminated his problem.
- All equipment, i.e. soap, which was available, was not put out.

It should be noted that these errors or omissions were still taking place after repeated prompts from the Controller.

1 JUDGE LAURENSEN: Are we ready to resume the  
2 questioning of the panel this morning?

3 MR. MILLER: Judge Laurenson, before we do  
4 resume the questioning of the panel, I feel compelled to  
5 make some comments on the Board's ruling on EP65.

6 I gather from the Board's ruling that the Board  
7 has made the decision that a pattern has not been shown  
8 by the county's offer of EP65. I obviously disagree with  
9 that ruling. I think yesterday we adequately demonstrated  
10 that there was a pattern, not only as to the lack of realism  
11 but subpatterns within that pattern going to other issues  
12 such as participants not taking drills seriously,  
13 equipment not being available, and so forth. I am not  
14 going to reargue what we tried to argue yesterday.

15 What bothers me about the Board's decision  
16 is that it seems that we are now applying the size of  
17 the data base to preclude the county from offering evidence  
18 before the Board.

19 To my knowledge, this is a new standard that has  
20 never been imposed by any board in an NRC proceeding.

21 I can think back to the proceedings we have held  
22 before other boards on other issues in this proceeding,  
23 health and safety matters, for example, where during the  
24 course of quality assurance/quality control litigation,  
25 reams and reams of documents were produced to the county.



1 The county attempted to ask questions about those documents.  
2 The board at that time indicated to the county that the  
3 county was obligated to show a pattern of failure of  
4 QA/QC procedures.

5 The county did so by going through those reams  
6 of paper and offering to the board what the county thought  
7 showed those patterns. No where did the board imply that  
8 because the statistical data base from which those  
9 documents were offered was very large and the documents  
10 offered to show a pattern were smaller that, therefore,  
11 made the documents inadmissible.

12 I don't understand the Board's ruling. It seems  
13 to me that the Board has made the determination regarding  
14 an ultimate finding of fact -- that is, that the county  
15 has not demonstrated a pattern at this stage of the  
16 proceeding. That is error. At this point the county has  
17 presented evidence. The other parties are entitled to  
18 present evidence.

19 Ultimate findings of fact, such as whether a  
20 pattern was shown, are not to be made at this stage of  
21 the proceeding. They should be made by the Board when  
22 the evidence has been offered and the Board has had time  
23 to consider all of the evidence.

24 I disagree strongly with the Board's ruling.  
25

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JUDGE LAURENSEN: Let me just add one thing in response to Mr. Miller's statement, and that is what the Board has said here today is that the individual evaluation forms that are comprised in the County's Exhibit EP-65 do not constitute probative evidence that is admissible in this proceeding to establish the points for which they are offered.

And at this point, the County has not established the pattern to give relevance to this material. And that is all we are ruling on at this point. We are not ruling on any of the ultimate questions in the case. And I think, as Dr. Kline said, we express no opinion on any of those questions, because we don't have that information.

All we are saying is that based upon the exhibit that you offered here in Exhibit 65, it does not comply with our requirement of relevant evidence that would be probative of any of the issues in the case, and that the danger of admitting this evidence is greater than any potential value.

MR. MILLER: Judge Laurenson, what the Board's ruling has said to the County, at least, is that -- let's first of all talk about the size of the data base, whether it's twelve inches, eight inches, or four inches makes no difference. There is paper out there. And the Board's ruling seems to be saying to the County, introduce all the

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1 paper and we will go through it page by page. We will  
2 consider that option. We might offer all the paper and  
3 then we will see what the data base is.

4 But we went through -- I hope the Board under-  
5 stands the process we used. It was a long, arduous process.  
6 We took whatever paper LILCO provided to us on June the 1st.  
7 We weeded out all of the noncompleted forms, which was a  
8 substantial amount. We then looked for patters within that  
9 stack of paper. We found roughly ten or so. I'm going to  
10 talk about some of those. I intend to ask questions about  
11 other documents that come from that stack of paper.

12 If you put it all together, maybe it amounts to  
13 a statistical portion of the data base that we were given  
14 by LILCO. But to say to the County because we only put in  
15 forty pages, or whatever the number of pages were in EP-65,  
16 doesn't constitute an adequate statistical data base from  
17 the data base that we were given to start with by LILCO,  
18 I don't understand that ruling.

19 It seems you are saying: Put all the paper in.

20 JUDGE LAURENSEN: I thought we said don't put  
21 any of it in. That was my understanding of what Dr. Kline  
22 announced as our decision, that the raw data itself doesn't  
23 establish anything, that it does require some sort of  
24 rigorous statistical or other subjective analysis in order  
25 to establish the pattern that we have indicated is required.

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2 data. But I don't think you should construe our decision  
3 today as an invitation to submit all of the raw data on  
4 these evaluation forms. I know that's true.

5                   Are you ready to resume the questioning?

6 Whereupon,

7                   HARRY N. BABB,

8                   GARY J. BERGER,

9                   MATTHEW C. CORDARO,

10                  CHARLES A. DAVERIO,

11                  DENNIS S. MILETI,

12                  WILLIAM F. RENZ,

13                  -and-

14                  RONALD A. VARLEY

15 were called as witnesses by and on behalf of the Long Island  
16 Lighting Company and, having previously been duly sworn,  
17 were further examined and testified as follows:

18                               CROSS EXAMINATION

19                               BY MR. MILLER:

20                   Q       Mr. Varley, when IMPELL has a drill or an exercise  
21 and receives evaluation critique forms from its observers  
22 and controllers, does IMPELL conduct a statistical analysis  
23 of the forms as provided by the observers and controllers to  
24 determine, for example, whether there is a particular area  
25 of concern that has been revealed during that drill or

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1 exercise?

2 A (Witness Varley) Could you --

3 Q A statistical analysis. I think you know what  
4 I mean by that.5 A No, I don't know what you mean by a statistical  
6 analysis. If you could elaborate on that particular aspect.7 Q What do you do with the forms when you get them,  
8 Mr. Varley?9 A As I explained yesterday, the lead drill controller  
10 is responsible for providing a formal written critique to  
11 the Long Island Lighting Company on that particular exercise.12 The lead drill controller reviews the comments  
13 that were provided, both in written form and in discussion  
14 with each of the drill controllers that participated in  
15 that particular exercise. They also hold the formulation of  
16 that written formal critique until after the oral critique  
17 is conducted with the key drill or exercise participants.18 With the accumulation of information, both from  
19 the written individual critique sheets by the individual  
20 controllers, the comments that may arise out of the oral  
21 critique, and the discussions with all of the drill control-  
22 lers, the lead drill controller then formulates the formal  
23 written critique based upon those three inputs.24 Q It sounds to me, Mr. Varley, like you are telling  
25 me that the forms turned in by the evaluators are reviewed

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1 by the lead controller.

2 I'm asking if there is any kind of an analysis,  
3 statistical analysis, conducted of those critique evalua-  
4 tion forms by the lead controller or anyone else at LILCO  
5 or IMPELL, to your knowledge?

6 A Based on my understanding of a statistical analysis  
7 where you would tabulate all of the comments that fall into  
8 a particular category and provide weight based upon how  
9 many comments were given on each particular topic that is  
10 being considered, my answer would be no.

11 Q And do you believe, Mr. Varley, that all the  
12 problems noted in the critique evaluation forms by IMPELL  
13 and LILCO observers and controllers show up on the written  
14 summary reports prepared for a particular exercise or drill?

15 A To answer that question, the lead drill control-  
16 ler looks at every written critique sheet that is provided.  
17 He also discusses the comments with the controllers that  
18 wrote those particular comments.

19 And depending upon the nature of the comment,  
20 he has to place weight and merit upon the individual's  
21 comments and make a decision upon whether a particular  
22 comment that the individual made carries enough weight and  
23 is of substance to provide in the formal written critique.

24 Q So the lead controller uses judgment in that  
25 regard, correct?

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A Oh, certainly he does, yes.

2

Q Subjective standard, right?

3

A I wouldn't say it's --

4

Q Judgment is not subjective, Mr. Varley?

5

A Subjective in the sense that the individual that is the lead drill controller is the experienced individual in running these exercises and places weight and merit upon the individual comments.

9

Q So, back to my question. Do all the comments given to the lead controller in these forms show up in the written report prepared by the lead controller?

12

MS. MONAGHAN: Asked and answered.

13

MR. MILLER: It wasn't answered.

14

JUDGE LAURENSEN: Overruled.

15

WITNESS VARLEY: The answer to that is no; otherwise, the formal written critique would be as lengthy as each of the individual written critiques.

18

BY MR. MILLER: (Continuing)

19

Q Look at Page 42 of the testimony. Mr. Varley, on Page 42, you mention the word "subsituations." Do you see that?

22

A Yes, I do.

23

Q And you say that the drills simulate actual emergencies through the use of subsituations, right?

24

A It says another way in which the drills simulate

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1 an actual emergency.

2 Q And these subsituations I gather, in your opinion,  
3 are the type of situations that may arise in a real  
4 emergency, correct?

5 A There is a potential for that, yes.

6 Q Tell me, are any of these subsituations given  
7 to your field personnel, LILCO's field personnel, during  
8 the exercises or drills? Field personnel would be people  
9 like traffic guides, bus drivers.

10 A They are provided to the field personnel so that  
11 they may input those subsituations back into the staging  
12 area and to the EOC.

13 Q Now, could you give me some examples of the  
14 subsituations that are given to field personnel during  
15 exercises or drills?

16 A Yes. An example would be a traffic guide is  
17 told that while at his traffic control post he notices that  
18 there is a downed tree across one of the roadways that is  
19 providing input into his particular intersection. The  
20 intent of that is that he would then radio that information  
21 back into the staging area so that we can evaluate the  
22 response of the organization to dealing with how they  
23 would logistically remove that particular obstacle.

24 end #3  
25 Joe flws



1 Q Well then, you are providing an opportunity  
2 to the supervisory personnel to deal with this situation.  
3 What about the traffic guides. We aren't talking about  
4 traffic guides particularly unless you want to. I am  
5 talking about your field personnel. Give me an example  
6 of some situation that provide to your field personnel  
7 that causes them to act in some way different than they  
8 would under normal circumstances.

9 In your words, provides additional problems  
10 and distractions.

11 A I just indicated one to you. A traffic guide,  
12 is in fact, field personnel.

13 Q The traffic guide gets on the radio, and he  
14 calls in the fact there was a downed tree, and that  
15 provides additional distractions and problems to the  
16 traffic guide, is that your testimony?

17 A That is correct.

18 Q Do you have anything a little bit more difficult  
19 you can share with me?

20 A Those are the types of situations that we provide  
21 to stimulate activities in the scenarios.

22 Q So that would be your example as representative  
23 of the sub-situations given to your field personnel?

24 A That's correct.

25 Q Look at page 43, please. I am curious about

1 the question, Mr. Varley.

2 The question says that you stated before that  
3 the emergency response tasks that are assigned to LILCO  
4 employees are not the type of tasks that require daily  
5 practice to establish proficiency.

6 Do you see that?

7 A No, I don't.

8 Q It is in the question.

9 A That is a question, yes. I didn't write the  
10 question.

11 Q Well, would you agree with me, Mr. Varley, that  
12 back on pages 39 and 40, the statement made by the panel,  
13 including yourself, was that the emergency tasks do not  
14 geneally require daily practice to ensure proficiency?

15 A That's correct.

16 Q Now, let me ask you, Mr. Varley. Well, let  
17 me back up for a second and make sure we have an under-  
18 standing here.

19 Mr. Daverio, yesterday, an example I think of  
20 someone you said should, or would need fairly periodic  
21 practice to be able to perform a task would be the radiation  
22 health coordinator, is that right?

23 A (Witness Daverio) That was the example we  
24 used yesterday, that is correct.

25 Q And you said that perhaps command and control

1 personnel as well?

2 A I am not sure I said that exactly. I would  
3 have to look at the transcript.

4 Q Okay. You state, Mr. Varley, in the first  
5 sentence, for example, the mobile radio units used by  
6 traffic guides and transfer point coordinators to  
7 communicate with the staging areas are simple to use.

8 Do you see that statement?

9 A (Witness Varley) Yes, I do.

10 Q Let me ask you, what would happen, in your  
11 opinion, if during an emergency several persons all on the  
12 same frequency tried to communicate by, as you say, simply  
13 depressing the button on the hand-held microphone and  
14 speaking into the microphone?

15 MS. MONAGHAN: Objection. That was covered  
16 in the communications area, and that is not within the  
17 scope of these contentions.

18 MR. MILLER: It is in the scope of the testimony  
19 offered by these witnesses.

20 JUDGE LAURENSEN: Again, this mobile microphone  
21 business is the matter discussed in great detail on pages  
22 59 and 60. The objection is overruled.

23 WITNESS VARLEY: Would you restate your question,  
24 Mr. Miller.

25 BY MR. MILLER: (Continuing)

1 Q I am asking you, Mr. Varley, what would happen,  
2 in your opinion, if during an emergency several persons,  
3 all on the same frequency, tried to communicate by as  
4 you say it, simply depressing the button on the hand-held  
5 microphone and speaking into the microphone.

6 A If all of those individuals did that activity  
7 simultaneously, there would be a problem with the message  
8 being received.

9 Q Have there been any drill scenarios or exercises  
10 of any kind, Mr. Varley, where such a situation was addressed  
11 in the scenario?

12 A There was no need to address that kind of a  
13 situation in the scenario, because on occasion that type of  
14 thing, did in fact happen.

15 A (Witness Cordaro) In the communications testimony  
16 heard earlier in this proceeding, there was some comment  
17 forms that, I think, -- LILCO comment forms that Suffolk  
18 County used in cross examination which, indeed, indicated  
19 that some of the people in the field had that kind of  
20 problem in communicating with the staging area, where  
21 indeed this problem of being able to get through and  
22 interference with other people attempting to use the  
23 same frequency had occurred.

24 Q Now, Mr. Varley, looking at that second  
25 paragraph on page 43, there is a long discussion on this



1 page about the equipment, the radio equipment, and how in  
2 your words it is simple to use.

3 Do you see all that?

4 A (Witness Varley) Yes, I do.

5 Q Do you think, Mr. Varley, the real point of  
6 training is whether or not the equipment is simple to  
7 use, or whether there is adequate practice to learn how  
8 to use the radios, including such things as radio discipline  
9 and protocol?

10 A I think there is a combination of factors that  
11 come into conducting any training session, and that is how  
12 much training is required based upon the complexity of  
13 the piece of equipment that you are trying to master.

14 Q And is it your testimony, Mr. Varley, that  
15 by definition a simple piece of equipment, in your words,  
16 is easy to master?

17 A Obviously, the simpler the piece of equipment,  
18 the easier it is to master that piece of equipment, yes.

19 Q And is it easier, in your opinion Mr. Varley,  
20 for LILCO employees and other participants in the LERO  
21 organization to master the use of a mobile radio?

22 A I think there is a problem with the use of  
23 the word, 'master' in my opinion. LILCO employees have  
24 not had a problem learning how to use the mobile radios.

25 Q Now, are you saying, Mr. Varley, that during

1 the course of exercise and drills there have been no  
2 problems with the participants in using the mobile radios?

3 A That is not what I said.

4 Q Tell me, have there been such problems?

5 A There have been isolated cases where there have  
6 been problems with the radios, yes.

7 Q Isolated cases. Could you define that for me,  
8 please?

9 A During the course of conducting drills and  
10 exercises, there have been problems with individual radio  
11 failures or some communication type problems with  
12 interference with a particular channel of a radio, but in  
13 no case have we seen the type of problem that arose during  
14 a particular drill impact the ability of a particular field  
15 group or response group to be able to carry out its  
16 activities.

17 Q Have you seen problems, Mr. Varley, with  
18 participants not demonstrating proper radio protocol  
19 or discipline?

20 A Proper radio protocol is a subjective term  
21 that has many different meanings.

22 Q Have you seen that problem using your  
23 definition.

24 MS. MONAGHAN: Mr. Miller, let the witness  
25 answer the question.

1 MR. MILLER: I am trying to get answers so that  
2 we can finish this testimony.

3 JUDGE LAURENSEN: I don't think he finished  
4 his answer, Mr. Miller. The rules that we have here is  
5 that he is entitled to finish the answer before you start  
6 the next question.

7 Mr. Varley?

8 WITNESS VARLEY: We have not witnessed a problem  
9 with radio terminology. What we have seen is that there  
10 is not a standard terminology applied by all of the  
11 participants, and we have been looking at that particular  
12 aspect of radio usage, the fact that all of the individuals  
13 do not use the coded numbers, so to speak, in conducting  
14 communications activities is a recurring comment that we  
15 get from all of our drill controllers.

16 We have looked at that, we have evaluated that,  
17 and we have found that, in fact, the fact that the  
18 individuals do not use -- to use a better term, ---  
19 standardized terminology while using the radios, although  
20 it has been pointed out numerous times by all of our  
21 drill controllers, we have found no instances where that  
22 has impacted the ability of that particular field group  
23 to accomplish its intended objectives.

24 That is a level of polish that we would hope  
25 maybe someday we can achieve, but it is not something

1 that we find a detriment to LERO's ability to accomplish  
2 its field activities.

3 Q Now, Mr. Varley, do you recall any instances  
4 where during exercises or drills, participants have been  
5 engaged in horse play over the radios?

6 A We have seen comments where individuals have,  
7 in fact, held the microphone up to the radio in their car  
8 for horse play purposes; yes, we have seen that.

9 Q Do you think that serves to accomplish the  
10 purpose of the exercise and drill?

11 A No, that is not what I said. I said in no  
12 case have we found problems that detracted from the ability  
13 to accomplish the given set of objectives for the drill.

14 And, in fact, where we could identify an  
15 individual that did that, they were admonished for that  
16 type of activity.

17 Q But isn't it a fact, Mr. Varley, that such  
18 activity has occurred during the course of every drill  
19 and exercise that has been conducted by LILCO for which  
20 the County has been provided the critique evaluation  
21 forms?

22 A I don't know if that is the case in every  
23 drill.

24 Q Well, we will look at that. Let me ask you,  
25 Mr. Daverio, the last sentence on page 43, during drills



1 and exercises, route alert drivers practice driving all  
2 or part of the routes while reading the maps that cover  
3 the route area.

4 Do you see that?

5 A (Witness Devario) Yes, I do.

6 Q We have discussed this area of route alert  
7 drivers in other contexts of this proceeding, Mr. Devario.  
8 I just want to straighten this up. Are you testifying here  
9 that the route alert drivers during the drills and exercises  
10 drive a particular route to which they would be assigned  
11 during an emergency?

12 A No.

13 Q Are you saying that the route alert drivers  
14 drive their entire routes, whatever route that might  
15 be during the exercises or drills?

16 MS. MONAGHAN: Objection. Judge Laurenson  
17 this was covered in excruciating detail during the  
18 communications testimony.

19 JUDGE LAURENSEN: I think the testimony is  
20 repeated here, and I think he is entitled to clarify  
21 if there is any ambiguity in it. Objection is overruled.

22 BY MR. MILLER: (Continuing)

23 Q Mr. Devario?

24 A As stated in our answer, they drive all or part  
25 of their route, and it may be the route they drive in an

1 emergency. They are not trained on the route that they  
2 can only drive in an emergency, as I think has been  
3 testified to many times.

4 Q Mr. Daverio, on page 44, there is a discussion  
5 which talks generally about the use of the implementing  
6 procedures.

7 Do you see that?

8 A Yes, I do.

9 Q Let me ask you first of all, Mr. Daverio, are  
10 you saying that each and every LERO worker has reviewed  
11 the procedures -- implementing procedures during their  
12 training, his or her training?

13 A I think between some time in the training  
14 program, including drills and exercises, they have had  
15 their procedure to be used. The packs that are given  
16 to the field crews, if they are required to use a procedure,  
17 are given to them.

18 In the EOC, the way we do it is we have identified  
19 for each position in the EOC the procedures that they need  
20 to use, and we have a book prepared for each person at the  
21 EOC which contains the individual procedures.

22 Anyone who goes to a table top, would go through  
23 the procedures in that table top session, so I think we  
24 can make the statement somewhere in the program they do  
25 get to use that procedure.

1 Q Now, when you say, 'that procedure,' Mr.  
2 Daverio, are you saying they look at, have the opportunity  
3 to review, all the implementing procedures?

4 A No, I didn't say that. I said the ones  
5 applicable to their job.

6 Q And who makes that determination as to which  
7 LERO member gets which procedure applicable to their  
8 job?

9 A If you look at our procedures, it is detailed  
10 and very well documented who has to do what. It says  
11 bus drivers do this, and it is the procedure that says  
12 who gets it, and my staff goes through and makes sure  
13 the right people are getting the right procedures.

14 Q So that falls within your responsibility.

15 A Within the group of LERO, it does.

16 Q Now, during an emergency, Mr. Daverio, an  
17 actual emergency, these procedures -- the entire implementing  
18 procedures would not available to most of the LERO workers,  
19 isn't that correct?

20 A I think as I just stated, the way we do it is  
21 that everyone has the procedures they need to have. The  
22 pack for a bus driver would contain the material required  
23 for a bus driver from the procedures.

24 There is no need for him to have the command  
25 and control module that is used by the EOC Director. We

1 would be overburdening him by asking him to carry the  
2 four volumes when he goes into the field.

3 Q Is it your testimony, Mr. Daverio, looking at  
4 the last sentence, that -- last sentence in the first  
5 paragraph on page 44 -- is it your testimony that the LERO  
6 training program and the guidance provided by these procedures  
7 necessarily ensures an, 'accurate and consistent timely  
8 response?'

9 A That is what that sentence says.

10 Q Mr. Daverio, the procedures have been used  
11 during the training exercises and drills, haven't they?

12 A Yes.

13 Q And it is true, isn't it, tht during these  
14 drills and exercises, there have been some problems with  
15 the procedures. Would you admit to that?

16 A Yes.

17 Q Let me see if we can clarify and specify for  
18 the parties and the Board some of those problems. Would  
19 you agree with me that there have been out of date  
20 procedures used during the exercises and drills?

21 A I am aware of isolated cases where we may not  
22 have had the latest procedure in all the books that we  
23 gave to everyone, that is correct.

24 Q Are you aware, Mr. Daverio, of personnel not  
25 having been kept up to date on changes made to the procedures?



1           A       In advance to the drill, they probably were not  
2 aware, but when they got to the drill, they should have  
3 had the latest procedure to work from.

4           Q       But in some cases they didn't, is that right?

5           A       In some isolated cases, there may have been a  
6 book or two that we didn't get the latest one in, that  
7 is correct.

8           Q       Now, are you aware, Mr. Daverio, of unfamiliarity  
9 by participants with the procedures during the course of the  
10 drills and exercises. Ever hear that comment before?

11          A       In the early exercises I would have expected  
12 that comment, because they had just finished their  
13 classroom sessions, and they hadn't seen the procedures  
14 until they did get into their first drill, that is correct.

15          Q       Well, are you saying that you haven't heard  
16 that sort of comment arising from any of the exercises  
17 or drills since January 28th?

18          A       As Mr. Varley testified yesterday, he might  
19 want to add to this. There was a case in -- I believe  
20 it was the February 8th drill, but I would have to look --  
21 where due to some scheduling and administrative problems,  
22 we had people at drills who -- we had people at the  
23 exercise who really should have been at a drill, where  
24 there should have been more coaching, and they probably  
25 weren't familiar with the procedure as we would have liked

1           them to go there.

2                       So, I can't say that it didn't occur in the  
3           February 8th or 15th drill, but it wouldn't surprise me  
4           if it didn't.

5           Q        It would surprise you?

6           A        It would not.

7           A        (Witness Varley)  If I had a moment to add.  
8           The problem that arose, that I believe Mr. Miller is  
9           referring to, is due to the fact that when we identified  
10          in late December or early January, I believe, that we  
11          were adding additional people as staging area support staff  
12          and additional dosimetry record keeper and those types of  
13          people, that we in fact had to get them through the classroom  
14          training program, and then into the drill and exercise  
15          experience, and I believe quite possibly what may have  
16          happened was that if those individuals were coming out of  
17          the classroom training session, the first opportunity  
18          to participate in drills and exercises may very well have  
19          been the February 8th and 15th exercise program.

20                       Shortsightedness on the training staff's part  
21          was the fact that we didn't recognize that these  
22          individuals would be entering into the exercise program,  
23          and being put in the field for their first experience  
24          during the exercise, where we had hoped to be able to  
25          take the hands-off approach of controllers and observers,

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not having to coach the participants.

In some cases, we in fact had to turn back and do some coaching and assistance for those new individuals coming into the program where this was, in fact, their first experience in the field.

So, we did get comments back from our controllers that, in fact, they had to do coaching and help the participants.

End 4

1           And as a result of that, we became aware of this  
2 inconsistency on our part in allowing those people coming  
3 out of the classroom training program to go into an  
4 exercise experience without first having had some drill  
5 experience where they could be coached.

6           And as I stated, to the practical extent possible,  
7 when we run an exercise we like to keep the observers and  
8 the controllers in a position where they do not coach  
9 the participants. But I also stated that in an instance  
10 where the exercise may be taken far afield, because an  
11 individual's performance is not adequate to allow the  
12 exercise to continue, that we do, in fact, encourage our  
13 controllers to step in at that point and assist where  
14 necessary so that the entire exercise does not go afield.

15           Q     Mr. Daverio, let me ask you about two other  
16 areas with these procedures.

17                     Is it fair to say that during the course of  
18 drills and exercises there have been comments regarding  
19 the incompleteness of procedures and the need for more  
20 detailed procedures?

21           A     (Witness Daverio) That wouldn't surprise me  
22 either, and I am aware of some of those.

23           Q     And just to make the record clear, Mr. Daverio,  
24 would you look please at SCEP64. That is the February 15  
25 report.



1 A Yes.

2 Q Do you see on page, what is numbered as page 7 --

3 A Yes.

4 Q About the middle of the page where it says,  
5 "Some unfamiliarity with procedures existed"? Do you  
6 see that comment?

7 A Yes, I do.

8 Q Is that kind of comment representative of the  
9 problems you and I have been discussing?

10 A All that comment says is that there was some  
11 unfamiliarity at the newscenter by some people in the  
12 newscenter with the procedures that existed. I don't  
13 know that I can make the generalization that you have  
14 made based on that one statement.

15 But -- well, I will leave it at that.

16 Q Well, I assume, Mr. Daverio, based upon Mr. Varley's  
17 earlier testimony today, that the lead controller  
18 considered this comment or this type of comment important  
19 enough to put into his written report to you, didn't he?

20 A That is correct, and we have gone back and  
21 done special training for the emergency newscenter personnel  
22 since these drills.

23 Q The only problem I have, Mr. Daverio, is that  
24 I have been given no documentation since the February 15  
25 drill.

1           A     I didn't say drill. I said training.  
2 A classroom type setting.

3           Q     My problem is that I haven't the documentation  
4 to see whether this problem with procedures has been  
5 resolved.

6                     (Pause.)

7                     If you look, please, Mr. Daverio, on page 44 also,  
8 answer 29, the answer sets forth why it is that LILCO  
9 believes its employees can perform emergency tasks in the  
10 event of an emergency at Shoreham, doesn't it?

11           A     I believe that is what the question states.

12           Q     And one of the reasons you give is the second,  
13 it says, "Emergency response work in hazardous situations  
14 is not new to the LILCO personnel who are members of LERO."

15                     Do you see that?

16           A     Yes, I do.

17           Q     And I think we have talked about this briefly  
18 yesterday and I gather that the personnel you are referring  
19 to there would be the underground lines and the overhead  
20 lines personnel departments; is that right?

21           A     No, that is not true. Yesterday we were talking  
22 about what people do on a daily basis. This is not limiting  
23 it to that because if you go on to page 45, we talk about  
24 the things we do under the emergency restoration program  
25 which everyone has some assignment in.

1 Q Right. I am trying to focus on your statement  
2 that emergency work in hazardous situations is not  
3 new to the LILCO personnel who are members of LERO.

4 Maybe I should just ask you, what personnel are  
5 you referring to in that statement?

6 A If you continue to read on, it explains that  
7 all the personnel in LILCO, under .3 about -- oh, I am  
8 sorry. I am reading it wrong. I didn't see the third point.

9 Yes. Yesterday we were talking about the under-  
10 ground and overhead line people who do, as this statement  
11 continues to say, talk about hazards on a regular basis  
12 as utility workers. And it is mostly underground and  
13 overhead people.

14 Q Is it true, Mr. Daverio, that LILCO's repair  
15 personnel have for the most part been kept out of LERO?

16 A I don't know what you mean by repair.

17 Q The people that go out and repair lines.

18 A Not in the underground department. As I stated  
19 yesterday, the whole department of 450 people, those are  
20 the people who repair the gas mains and gas main leaks.  
21 And underground electric, they also repair. As I stated  
22 yesterday, there are 150 or 100 to 150 people from our  
23 overhead section which I think is what you mean by repair.  
24 Those are the people who repair the lines.

25 Q Looking at LILCO as a whole, are you telling me that

1 repair personnel are for the most part included within the  
2 LERO organization?

3 MS. MONAGHAN: I think the question is somewhat  
4 vague. It seems to me Mr. Daverio is having a little  
5 problem with what Mr. Miller means about repair personnel.

6 JUDGE LAURENSEN: That is an ambiguous term.  
7 Would you define what you are including in that?

8 BY MR. MILLER:

9 Q Let me ask Mr. Daverio if he would tell me,  
10 who would you include within, if you were asked to  
11 describe repair personnel within LILCO, Mr. Daverio?

12 A I think, as I stated yesterday -- well, repair  
13 personnel in LILCO. You could go a lot further. If you  
14 are talking about repair personnel in an emergency situation  
15 or are you talking about building maintenance people who  
16 repair things?

17 Q I don't want to get into the building maintenance  
18 people.

19 A That is why I am having a problem with how you  
20 define repair. Are you talking about people who may, on  
21 a daily basis, repair something in the company in an  
22 emergency situation, or are you -- see, I am having trouble  
23 trying to figure out what you want.

24 Q Let's hold it with respect to the personnel in  
25 LILCO who may be called upon to perform work in hazardous



1 situations that you would consider repair personnel.

2 A Those personnel on a regular basis -- and  
3 Dr. Cordaro or Mr. Renz may want to add -- in my opinion  
4 would probably come out of the overhead lines department  
5 or the underground lines department. And those would  
6 probably be the two main departments I can think of.

7 They may want to add something.

8 A (Witness Renz) During emergency restoration,  
9 two-man makeup crews -- oh, I am sorry.

10 A (Witness Cordaro) On occasion, meter readers  
11 will encounter hazardous situations and have to take some  
12 emergency action. It is not as routine a part of their  
13 duties as it is for the underground personnel or the  
14 overhead personnel, but on occasion they will have to address  
15 hazardous situations.

16 (Pause.)

17 Q Mr. Daverio, is it your testimony that all  
18 the overhead lines and underground lines departments  
19 personnel are included within LERO?

20 A (Witness Daverio) No.

21 Q Could you tell me your best guess at the percentage  
22 of those personnel who are included within LERO?

23 A I think as I stated yesterday, the whole underground  
24 lines department is included. It is my best guess that  
25 somewhere between 100 to 150 people from the overhead lines

1 department are included.

2 Q And how many personnel would you think are in  
3 the overhead lines department at LILCO?

4 A I have no knowledge. Dr. Cordaro is saying  
5 200 to 300 people.

6 Q So roughly half are in the LERO organization?

7 A That is the best of my knowledge. I don't work  
8 in that area.

9 Q And when you state, Mr. Daverio, that a number  
10 of these personnel are regularly called upon to respond  
11 to hazardous situations, does that mean -- and I think  
12 we talked about this yesterday -- that they could be  
13 called upon at any time to perform such hazardous work?

14 A As I stated, any day, any one of those people  
15 may be called on to do some hazardous work, that is correct.

16 Q But you are not saying they do hazardous work  
17 on a routine day-to-day basis, are you?

18 A Well, some of them do. I mean, going out and  
19 repairing high voltage lines is a hazardous job whether  
20 -- on a day-to-day basis they do that. I am talking  
21 about under a storm condition on a day-to-day basis they  
22 don't go out. But under normal conditions, they go out  
23 and play with very high voltage lines, and Dr. Cordaro  
24 would like to add something.

25 A (Witness Cordaro) On a routine basis, many of

1 these people go out in the field and with their hands  
2 handle lines which are carrying 13,000 volts or even higher  
3 voltages, which I view as a very, very hazardous situation.

4 Q And are they trained to do that work, Dr. Cordaro?

5 A Yes, they are.

6 Q And then they do it on a daily basis?

7 A Yes, they do.

8 Q Now, looking at page 45, Mr. Daverio, here you  
9 start to talk about the emergency restoration organization.

10 A (Witness Daverio) Right, .3.

11 Q Could you tell me again your best estimate of  
12 the percentage of restoration organization members who are  
13 in LERO?

14 A Everyone.

15 Q Everyone in the emergency restoration organization  
16 is a member of LERO?

17 A Everyone who is in the restoration program --  
18 everyone in LERO is in the restoration program. Everyone  
19 at LILCO is assigned a restoration assignment.

20 Q I see.

21 Let's see if we can break it down then.

22 It is true, isn't it, Mr. Daverio, that most of  
23 the LERO members who are members of the restoration  
24 organization are only called out during a condition red;  
25 isn't that right?

1           A     I don't think you can make that generalization.

2                     (Pause.)

3           Q     Would you make the generalization for a  
4     condition blue, are most LERO members who are members of  
5     the restoration organization only called out during a  
6     condition blue or a condition red? Can you make that  
7     generalization?

8           A     See, the problem I am having is in personal  
9     experience, as an engineer, I have been called out --  
10    and I am not sure it was blue -- I know it wasn't red  
11    and I am not sure if it was blue -- to do emergency  
12    restoration work.

13                     It depends on the personnel that are available  
14    and the people they need.

15                     A particular case in point, as we discuss here,  
16    is the two-man crews. Two-man crews are called out at  
17    a much lower rate, and I am not sure if it is blue or  
18    white where we would call them out. It depends on the  
19    number of customers out. And there are makeup crews from  
20    around the company who work on what we call low voltage,  
21    but low voltage is 120 volts. It is not real -- we use  
22    low voltage in a different way than most people use low  
23    voltage.

24                     So I am having trouble because I have been called  
25    out to do emergency restoration work when there wasn't a full



1 force out.

2 Q And when you were called out, Mr. Daverio,  
3 did you ever perform hazardous work?

4 A I performed work that is analogous to LERO functions.

5 Q Have you ever performed hazardous work?

6 A In LILCO, if you are familiar with our service  
7 territory, we have rear property distribution. I consider  
8 it kind of hazardous to go back there where there might  
9 be a downed cable with leaves down and I can't see where  
10 the cable is, and I have had to do that.

11 Q Now, these two-man crews you mentioned, Mr. Daverio,  
12 isn't it true that these two-man crews, if they are called  
13 out to perform in the restoration organization, their  
14 duties are generally to, I think the term is, "ride  
15 the lines" to see if the lines are indeed down or need  
16 repair?

17 A No.

18 Q That is not true? What do they do?

19 A Two-man crews repair, as it states there,  
20 low voltage power lines, what we call 120 volts.

21 Q And are these two-man crews, Mr. Daverio, in all  
22 cases members of LERO?

23 (Off the record.)

24 A While I don't know who makes up all the two-man  
25 crews, it is my understanding that the two-man crews are made

1 up from departments which are participating in LERO.  
2 And whether I can say they are members of LERO or not,  
3 I can't. But construction department, maintenance  
4 service division, I think, has people from it; underground  
5 lines make up two-man crews.

6 So there are LERO members who make up two-man  
7 crews.

8 Q You just don't know how many, correct?

9 A That's correct.

10 Q Now, I guess I have my terms confused, Mr. Daverio.  
11 The survey people, those are the people that generally,  
12 if they are indeed called out to perform in the restoration  
13 organization, they, as you say, ride the lines; is that  
14 correct?

15 A Yes. But as I just stated, riding the lines  
16 may be getting out of your car, walking through someone's  
17 back yard with a downed line with leaves covering the line.  
18 So there is some hazard involved.

19 It is also, there may be an ice storm. You are  
20 called out, you have to go drive in an ice storm because  
21 that is our job to do that.

22 Q Mr. Daverio, there is a statement at the end  
23 of page 45, "During the last seven years, the emergency  
24 restoration organization has been mobilized seven times  
25 for training purposes and three times in response to major

1 storms, causing widespread emergency conditions."

2 Do you see that?

3 A Yes, I do.

4 Q Can you tell me, how many major storms have  
5 you had in the last five years where you have had to  
6 call out the emergency restoration organization?

7 A My understanding of that sentence is that we  
8 have gone to condition red three times in the last seven  
9 years. In the last five years -- and someone else may  
10 correct me because I am stretching my memory -- I believe  
11 we may have gone to condition red once or twice, but I  
12 don't have direct knowledge.

13 Q And in all these cases, Mr. Daverio, is it your  
14 testimony that the personnel were not just mobilized but  
15 they were indeed sent out to perform hazardous situations?

16 A Not only in those cases but in other cases.  
17 It is my understanding, from talking to the people in this  
18 area, in the lines section, while we may only mobilize  
19 condition red three times a year, we probably make --  
20 three times in the last seven years, we make two-man crews  
21 up probably twice a year, and we use them. They are not  
22 only used for condition red.

23 As I have stated previously, my personal  
24 experience is I have worked in two emergencies that I  
25 am aware of that condition red didn't exist and that I was

1 called out to perform.

2 Q But you are unable to tell me how many of these  
3 two-man crews are members of LERO?

4 A As I stated, people who make those crews up  
5 come from departments that provide a large number of  
6 LERO people, but I can't tell you the exact correlation.

7 Q Looking at page 46, please. Mr. Daverio, that  
8 first sentence, "LERO has been structured to provide  
9 shift relief for all of the LERO positions that it is  
10 anticipated will be required to be manned for long periods  
11 of time, 12 hours or more."

12 Do you see that?

13 A Yes, I do.

14 Q Is it your testimony, your opinion, that  
15 emergency workers who may be on duty for any period of  
16 time up to 12 hours would not face fatigue?

17 A Based on my personal experience, when we go  
18 into storm restoration, we work 16 on and 8 off, and I  
19 have done that for five or six days. You may get fatigued,  
20 but you still perform.

21 Q Now, under LILCO's own analysis as to evacuation  
22 times, Mr. Daverio, I think yesterday we agreed that that  
23 might be somewhere in the eight to ten hour range in the  
24 worst case; is that right?

25 A I said, I think yesterday, those numbers sounded



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about right.

END 5

I don't know if they are exactly right.

#6-1-SueT

1 Q And let's talk about that worst case under LILCO's  
2 analysis. During that period of time, eight to ten hours  
3 generally, the field workers such as traffic guides, would  
4 be on continuous duty, wouldn't they?

5 A (Witness Daverio) Not necessarily.

6 Q Do you intend, and have provision for providing,  
7 relief to traffic guides at their posts during an emergency?

8 A No. But you have to look at the traffic analysis  
9 and I believe the times you are reporting to me are the  
10 last person to get across and outside the ten mile zone.  
11 That doesn't mean that people who might be at zone who may  
12 be assigned traffic control points within five miles had  
13 not been relieved hours earlier.

14 Q Okay. Mr. Daverio, would you agree with me  
15 that some field personnel, such as traffic guides, would  
16 be on continuous duty under the worst case and using LILCO's  
17 own numbers, for as long as eight to ten hours?

18 A There may be a few traffic guides who have to  
19 stay for the eight to ten hours which, as I stated, they  
20 are used to. In emergency conditions, we go on sixteen-hour  
21 shifts, and that shift, sixteen on, eight off, whenever we  
22 go into restoration. That's the standard.

23 (Witness Mileti) If I might supplement that  
24 answer. A variety of different people who have investigated  
25 people who do emergency work in actual emergencies have

#6-2-SueT

1 found that emergency workers typicall work for endless num-  
2 bers of hours, most of them step aside only when others  
3 come along and ask them to do that.

4 And fatigue is something that, to the best of  
5 my knowledge, doesn't interfere with people doing emergency  
6 work, even working around the clock for twenty-eight or  
7 thirty-six hours straight.

8 Q Yes, Dr. Mileti. We are going to come to your  
9 testimony in that regard.

10 Mr. Daverio, I would like to follow up though  
11 what you have just said. You seem to be relying again on  
12 the fact that during the restoration, an organization when  
13 it's called out, you go into a sixteen hour on, eight hour  
14 off shift; is that right?

15 A (Witness Daverio) That's correct.

16 Q But you've told me that in the last five years,  
17 to the best of your knowledge, there have been only one  
18 or two instances where the entire organization has been  
19 called out, mobilized and actually sent out; is that right?

20 A As I stated earlier, that is Condition Red.  
21 I've been called out myself, and I'm talking from personal  
22 experience, and have gone on sixteen hour days, eight off,  
23 when it wasn't Condition Red.

24 Q And you've also been unable to provide me with  
25 the numbers of personnel in LERO who have, like yourself,

#6-3-SueT

1 gone through these conditions and instances of being on duty  
2 for long periods of time.

3 MS. MONAGHAN: That question has been asked and  
4 answered a number of times.

5 JUDGE LAURENSEN: Overruled.

6 WITNESS DAVERIO: As I previously stated, I can't  
7 give you an exact number. But the departments that make up  
8 those types efforts are the people who make up two-man  
9 crews, make up parts of LERO.

10 BY MR. MILLER: (Continuing)

11 Q Mr. Daverio, since we are using you as the  
12 example right now, could you tell me, have you ever directed  
13 traffic?

14 A No, I have not.

15 Q Now, Dr. Mileti.

16 A (Witness Mileti) Yes.

17 Q Looking, beginning on Page 46 at the bottom and  
18 going on for some pages, you discuss stress and the effects  
19 of stress in emergencies; is that right?

20 A Yes, among other things.

21 Q Now, let me ask generally, Mr. Berger, you have  
22 read Dr. Mileti's response to Question 31, I assume?

23 A (Witness Berger) It has been a period of time  
24 since I have read it. I can take a few moments to scan  
25 it briefly.



#6-4-SueT

1 Q What I would like to know is whether you agree  
2 with it, if you need to read it to make that determination.

3 A I have to do so.

4 Q And, Mr. Babb, have you read Answer 31?

5 A (Witness Babb) No.

6 Q Would you take a few minutes to? I will go  
7 ahead with Dr. Mileti, but if you could read it, I would  
8 like to know if you agree with it also.

9 No prompting, Dr. Mileti.

10 A (Witness Mileti) I haven't whispered a word.

11 (Laughter.)

12 Q Let me ask you generally, Dr. Mileti, is it your  
13 testimony that stress will not affect the quality of job  
14 performance during an emergency?

15 A No. I don't think that is my testimony at all.  
16 I think it will enhance job performance in an emergency.

17 Q Okay. Now, could you tell me what studies or  
18 analyses that you have specifically performed in this regard?

19 And I'm not asking for a survey of the literature,  
20 and I'm not asking for interviews or discussions or chats.

21 A What if the analyses were based on interview  
22 data?

23 Q If it's a specific analyses regarding the  
24 quality of job performance and how that quality is affected  
25 or not affected by stress during an emergency.

#6-5-SueT

1           A       That's narrowing the world and population down a  
2 whole lot, as I'm sure you know. But, yes, I have done  
3 some.

4                    It turns out -- and I hate to keep going back to  
5 Rapid City as an example. I keep going back there because  
6 I tend to think of emergencies in terms of how I experience  
7 them. That was my dissertation. It was the first one I  
8 ever went to. And then we typicall end, and I don't get a  
9 chance to talk about others. But let's talk there.

10                   And you used the word "job" in your question,  
11 and job is a pretty broad word. So I get to talk about  
12 jobs that are non-emergency jobs as well.

13                   And one of the things that happened in Rapid  
14 City was that people, as we have talked about before, had  
15 two sets of flood warnings, one flood in the middle of  
16 them and --

17           Q       Excuse me, Dr. Miletic. If you are going to talk  
18 about non-emergency jobs that's not really what I'm in-  
19 terested in. If you would, limit your answer to analyses  
20 or studies that discuss this issue of the effects of  
21 stress on job performance during emergencies of emergency  
22 workers.

23                   If I wasn't clear, I'm sorry, but that's what  
24 I want to hear about.

25           A       People who did emergency jobs in an emergency?

#6-6-SueT

1 That's what I'm talking about. Because lots of times,  
2 people who do emergency jobs in emergencies volunteer to  
3 do emergency work, and that's certainly performing emergency  
4 work or performing an emergency job.

5 Q If you are going to give me an analysis or a  
6 study, that's fine. But I don't want to hear about specific,  
7 isolated instances where you know of some family that did an  
8 admirable job during the flood in Rapid City.

9 A I'm talking about path models. I consider that  
10 an analysis. What we did, or what I did, one of the things  
11 that happened was that people -- I've already explained the  
12 context of the study and what happened. But it was very  
13 difficult to interpret the data about how it is that people  
14 came to do what it was that they did, and that included  
15 doing some kinds of emergency help and work and jobs.

16 And the purpose of the dissertation, which has  
17 never been talked about, and I'm tired of thinking about  
18 even because I did the study, however, was to find out  
19 it was that people's experience with the first flood --  
20 that is the degree to which they were actually impacted,  
21 effected, what it was that they did the second time that  
22 the flood warnings were issued. And in order to interpret  
23 the data that I had, I had to, and did, revert in an  
24 ex post facto way to the generic relationship that exists  
25 in the social sciences about the relationship between what

#6-7-SueT

1 some would call stress and people's response in emergencies.

2 And one of the curious things that I found was  
3 that people who were not impacted by the flood at all when  
4 it hit and people who were severely impacted by the flood --  
5 and what I mean by severely impacted was seeing loved ones  
6 die and barely escaping with their own lives. Those two  
7 tails of the curve produced people who were unable and  
8 unwilling to respond in that emergency.

9 And the conclusion that I drew was that -- and  
10 some people used the word "stress" to cover this, that in  
11 this unique case because of that recent dramatic experience  
12 with seeing and experiencing and feeling death, that you  
13 might say that they were traumatized. And there were some  
14 who would consider that trauma stress; others wouldn't.  
15 But stress is a very general concept and it's used in  
16 different ways.

17 That was one analysis that I did based on the  
18 relationship between stress and behavior. And that was  
19 true for people who, in the first instance, engaged in  
20 emergency work as well as people who didn't.

21 Q Dr. Miletic, let me interrupt you. Would you  
22 restrict your answers to the emergency workers?

23 A Well, the --

24 Q And I'm not asking about the families that went  
25 through a bad experience and then had to somehow engage in



#6-8-SueT

1 emergency work under your definition.

2 I would like to restrict my answer to emergency  
3 workers. And if I could ask you about Rapid City, did you  
4 specifically study the effects of stress of emergency  
5 workers in the Rapid City flood?

6 A Some of the people I studied were emergency  
7 workers. They were included in one or all of the three  
8 samples that I was studying; however, I did not do a  
9 specific analysis just limited to people who had pre-  
10 emergency emergency work training.

11 Q Okay. Now, could you tell me what emergency  
12 workers did you analyze in your studies of the Rapid City  
13 flood? Just give me the categories if you would, the  
14 people.

15 A All the emergency workers fell into, in one way,  
16 shape or form, the sample that I polled. There were only  
17 forty thousand people that lived in Rapid City.

18 I can recall today specifically that in the  
19 sample it included people who worked at the local utility  
20 company; it included people who worked for the Department  
21 of Transportation, who have emergency work associated with  
22 cleaning roads off. I remember it included people who were --  
23 I don't recall if any of them were from -- people who have  
24 jobs as police. It was a small enough community, and my  
25 sample was large enough, that some emergency workers were

#6-9-SueT

1 included in the sample.

2 Q And how did you measure, if at all, the stress?

3 A Well, as I + said, I resorted in an ex post  
4 facto way to the concept and the relationship between stress  
5 and behavior to explain the data that I had observed. And  
6 it was spliced into the study more in terms of the methodolo-  
7 gical design than a measurement of stress.

8 Q Yes. What quantitative measure of stress did  
9 you use, if any?

10 A The degree to which they were impacted by the  
11 flood.

12 Q We are having troubles communicating, I'm afraid.

13 A No. I suspect you didn't like my measure.

14 Q It sounds like your measure, Dr. Miletic, was  
15 one of your judgment and your opinion.

16 A It was --

17 Q Now, I'm asking, did you have any quantitative,  
18 objective measurement that you used?

19 A Well, as I said, I used an ex post facto. That  
20 means after the fact. So, I didn't sit down before I  
21 started the study and said I want to measure stress. It  
22 was something that I needed to bring into the study to  
23 interpret what happened and the data that I observed.

24 And it is based on the presumption that people  
25 who did not experience any flood waters were less stressed

#6-10-SueT

1 than those who barely escaped with their lives.

2 Q Could you tell me the specific questions that  
3 you asked to determine the level of stress?

4 A I can't remember any of the specific questions  
5 that I asked. I can remember in general. When I was  
6 trying to define how it was that people had no experience  
7 with the first flood, had a moderate experience with the  
8 flood, and severe experience with the flood. I didn't  
9 ask any questions to measure that.

10 I measured it in a different way. What I did  
11 was take a map of that portion of South Dakota and in  
12 working with some -- they are called fluvio geomorphologists;  
13 they are people that know where water went and why it did.  
14 Took the flood plain and found out what portions of the city  
15 were totally inundated and washed away and no longer there.  
16 They are now parks. What part of the city had slight im-  
17 pact with the flood waters, and in the first flood what  
18 part had none.

19 And then when I was interviewing people and  
20 pulling the samples based on where they were, I had an  
21 obstrusive measure, rather than a subjective measure of  
22 their experience with the flood.

23 But again we are just talking about one study,  
24 and I hope I get a chance to talk about others.

25 Q Tell me, Dr. Miletic, if you could, how did you

#6-11-SueT

1 measure, quantitatively measure, an individual's job  
2 performance during the emergency?

3 A I asked them what they did.

4 Q You asked them how they reacted to the flood  
5 waters?

6 A No. I was asking them what they did after they  
7 got each of the different pieces of information about an  
8 impending flood. I asked them that about the first warn-  
9 ings for the first flood, and I asked them about the second  
10 sets of warnings for the second flood. So, I asked them  
11 what they did.

12 Q And then based upon those answers, you made  
13 interpretations and judgments, I assume, and reached  
14 conclusions regarding among other things the stress level  
15 that came into play during this flood?

16 A Yes and no. What I did with that data was  
17 devise what I call the normative scale of response, and I  
18 made an external value judgment that if they were in the  
19 area targeted for the next flood if they did nothing, that  
20 was in my opinion not good. And I scaled that lower in  
21 terms of adequate response than the extreme of that scale  
22 which would have been going somewhere where they wouldn't  
23 drown had that flood occurred, like evacuating.

24 And along that continuum, I scaled other sorts  
25 of things like going to work, stuffing terry cloth towels



#6-12-SueT

1 under the front door, and brining in the lawn furniture,  
2 the range of what someone could do was very, very large.  
3 And I suspect trying to scale that sort of stuff is why  
4 you-all call sociologists soft scientists.

5 Q Now, Dr. Mileti, based on the Rapid City experience  
6 you wrote your dissertation; is that right?

7 A I'm sorry. What did you say?

8 Q I said, based upon the study that you have been  
9 talking about, you wrote your dissertation; is that right?

10 A Yes, that's part of the things that I did with  
11 that study, right. The best thing that happened because  
12 of it, I might add.

13 Q And you wrote some other reports as well?

14 A Sure.

15 Q Okay. Let me ask you, and you can give me a  
16 yes or a no, in any of these written reports from the  
17 Rapid City flood, did you specifically conclude in the  
18 report and state in the report that stress enhanced job  
19 performance?

20 A No, I didn't use those words.

21 Q Now, Dr. Mileti, if we could go to Page 47.

22 A I'm there.

23 Q Do you know, Dr. Mileti, of any predetermining  
24 tests for determining whether personnel will respond  
25 positively or negatively during an emergency?

#6-13-SueT

1           A       Well, it depends on what you mean by emergency.  
2           If what you are talking about is the kind of emergency  
3           we are talking about here, no, I don't. And I wouldn't  
4           believe any if I saw them.

5           Q       Well, do you know of any such predetermining tests  
6           for any kind of emergency?

7           A       If what you are talking about when you say any  
8           kind of emergency are the kinds of things that some might  
9           characterize as an emergency that occur during the routine  
10          of life, that I would not characterize as an emergency  
11          comparable to the kind that we are talking about here;  
12          that is, non-earthquakes, non-nuclear power plants, non-  
13          chemical spills, et cetera, then I have to say, although I  
14          haven't seen them, I'm sure there is a raft of them.

15          Q       Could you tell me, Dr. Mileti, whether to you  
16          knowledge LILCO has used such predetermining tests?

17          A       I can't say for sure, because I don't know  
18          everybody in LILCO and everything that they have been up  
19          to. But I would suspect and hope that they haven't.

20          Q       Okay. So the answer is that you don't know?

21          A       And I've also recommended that they not worry  
22          themselves about stress.

23          Q       Fine. You have made that specific recommendation,  
24          that they not use such predetermining tests; is that what  
25          you are saying?

#6-14-SueT

2           A       I didn't say predetermining tests. I've never  
3           used those words. Those are yours, not mine. But I  
4           certainly did recommend to LILCO that they not consider  
5           subjecting LERO employees to something like a stress  
6           management course or an EST course, or any other kind of  
7           course that might be popular that somebody might come  
8           along and try to sell to them.

8           Q       Now, on Page 47, Dr. Mileti, you mention, you  
9           say that it is more plausible that stress has positive  
10          impacts during an emergency.

11                    Do you see that?

12          A       Yes, I do.

13          Q       Can you name for me, Dr. Mileti, a study,  
14          a specific study, which examined how individual emergency  
15          workers performed their jobs during an emergency when that  
16          emergency was their first real experience under stress?

17          A       Could you ask that again? There were a lot  
18          of qualifiers in it. I want to be sure I follow that.

19          Q       Okay. Could you name for me any study, a  
20          specific study --

21          A       I've got that one.

22          Q       -- which examined how individual emergency  
23          workers performed their jobs when the jobs were performed  
24          in the emergency at a time when it was their first exposure  
25          to such an emergency?

#6-15-Sue†

2 A Well, if you don't mind, can I ask, do you  
3 mean emergency workers who are working in an established  
4 emergency organization that had received prior training,  
5 or emergency workers who did emergency work in emergencies?

6 Q What I would like are emergency workers for this  
7 question of any kind. But, please keep in mind my question.

8 A Well, I think the answer to the question is yes,  
9 because if you define emergencies --

10 Q No. My question is, can you name me any study?

11 A Yes, I think I can.

12 Q Well, give me the study, please.

13 A Well, I wanted to be sure that I am interpreting  
14 the question right, and that is because all the studies  
15 that looked at how emergency workers who do emergency work  
16 in emergent groups, by definition emergent groups are groups  
17 of workers who don't have emergency jobs and in an emergency  
18 begin doing emergency work.

19 Now, I don't know that anyone has gone around  
20 and asked these emergent emergency workers if they ever  
21 in their past history have done emergency work before. So,  
22 I would have to say it's possible that some of them had.  
23 It's most likely that most of them hadn't. But I don't  
24 know what the numbers would be.

25 And by definition, that's what emergency workers  
are. On the other hand, had you asked the question about --

end #6  
Joe flws



1 Q Doctor Mileti, let's go back to the question.  
2 I haven't heard the study yet. Can you name any specific  
3 study which has addressed the area which I asked you about?

4 A You mean emergent groups; people who did  
5 emergency -- this was one of the first things that  
6 sociologists began looking at back in the --

7 Q Yes, sir. Just please, if you would name the  
8 study

9 A Sure. Well, Moore, et al, study, I believe  
10 of tornadoes, that was an early Academy report, 1958.  
11 It was an early study that addressed phenomenon of  
12 emergent groups, --

13 Q My question Dr. Mileti, let's make sure  
14 we understand each other.

15 MS. MONAGHAN: Mr. Miller, I think Dr. Mileti  
16 had not finished his response to your question. You  
17 asked him to give you the studies, and I believe he is  
18 proceeding to do that.

19 MR. MILLER: Judge Laurenson, I am trying to  
20 save some time by making sure we are on the same wave length  
21 here, and I am not sure that we are.

22 JUDGE LAURENSON: You have been back and forth  
23 over the question several times here. Now, I have to  
24 assume that Dr. Mileti, at least, believes that these  
25 studies, if there is more than one, that he is going to

1 list here are responsive to your question, and then you  
2 can follow up and find out whether they are or are not.

3 Did you have additional studies you were going  
4 to list, Dr. Mileti?

5 WITNESS MILETI: Yes. If I understood the  
6 question to be asking me about people who did emergency  
7 work in an emergency, who hadn't done it before, and that  
8 to my way of thinking would include people who stepped  
9 forth and volunteered for emergency work, both within  
10 emergent emergency organizations, those that didn't exist  
11 prior to the emergency, as well as emergency work in  
12 pre-emergency emergency organizations by volunteers.

13 BY MR. MILLER: (Continuing)

14 Q Dr. Mileti, let me ask you about the Moore, et  
15 al, study that you mentioned. Could you tell me how they  
16 measured stress in that study?

17 A I don't think they measured stress in that  
18 study.

19 Q Can you name any studies where the job  
20 performance of individual emergency workers was specifically  
21 examined when it was their first exposure to stress in  
22 an emergency condition where stress was specifically  
23 measured.

24 A I am sorry. That was a different question  
25 than the last one, so it would provoke from me a different

1 set of answers.

2 Q Could you just give me --

3 A Could you go over that one.

4 Q I hate to this. I am going to ask the  
5 Court Reporter to read the question.

6 A Thank you. I just want to make sure all those  
7 parameters are taken into account.

8 (Reporter reads question)

9 A Yes, I think I can.

10 Q Would you please name one for me?

11 A It seems to me that stress, if it is  
12 specifically measured as -- and there is no reason why  
13 it couldn't be -- the degree to which people experienced  
14 the impact of the disaster, versus not experiencing it,  
15 as opposed to using in the heritage of Stephen Cole  
16 questionnaire to measure stress, studies that looked at  
17 group emergence and where those people came from in terms  
18 of emerging from the disaster-stricken population versus  
19 the non-victim population in an emergency, I think one  
20 could gain a judgment about that.

21 However, I don't believe that any of those  
22 researchers called that stress.

23 Q You have not named a study, Dr. Miletic. Can  
24 you name me one study?

25 A Well, I suspect that Bates, et als, study

1 of hurricane -- it was either Camile or Carla -- I am  
2 sorry, I don't remember which it was.

3 And that was also an early Academy report,  
4 examined group emergence. In addition to that, Allen  
5 Barton's work, he is from Columbia University, which was  
6 really a summary of the findings of a dozen and a half  
7 Academy studies.

8 It talks about the emergence of volunteer  
9 first time -- although he doesn't say first time --  
10 emergency workers, given the alternative degrees to which  
11 those emerging workers were impacted by the particular  
12 disaster agent.

13 Q Yes. Dr. Mileti, could you tell me how the  
14 Bates, et al, study, the stress was specifically measured?

15 MS. MONAGHAN: Again, Mr. Miller is interrupting  
16 Dr. Mileti's prior answer. I don't believe Dr. Mileti  
17 was finished.

18 JUDGE LAURENSEN: Were there other studies  
19 you were going to cite in that answer, Dr. Mileti?

20 WITNESS MILETI: A couple additional ones  
21 that came to mind. A fellow at Ohio State University,  
22 for example, named I believe Arnold Parr, wrote his  
23 dissertation, and he wrote his dissertation on the basis  
24 of looking at the emergence process in, I believe, about  
25 ten or twelve different emergencies, or different types,



1 and he also published three or four page journal article  
2 summarizing some of his work on this phenomenon in the  
3 journal called, The American Behavioral Scientist, back  
4 in the early '70s, and there also was a study done by  
5 a fellow named Lucas, who studied how some -- it was  
6 called, Men in Crisis, and I think it has some bearing  
7 on understanding how it is that people come to behave  
8 in emergent groups, as well as deal with the situation,  
9 and that was probably in the late '60s or early '70s.

10 Some more might come to mind as we chat.

11 Q None do now, do they?

12 A No more?

13 Q Do you have any more at this time that you  
14 want to tell me about?

15 A Not off the top of my head.

16 Q Can I ask you this question, Dr. Miletì, for  
17 the Bates, et al, study, could you tell me specifically  
18 how stress was measured?

19 A I think in all of these studies stress was  
20 not measured with a questionnaire. I think stress would  
21 be something that one would have to infer by the degree  
22 to which the people in the emergent groups were impacted  
23 by the disaster agent.

24 Q So, you measured stress -- these studies,  
25 Dr. Miletì, would have measured stress by looking at the

1 stimulus to the emergency, is that fair to say?

2 A You could say it that way. I wouldn't  
3 characterize it that way.

4 But rather in terms of the degree to which  
5 people were impacted by the particular emergency.

6 Q That is fine, Dr. Mileti. Let me ask you --

7 A I wasn't done.

8 MR. MILLER: Judge Laurensen, this is going  
9 to take a long time if the answers are going to go on  
10 like this.

11 JUDGE LAURENSEN: The question you asked him  
12 was sort of an open-ended one, whether what you had said  
13 was fair. And I think if he is indicating he doesn't  
14 agree with your words and is explaining why he has chosen  
15 other words, I think we have to permit that type of answer.

16 Now, I think if you want to limit the cross  
17 examination or the responses, you can phrase the questions  
18 in either yes or no answers, or some other limited type  
19 of answer, but in light of the question that is on the  
20 table now, I think Dr. Mileti is entitled to respond.

21 WITNESS MILETI: I was merely going to add that  
22 another set of studies occurred to me, and it seems almost  
23 silly that I had forgotten to mention them, and that was  
24 the studies that --

25 MR. MILLER: Wait a second. This is different

1 Judge Laurenson.

2 Now, we are going back to a previous question  
3 which I asked some time ago. I think in that case Dr.  
4 Mileti has more studies. That is something for redirect.

5 I don't think we should go back to previous  
6 questions now and start supplementing.

7 JUDGE LAURENSEN: I don't understand. Do you  
8 -- either you want the studies, or you don't want the  
9 studies. What is the point whether we do it now or on  
10 redirect, and we add this and come back to it later on.

11 MR. MILLER: That is fine. The question is  
12 pending. Go ahead, Dr. Mileti.

13 WITNESS MILETI: I was simply going to point  
14 out that perhaps the one emergency where stress has been  
15 more researched than ever before in quantitative ways and  
16 on scales, on standardized instruments for measuring stress,  
17 et cetera, and how that affected the behavior of emergency  
18 workers as well as the general population, and anybody  
19 else you want to talk about were the Three Mile Island  
20 studies, one of which I did myself, and there were many  
21 others.

22 The President's Commission did some, et cetera,  
23 and the degree to which first time emergency people would  
24 have been included in that in the sense that they had  
25 never done emergency work before or not, I am sure there

1 must have been some, but I have no way of knowing how many.

2 Q Dr. Mileti, could you answer this yes or no,  
3 please. In any of the studies that you have mentioned,  
4 the four; the Bates, et al, the Barton Allen, Parr and  
5 the Lewis studies, and also the TMI studies you just  
6 mentioned, in any of those studies was a direct comparison  
7 made between stress and job performance?

8 A Well, if I can define the word, 'direct' as  
9 I would like to, I think it was.

10 Q Now. In those studies, yes or no, please, was  
11 a direct comparison made between stress and job performance  
12 during the actual emergency?

13 A I think yes.

14 Q And could you tell me, Dr. Mileti, how the  
15 stress was measured in those studies for which you think  
16 the answer is yes.

17 A Well, let me start with some of the TMI work.

18 Q Can I make a suggestion, Dr. Mileti, and I  
19 don't mean to interrupt you. But if you are going to  
20 refer to the TMI's, we will come to those, I promise you.  
21 Could you maybe, for the purposes of this question, just  
22 talk about the first four. If any of those first four,  
23 the Barton, et al -- I am sorry. The Bates, et al, the  
24 Barton Allen, the Parr, or the Lewis studies, if any of  
25 those four were included within your 'yes' answer, would



1 you tell me specifically how this stress was measured?

2 MS. MONAGHAN: Mr. Miller, are you changing  
3 the question from the one you originally asked, because  
4 you don't want him to include the TMI studies in there,  
5 or because you don't think they are relevant?

6 MR. MILLER: My question stands, Judge Laurenson.

7 JUDGE LAURENSEN: He has asked him to exclude  
8 the TMI studies, and I think he can properly exclude that  
9 from this question.

10 Objection is overruled.

11 WITNESS MILETI: Did you ask me to say how  
12 those four studies that you listed the authors for measured  
13 stress? Was that the question?

14 BY MR. MILLER: (Continuing)

15 Q If any of those four were included in your, 'yes'  
16 response to my earlier question, please tell me specifically  
17 how the stress was measured.

18 A I think they were included, otherwise you  
19 wouldn't be asking me about them, and I think I already  
20 said how I think one would impute stress from what those  
21 works address.

22 Q Okay. So there were judgments drawn by the  
23 people conducting these studies, is that correct?

24 A Well, I would go even further than that and say  
25 that I don't recall that they used the word, 'stress' which

1 I have already said.

2 Q Fine. Thank you. Now, before we take a break,  
3 Mr. Berger, let me ask you, have you had a chance to review  
4 Dr. Mileti's response to Question 31?

5 A (Witness Berger) I have read the response.

6 Q Do you agree with it?

7 A As best as I understand his response to the  
8 question, I would agree.

9 Q You agree that stress, for example, Mr. Berger,  
10 would not affect job performance during an emergency?

11 MS. MONAGHAN: I am going to object to that.  
12 I believe the question mischaracterizes the testimony of  
13 Dr. Mileti.

14 MR. MILLER: I don't see how.

15 JUDGE LAURENSEN: Perhaps you could cite the  
16 specific page that you are referring to, or the statements,  
17 so that the witness can determine the context in which  
18 it is used, or --

19 MR. MILLER: Judge Laurenson, I think the  
20 testimony is full of Dr. Mileti's opinions regarding the  
21 fact that stress would not have a negative impact during  
22 an emergency.

23 The first one that comes to mind is on page 47,  
24 which is the page we are on, and it says: It is more  
25 plausible that stress has positive impacts during an

1 emergency.

2 That is, that stress may motivate people to  
3 rise to the occasion.

4 He goes on at some length here. If they read  
5 the answer, I think the question is a very fair question.

6 JUDGE LAURENSEN: I think the problem is that  
7 is the words that you have chosen, rather than Dr. Mileti's  
8 words. That is the objection. Is that you are  
9 mischaracterizing it, or at least there is a question  
10 about whether you are properly paraphrasing Dr. Mileti's  
11 answer.

12 BY MR. MILLER: (Continuing)

13 Q Mr. Berger, let me ask you to turn to page  
14 56. There is another good example. Dr. Mileti states  
15 there, and this is I think a continuation of the same  
16 discussion: Put simply, stress and trauma can occur  
17 in people. They do not in community-wide emergencies  
18 emerge to interfere with the ability of people to do  
19 things, especially if those people know through training  
20 or some other mechanism that they have a job to do that  
21 needs to get done, and what they need to do in order  
22 to accomplish it.

23 And then he goes, and he states: Furthermore,  
24 the literature on psychological and system stress  
25 indicates that stress assists rather than detracts from

1 the ability of people to cope with the situation.

2 Now, do you agree with Dr. Mileti's comments  
3 in this regard?

4 A Based on my reading of Dr. Mileti's answer,  
5 as well as what readings I have done on stress on my  
6 own, I would say that there are instances based on my  
7 limited study of this issue, where stress indeed could  
8 motivate someone to perform a job.

9 Q Now, Mr. Berger, are you aware of any instances  
10 where stress detracts from the performance of the job?

11 A Well, Mr. Miller, in my undetstanding in  
12 readings again, and work done at the Institute of  
13 Personality Building and Testing in Champlain, Illinois,  
14 stress is measured over a long period of time, and results  
15 in either physical or psychological impact on an individual  
16 and cannot be measured in a moment or snapshot period of  
17 time.

18 It is a cumulative thing. If you look at  
19 stress curves, there are indivi als in the industry who  
20 would say that productive tension increases productivity  
21 in an individual, to a point where that becomes so damaging  
22 psysiologically and physically, mentally, that the person  
23 is not able to perform. But that measurement is over a  
24 long period of time.



1 Q And you are aware of no instance of any  
2 kind, Mr. Berger, where the stress has been shown to detract  
3 from job performance during an actual emergency?

4 A Not that I am aware of.

5 Q Mr. Babb, let me ask you, as a former police  
6 officer, I am sure you went through some examples of your  
7 own where stress maybe became a factor.

8 Do you agree with Dr. Mileti's testimony?

9 A (Witness Babb) Well, if we were to be talking  
10 about an entire group of people, 400, 500, 1,000 people,  
11 I would be very hesitant, in a situation like this when  
12 we are discussing stress, to say yes or no and apply  
13 that yes or no to the entire group.

14 I would have to say that -- and I have outlined  
15 some of the things that Dr. Mileti has indicated here, if  
16 you wish me to expand my answer that way, I would be glad to.

17 Q Yes, sir. I would like that.

18 A He has said that stress may motivate people to  
19 rise to the occasion. I would concur with that. I have  
20 seen that happen, both in my police experiences and my  
21 military experiences which were, on occasion, rather  
22 stressful.

23 So I have seen people who have been motivated  
24 to rise to the occasion. But I could not say that that would  
25 apply to an entire group of people.

1 Q Okay.

2 A He talks on page 48 about people who do  
3 emergency work daily. I would not myself concur with the  
4 fact that people, in fire and police who do emergency  
5 work, are always themselves under stressful circumstances.  
6 I would suggest that many people do emergency work but  
7 they themselves are not being subjected to stress while  
8 doing it. This is part of their performance.

9 Q Okay. Anything else?

10 A He said on page 53 that stress would almost  
11 certainly exist in LERO emergency workers at Shoreham  
12 in the event of an emergency and it would also likely be  
13 higher in some people than in others. It would not  
14 incapacitate emergency LERO workers when their services  
15 are needed.

16 I could not speculate on an entire group. It is  
17 possible, I have seen stress adversely affect police  
18 offices in small numbers, true.

19 Q Mr. Babb, is it fair to say that what you are  
20 telling us is that when looking at a group such as LERO,  
21 it would not surprise you if stress did indeed occur at  
22 least among some of the individuals that formed that group?

23 A Yes.

24 MR. MILLER: Thank you.

25 Judge Laurenson, this would be a good time for the

1 break.

2 JUDGE LAURENSEN: We will take the morning recess  
3 now.

4 (Recess.)

5 JUDGE LAURENSEN: Mr. Miller?

6 BY MR. MILLER:

7 Q Dr. Mileti, the last sentence of the first full  
8 paragraph on page 47, it says, "Long lasting stress that  
9 continues to exist after the emergency is over is not  
10 a phenomenon that is applicable to the soundness of  
11 emergency response."

12 Do you see that?

13 A (Witness Mileti) Yes, I do.

14 Q Would you answer this yes or no, Dr. Mileti.  
15 Would you agree that the effects of prolonged stress  
16 may lead to negative consequences?

17 A That is almost impossible to answer yes or no.

18 Q So you can't answer it yes or no?

19 A I don't think I can.

20 Q Now, Dr. Mileti, you talk in the next paragraph  
21 about the extensive history of research into emergency  
22 response.

23 Do you see that?

24 A Yes.

25 Q Could you answer this question yes or no,

1 Dr. Mileti: Would you agree that emergency response  
2 organizations generally have a mix of inexperienced and  
3 experienced workers?

4 A Yes, I would.

5 Q And could you answer this question yes or no,  
6 Dr. Mileti: Would you agree that impaired performance by  
7 individual and perhaps inexperienced workers in such  
8 an emergency response organization may not be noticed when  
9 looking at the performance of the overall organization?

10 A I suspect that is possible, yes.

11 Q And Dr. Mileti, where you state that you know  
12 of no instance in which an emergency response organization  
13 has not been able to do its job because workers were  
14 incapacitated because of high stress levels, do you know  
15 of any instance involving an emergency response organization  
16 where the organization was comprised of workers performing  
17 their emergency jobs for the first time during the  
18 emergency?

19 A Yes.

20 Q Could you give me examples?

21 A Yes. Three Mile Island. I think that was  
22 the first radiological emergency that those people actually  
23 dealt with.

24 Q And at TMI you are talking about the professional  
25 organizations such as the police?



1           A     All of them. I don't think had experienced  
2 a radiological emergency like that up till Three Mile Island.  
3 I think it was everybody's first time.

4           Q     But with respect to other experience in other  
5 kinds of emergencies, Dr. Miletic, could you tell me  
6 of any instance that you know of which involved an emergency  
7 response organization comprised of workers performing  
8 their emergency jobs for the first time?

9           A     Everybody has a first time. The response at  
10 Ginna was a first time for the people that were there.

11          Q     Yes, sir.

12                 Make sure we understand one another. We are  
13 talking now about the organization, and I am not asking  
14 you if organizations, emergency organizations were  
15 experiencing a particular emergency for the first time.  
16 I am asking if you can give me an example of an emergency  
17 organization that their response to emergencies was a  
18 response to an emergency of any kind for the first time.

19          A     I think again, the people at Three Mile Island  
20 were responding to an emergency for the first time, and  
21 I think the emergency people who were on-site were  
22 responding to an emergency for the first time.

23          Q     Are you saying at TMI that organizations such  
24 as police, fire department personnel were performing  
25 in emergencies for the first time?

1           A     Not those, but others. For example, the on-site  
2 response groups in the reactor were responding to an  
3 emergency for the first time.

4           Q     Can you give me an example of where an emergency  
5 organization performing off-site emergency response  
6 jobs would fall within the category that we are talking about?

7           A     Well, if you use the word broadly, when you  
8 say "organizations," I would classify emergent groups as  
9 organizations. And any of the cases where groups emerged  
10 in emergencies, it was their first time behaving as an  
11 organization.

12          Q     Let's talk about an organization in the more formal  
13 sense such as a police department or LERO.

14          A     If what you are asking is, do I know of a case  
15 where an emergency organization before an emergency  
16 existed and it responded for the first time after a  
17 particular emergency, I suspect that all organizations  
18 had a first time.

19          Q     But can you name one for me, Dr. Mileti?

20          A     Well, I imagine the Suffolk County Police  
21 Department didn't exist once and then came into existence  
22 and then responded to, as an organization, its first  
23 emergency.

24          Q     And do you have any data, Dr. Mileti, which  
25 would indicate the response quality of performance of the

1 Suffolk County Police Department when they performed  
2 in their first emergency?

3 A Of course not. If I did, I am sure I would have  
4 it in my testimony.

5 Q So can you give me any examples, using this  
6 category that we are discussing, where you have any kind  
7 of data regarding the quality of performance by the  
8 organization at the time of their first exposure to an  
9 emergency?

10 A I believe the emergency response of the utility  
11 at Three Mile Island is an example.

12 Q Off-site, Dr. Mileti. Off-site.

13 A If you had included that in your question, I  
14 would have had a different answer.

15 Q So do you have any examples?

16 A Not where I have data, no.

17 Q Is it your testimony, Dr. Mileti, that the  
18 utility organization at TMI responded well to the  
19 emergency?

20 This isn't in your testimony. It is based upon  
21 what we were just discussing.

22 A You are asking for my overall judgment of  
23 everything that happened there?

24 Q I am asking, is it your testimony that the  
25 utility organization at TMI responded well to the TMI

1 emergency?

2 A Well, I have to look at my testimony to see if,  
3 indeed, it was my testimony.

4 Q For purposes of clarification, Dr. Miletì,  
5 when I say, is it your testimony, I am also talking about  
6 things that you say like today.

7 A Just given what I know, I would say that there  
8 were some people who worked for Metropolitan Edison who  
9 did things well, and I base that conclusion, for example,  
10 on the conclusion of the Rogovin report when it says  
11 things like, "plant personnel carried out their assigned  
12 duties, stayed on the job and worked diligently to achieve  
13 a safe shut down of the reactor and to collect and to  
14 distribute," et cetera.

15 Q Dr. Miletì -- I'm sorry.

16 A I also know that some of the people who worked  
17 for Metropolitan Edison did things that in my judgment I  
18 would say weren't too good.

19 Q Dr. Miletì, is it your testimony that taking  
20 all things, including stress, into consideration, a LERO  
21 worker such as a traffic guide would be as effective as  
22 a professional emergency worker such as a police officer  
23 in performing emergency jobs during an incident at Shoreham?

24 A Taking all things into account, I would include  
25 in that that they know what their job is and that they know



1     how to do it. And if they have those two factors under  
2     their belt, in my opinion stress would not interfere with  
3     their ability to perform what it is they are trying to do,  
4     only because in emergencies, I know of no evidence  
5     where -- and I underscore in the kinds of emergencies  
6     we are talking about here -- where stress causes people  
7     to not perform well.

8             Now, I am aware that stress in other kinds of  
9     human situations can interfere with work. That is not  
10    new knowledge to me.

11            Q     Dr. Mileti, you have said before in these  
12    proceedings, I believe, that you are not a psychologist.

13                    Do you know what effect stress has on newly  
14    learned or infrequently practiced behavior?

15            A     Are you talking about in emergencies or in  
16    nonemergency situations?

17            Q     My question at this point is a broad question.

18                    Do you know what effects stress has on newly  
19    learned or infrequently practiced behavior?

20            A     In emergency situations, I think I know about  
21    that. In nonemergency situations, I know much less about  
22    that.

23            Q     Would it be fair to say, Dr. Mileti, that stress  
24    induces people to fall back on familiar and routine behaviors  
25    and to forget new learning?

1           A     In some contexts of human circumstance I could  
2 agree with that. And in others I wouldn't.

3           Q     Do you know, Dr. Mileti, what effect stress  
4 has on a person's ability to process new and complex informa-  
5 tion?

6           A     If you are talking about in an emergency, I  
7 suspect that it would in some ways make them more vigilant  
8 and might help.

9           Q     Isn't it true, Dr. Mileti, that at high levels  
10 of stress, people focus their attention narrowly and  
11 sometimes cannot perform novel or process novel and complex  
12 information?

13          A     That certainly is the case in nonemergency  
14 situations.

15          Q     But it is your testimony that it is not the case  
16 in emergency situations?

17          A     It is -- and I have always said this -- possible  
18 that it could happen to a person.

19                   I can't speak beyond what would happen to most  
20 people. That is what are the limits of the behavioral  
21 sciences.

22          Q     Dr. Mileti, where you say at the bottom of page  
23 48, you mention that none of these studies statistically  
24 examined the effect of stress per se.

25                   Do you see that?

1           A     Yes, but I don't immediately see what topic  
2 we are addressing here. I will have to look. But I  
3 see that, yes.

4           Q     Are you saying, Dr. Miletic, that there are,  
5 to your knowledge, no studies of individuals' job  
6 performances during emergencies?

7           A     Not in the sense that someone went in and  
8 over time measured statistically with good measures stress  
9 and correlated that in a statistical sense to job performance  
10 measured in a statistical sense measured over time for  
11 individuals. That I know of.

END 8

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#9-1-SueT

1 Q Now, Dr. Mileti, on Page 49 --

2 A Yes.

3 Q -- you mention about a dozen or so studies on  
4 the behavior of emergency workers during emergencies, and  
5 you state that these are summarized in Chapter 4 of your  
6 monograph.

7 Do you see that?

8 A Yes. This is dealing with the behavior of  
9 emergent groups, or people in emergent groups.

10 Q Do any of these studies involve radiological  
11 emergencies?

12 A Not the ones in my monograph, no.

13 Q Now, Dr. Mileti, at the bottom of Page 49, you  
14 state: Existing evidence suggests to me that stress  
15 facilitates doing work in an emergency and does not  
16 detract from it.

17 Do you see that?

18 A Yes.

19 Q This is your judgment, I take it; correct?

20 A On the basis of the evidence, yes.

21 Q On the basis of your review of the evidence?

22 A Well, that's the only thing I have is my  
23 review; I'm limited by being human.

24 Q Now, Dr. Mileti, on Page 50 you discuss the  
25 Technical Staff Analysis Report on Behavioral Effects to



#9-2-SueT

1 the President's Commission at TMI; do you see that?

2 A Yes, I do.

3 Q Could you answer this question yes or no,  
4 please?

5 The utility workers at TMI did not perform  
6 emergency jobs related to off-site consequences of the  
7 radiological emergency, did they?

8 A I don't think I would agree with that. I  
9 think the ability to keep more radiation from leaking out  
10 has significant off-site consequences.

11 Q Let me see if I can phrase my question better.  
12 Again, I would ask for a yes or a no if you can give it  
13 to me.

14 Utility workers at TMI did not perform off-site  
15 emergency jobs, for example, directing traffic; isn't  
16 that correct?

17 A No, I don't think they directed traffic. You  
18 are right.

19 Q Did they perform any off-site emergency jobs,  
20 Dr. Mileti?

21 A I don't think they did things like direct  
22 traffic or work out in the community, no.

23 Q Now, Dr. Mileti, you state --

24 A Unless you mean dose assessment and that sort  
25 of stuff. That went on in the community, but they didn't

#9-3-SueT

1 help evacuation or that kind of stuff.

2 Q Dr. Mileti, about the middle of the page, you  
3 talk about self-reports of extreme upset.

4 Do you see that?

5 A Yes.

6 Q Could you answer this question yes or no? Do  
7 you believe that a rating of extreme upset is an adequate  
8 measure of stress?

9 A It's a measure of stress.

10 Q Could you please answer it yes or no, Dr.  
11 Mileti?

12 A It's impossible to answer yes or no.

13 Q Do you believe, Dr. Mileti, that, or wouldn't  
14 it be fair to say, Dr. Mileti, that an accurate measure  
15 of stress would require a non-self-reporting measure?

16 A You could have a different way to measure that  
17 that would be adequate that would involve non-self-reports.  
18 But there are some self-reports that would be adequate.

19 Q That, in your opinion, could accurately measure  
20 levels of stress?

21 A The kinds of stress that that particular research-  
22 er wanted to measure, how they are operational under  
23 stress.

24 Q Now, do you believe, Dr. Mileti, that an  
25 individual could experience stress and not know it?

#9-4-SueT

1           A       I'm sure that's possible, in the realm of  
2 possibilities. Sure.

3           Q       Dr. Mileti, turning to Page 51, you talk about  
4 the Bromet Report on TMI. Do you see that?

5           A       Yes, I see it.

6           Q       And towards the bottom of the page, you go  
7 back to the Technical Staff Report to the President's  
8 Commission and the Bromet Report. This is the last  
9 paragraph.

10                   Do you see that?

11          A       Yes.

12          Q       Now, Dr. Mileti, did either the Technical Staff  
13 Report to the President's Commission or the Bromet Report  
14 look at the stress in emergency workers, per se?

15          A       They looked at stress in the emergency workers  
16 inside the plant, as they did their emergency job.

17          Q       Do those reports look at, and attempt to  
18 measure, the stress levels of emergency workers performing  
19 off-site emergency jobs or tasks?

20          A       Not in the sense that they used statistical  
21 measures. They limited their statistical analysis to  
22 stress in emergency workers that worked for MetEd and other  
23 groups.

24          Q       Performing on-site tasks; correct?

25          A       Yeah, but it was also measures of stress in

#9-5-SueT

1 other sub-populations that weren't on-site like mothers,  
2 et cetera.

3 Q Do you believe, Dr. Mileti, that either the  
4 Technical Staff Report or the Bromet Report specifically  
5 focused on attempting to determine the levels of proficiency  
6 in job performance?

7 A No, not given how you worded that question.

8 Q Dr. Mileti, looking at Page 52 of your testimony,  
9 there are some other reports regarding TMI mentioned,  
10 towards the top of the page. Let me ask you, did any of  
11 these studies specifically look at job performance of  
12 emergency workers?

13 A Yes, they certainly did. For example, the  
14 Governor's Commission tried to catalogue what was the  
15 emergency response of the State of Pennsylvania -- the  
16 Commonwealth of Pennsylvania's emergency organizations,  
17 and the Rogovin Report also tried to catalogue in an  
18 evaluative way what was the emergency response of all  
19 different sorts of emergency organizations.

20 Q Were these off-site emergency workers, Dr.  
21 Mileti?

22 A Oh, yes, all of them. All the different  
23 organizations involved.

24 Q Did any of these reports attempt to measure  
25 stress in individual job performance?



#9-6-SueT

1           A       They may have. But I don't know about it in  
2 terms of how the information was presented in the report.  
3 What was presented in the reports were the conclusions  
4 about whether or not they thought off-site emergency  
5 response organizations responded well or not, and why.

6           Q       Do you know, Dr. Mileti, if any of these reports  
7 on an individual emergency worker basis attempted to look  
8 at job performance levels as a result of the emergency?

9           A       Not to the best of my knowledge, but I can't  
10 say they didn't.

11          Q       Now, Dr. Mileti, beginning halfway down on Page  
12 52, you refer to the Diagnostic and Statistical Manual of  
13 Mental Disorders.

14          A       Yes, the DSM-3.

15          Q       And you state in your testimony, it says the  
16 DSM-3 states that diminished responsiveness to the  
17 external world is not a characteristic response during an  
18 emergency.

19                   Do you see that?

20          A       Yes. That's certainly attempt to summarize  
21 several pages from the DSM-3.

22          Q       Yes, sir. Could you briefly define for me  
23 what you mean by diminished responsiveness?

24          A       Well, I think what I mean by diminished responsive-  
25 ness is what the DSM-3 means by diminished responsiveness.

#9-7-SueT

1 This is the whole Lifton and Erikson thesis about how they  
2 think people behave in emergencies, and diminished re-  
3 sponsiveness means, I guess, getting a little numbed and  
4 not being able to respond well to the outside world,  
5 withdrawn I suspect. It's hard to do in English.

6 Q Dr. Mileti, do you equate diminished responsive-  
7 ness to stress?

8 A I certainly don't, not in any way, shape or  
9 form. Diminished responsiveness, if it exists, if it  
10 occurs, is a consequence of something called, as it's  
11 called in the DSM-3, trauma.

12 Q Dr. Mileti, you state: Diminished responsiveness,  
13 if it occurs, usually begins soon after the traumatic  
14 event.

15 Do you see that?

16 A Yes.

17 Q Now, during a radiological emergency, what would  
18 be the traumatic event, in your opinion? When would that  
19 start?

20 A Well, I think it's a supposition that there  
21 would be one. But if you wanted for me to speculate,  
22 hypothesize and create a scenario about how there could be  
23 one, and I would really have to start making up a descrip-  
24 tion of radiological emergencies to do that.

25 I suspect I could.

#9-8-SueT

1 Q Let me back up for a second. Are you saying  
2 that you would not expect a radiological emergency to even  
3 be a traumatic event?

4 A Not necessarily, no. I could imagine one that  
5 could create trauma in individual people. That would be  
6 the psychological response.

7 Q But you don't necessarily believe that a  
8 radiological emergency would be a traumatic event?

9 A Not for most people, I'm sure it wouldn't.

10 Q It would not?

11 A Oh, no. Most emergencies and disasters, even  
12 where there has been mass death, don't become traumatic  
13 events for most people. But they can become traumatic  
14 events for some.

15 Q Now, Dr. Mileti, do you think that it's possible  
16 that for emergency workers, some emergency workers, the  
17 traumatic event, if one were to occur during a radiological  
18 emergency, would begin from the time that notice of the  
19 emergency went out and individuals were asked to report for  
20 duty?

21 A No.

22 Q It wouldn't start that early?

23 A I don't think so. I believe experiencing trauma,  
24 one would have to experience a whole lot more than that.

25 Q Well, when do you think such trauma could begin

#9-9-SueT

1 during a radiological emergency, at what point?

2 A Again, this is hypothetical, and we are conjuring  
3 up an image or scenario of some future unspecified emergency,  
4 and I don't know much about the nuclear psychics part of  
5 these things, so it's possible that the scenario I might  
6 describe couldn't happen. I just don't know that.

7 But I would suspect that any person, be they  
8 an emergency worker or not, who encountered massive numbers  
9 of dead people, that would be the point at which it could  
10 become traumatic for them. That would be the event that  
11 then they could experience recurrent dreams about, relive  
12 on occasion when they smelled things that have come to  
13 associate that particular event, and that would be classifi-  
14 ed as a traumatic stress disorder.

15 Q Are you saying, Dr. Mileti, that short of mass  
16 deaths resulting from a radiological emergency there would  
17 not, in your opinion, be a traumatic event?

18 A No. You just asked me to conjure up an example.  
19 And that was one that I gave.

20 It is possible that a traumatic event could be  
21 experienced by any human being during the course of any  
22 normal day, and that would become traumatic for them. But  
23 it would have to be a dramatic sort of thing, like being  
24 raped during a non-emergency situation. And the evidence  
25 that exists suggests that in emergencies trauma, when it



#9-10-SueT

1 does occur, is associated with things. In some people  
2 they respond to it in a traumatic way, like the massive  
3 death that was seen in the nuclear explosions at Hiroshima  
4 and Nagasaki and some Japanese elicited trauma, and at  
5 Rapid City the mass of deaths that occurred there in  
6 some people elicited trauma.

7 The Erikson study describes, although one  
8 can suspect the quality of the data that he used, shouldn't  
9 be surprised that there may have been trauma after people  
10 saved their lives and in the process encountered loved  
11 ones that were dead.

12 Q Dr. Mileti, let me give you a scenario so maybe  
13 we can talk more on the same wave length. We have, assume  
14 with me, that there is a radiological emergency at Shoreham,  
15 that the announcement is made that it's a general emergency,  
16 that emergency workers in LERO are obviously asked to  
17 report for duty, and are indeed dispatched to their  
18 respective posts, whether it be traffic guides or traffic  
19 posts or personnel within the EOC.

20 Now, do you think it's possible, Dr. Mileti,  
21 under this scenario with evacuation of the general public  
22 in the EPZ that the traumatic event would begin for some  
23 workers at the time they are notified of the emergency and  
24 told to report for duty?

25 A Absolutely not. I can't say that it couldn't

#9-11-SueT 1 happen, that you couldn't find one person out of a popula-  
2 tion of a billion, that that might not be traumatic for  
3 them. But I would be real surprised, because I've never  
4 seen a case where that kind of information has led someone  
5 to define the situation in such a way that it would be  
6 traumatic in the sense that trauma is used in the DSM-3.

7 Now, in the lay sense of the word "trauma,"  
8 in a nontechnical sense of the word "trauma," then it  
9 should be another word. Then we are talking about something  
10 else. But not in the sense that you would experience  
11 diminished responsiveness.

12 Q And during the course -- continuing with our  
13 scenario -- the traffic guide goes to his post and he  
14 has been at his post for a number of hours with traffic  
15 and the congestion that could result from an evacuation  
16 of the ten mile EPZ, and it would be your opinion, I  
17 gather, that under those circumstances, again there would  
18 not be a traumatic event to the traffic guide?

19 A Well, I can't answer that yes or no. What I  
20 would have to say is, the act of having directed traffic in  
21 an emergency for half a dozen hours might, a month later or  
22 six months later, become a traumatic event for that person.  
23 But I wouldn't suspect that it would be a traumatic event  
24 while they are doing it.

25 Q Now, do you think, Dr. Miletic, with respect to

#9-12-SueT 1

2 the public and people being forced to leave their homes  
3 and their belongings, would that constitute a traumatic  
4 event in your opinion?

5 A No, it wouldn't.

6 Q Let me ask you, Mr. Babb, you have been listening  
7 to Dr. Mileti's discussion with me, I take it. Do you agree  
8 with what Dr. Mileti is saying regarding the trauma that  
9 could be experienced by emergency workers during something  
10 like a radiological emergency at Shoreham?

11 A (Witness Babb) Well, I would have to preface  
12 my answer, Mr. Miller, by, of course, saying I'm not a  
13 behavioral sociologist, so my answers would be in very  
14 broad terms.

15 Q Yes, sir. I'm interested in your answers because  
16 of your experience.

17 A Okay. Will we equate or use synonymously the  
18 word "trauma" with pressure?

19 Q I would like to use the word in the sense that  
20 it could impair job performance.

21 A Well, certainly trauma or pressure could  
22 certainly impair job performance among any population.  
23 The numbers, of course, as I indicated before I could not  
24 discuss with you.

25 It would also cause others to rise to the  
occasion. Perhaps that pressure or trauma would be in



#9-13-SueT

1 direct proportion to the numbers of hours that the person  
2 might be exposed to it. If someone were exposed -- in my  
3 particular case, if I can refer to a particular case which  
4 was pressure, myself as a police officer, I was under a  
5 situation directing traffic for many, many hours for many  
6 weeks in a very large strike situation. And at the end of  
7 two or three weeks I, of course, was fatigued but I still  
8 performed. And did other associates of mine.

9 Q Are you aware, Mr. Babb, of any instances while  
10 you were a police officer where during an emergency stress  
11 or trauma impaired job performance of any emergency response  
12 workers, including of course the police officers?

13 A There were several officers under my command  
14 whose performance I was not completely satisfied with, at  
15 my levels of expectation under emergency situations. I  
16 will not say that they fell apart. They just didn't perform  
17 at the level of expectation that I would have expected.

18 Q Is it fair to say that their job performance,  
19 in your opinion, was somewhat impaired?

20 A It did not meet my levels of expectation.

21 Q Do you believe, Mr. Babb, that a radiological  
22 emergency at Shoreham would not constitute a traumatic  
23 event to emergency response workers?

24 MS. MONAGHAN: Objection. I think this is so  
25 far beyond the scope of the witness' expertise as to



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1 require the witness to speculate wildly on the record,  
2 and it would have no probative value whatsoever.

3 MR. MILLER: Judge Laurenson, I'm looking at --  
4 I'm asking Mr. Babb these questions because, to my  
5 knowledge, he is really the person on this panel with  
6 the experience in performing emergency work as a police  
7 officer. And I think in that context, it is certainly  
8 relevant to ask him his opinions regarding the effect of  
9 trauma or stress on job performance during emergencies.

10 JUDGE LAURENSEN: The only problem that concerns  
11 me is the use of the word "trauma" which was defined one  
12 way by Dr. Mileti, and I understood from Mr. Babb's  
13 testimony that he was not familiar with that definition, or  
14 at least was not necessarily using it.

15 And I think there ought to be some clarification  
16 of whether we are using the word "trauma" in the lay sense  
17 here or in -- well, what definition you are using or Mr.  
18 Babb is using in response.

19 MR. MILLER: I'm using the definition -- and I  
20 think Mr. Babb and I have agreed on this, that trauma would  
21 be impairment of job performance.

22 Is that correct, Mr. Babb?

23 WITNESS BABB: Or pressure which would also do  
24 the same thing.

25 MR. MILLER: So I think we have an understanding

#9-15-SueT 1

of the definition, and the record will be clear in that regard.

end #9 3

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1 JUDGE SHON: Mr. Miller, it seems to me that  
2 the definition you have used is in some sense quite  
3 circular if what your line of questioning seems to be  
4 approaching.

5 Several of the witnesses, and Dr. Mileti in  
6 particular, had said that stress, he did not believe,  
7 impaired job performance. You then asked a question,  
8 at least once, that implied that stress and trauma were  
9 the same thing, or that pressure and trauma were the  
10 same thing and defined them as that which does impair  
11 job performance.

12 You do that sort of thing, you tie a logical  
13 knot. Do you see what I mean?

14 MR. MILLER: Yes, sir. I am not sure there  
15 is confusion on my part, but let me try to clarify it.  
16 I think when Dr. Mileti and I were discussing these  
17 issues, and I should ask Mr. Mileti, when he began using  
18 the word, 'trauma,' he was using the word in the sense  
19 of DSM 3 study.

20 In my discussions with Mr. Babb, I have been  
21 using it in the sense of impairing job performance, and  
22 if it will make the record clear, I am glad to take out  
23 the word, 'trauma' and put in the word, 'stress' to my  
24 questions to Mr. Babb.

25 I think the consequences are what we are

1 interested in, and the consequences would be is the  
2 possibility of impairing job performance.

3 JUDGE SHON: But even at that, if you define  
4 your word, 'stress' as that which impairs job performance,  
5 you can only get one answer to the question does stress  
6 impair job performance, and it is not the same answer that  
7 Mr. Babb gave you a short while ago.

8 In fact, he said, too, that stress sometimes  
9 makes people rise to the occasion and do a better job  
10 than they would have.

11 MR. MILLER: Yes, sir. He also pointed out  
12 that stress in individuals could impair job performance.

13 JUDGE SHON: It could, but if you define it  
14 as that which impairs job performance, you cut the other  
15 possibility out entirely.

16 MR. MILLER: I understand. Thank you, Judge  
17 Shon. Your point is a good point.

18 BY MR. MILLER: (Continuing)

19 Q Mr. Babb, let's back up and see if your answer  
20 has changed in any way. Instead of my using the words,  
21 'stress' or, 'trauma' and defining it as Judge Shon has  
22 pointed out, let me just ask you: During the course of  
23 emergency events, have you, during your career, noticed  
24 emergency workers such as police officers, where job  
25 performance was impaired?



1 MS. MONAGHAN: I think we need to make clear  
2 what Mr. Miller is referring to when he uses the term,  
3 'emergency events.'

4 JUDGE LAURENSEN: Objection is overruled.

5 WITNESS BABB: My answer, Mr. Miller, I would  
6 repeat what I had said before, that I have seen on occasion,  
7 not as a regular occurrence, but I have seen on occasion,  
8 emergency workers who did not perform up to my levels of  
9 expectation.

10 BY MR. MILLER: (Continuing)

11 Q And, Mr. Babb, if there were to be a radiological  
12 emergency at Shoreham, would you suspect that job performance  
13 by some members of LERO could be impaired?

14 A (Witness Babb) Well --

15 MS. MONAGHAN: Objection. He is asking the  
16 witness to speculate.

17 JUDGE LAURENSEN: Overruled.

18 WITNESS BABB: Are you looking for a yes or a  
19 no, Mr. Miller?

20 BY MR. MILLER: (Continuing)

21 Q I would like your opinion, Mr. Babb. You can  
22 explain it if you like.

23 A (Witness Babb) I do think in any group, whether  
24 they are LERO people, or police, or volunteer firemen, or  
25 any group, there is that possibility that you just had

1 proposed.

2 The numbers, of course, I couldn't speculate  
3 on, obviously. It could be one out of a hundred; it could  
4 be ten out of a hundred. But it could happen, yes.

5 Q Mr. Babb, would you expect that trained  
6 emergency response workers such as police officers, would  
7 suffer less impairment of job performance than the individuals  
8 in LILCO who comprise the LERO organization?

9 A You are referring to the radiological  
10 scenerio?

11 Q Yes, sir.

12 A I really and truly could not answer that because  
13 I do not know the impact of a radiological emergency on  
14 people, of any of those groups. That is a brand new arena,  
15 and I am really not qualified. It is such a brand new  
16 arena.

17 I have never had experience with that area.

18 Q Now, Dr. Mileti, back to you. Do you -- you  
19 have in front of you what has been handed out -- it says  
20 on the front page, Diagnostic and Statistical Manual of  
21 Mental Disorders.

22 A (Witness Mileti) Yes. That is the diagnostic  
23 manual psychologists and psychiatrists use to diagnose  
24 what is wrong with people.

25 MR. MILLER: Judge Laurenson, could we mark

1 this as SC EP-66, I think.

XXINDEX 2 JUDGE LAURENSEN: It will be so marked.

3 BY MR. MILLER: (Continuing)

4 Q And, Dr. Mileti, this document marked SC EP-66,  
5 is comprised of the three pages of DSM 3 that you refer  
6 to in your testimony on page 52, correct?

7 A Yes, but I have a complete copy of it with me  
8 as well.

9 Q Fine. Now, Dr. Mileti, your statement that  
10 says: Incapacitation when it does occur is the result  
11 of rather than an occurrence during an emergency.

12 Do you see that statement in the testimony?

13 A Yes.

14 Q Could you point me to where that is stated  
15 in DSM-3?

16 A Well, in my testimony, it doesn't have quote  
17 marks around it.

18 Q Yes, sir. But isn't it taken verbatim from  
19 DSC-3?

20 A Of course not. It is my attempt to summarize  
21 several pages from the DSM, and stems from first, the  
22 team of M.Ds, and psychiatrists and psychologists who  
23 made this classification when they classified this stress  
24 disorder, of calling it post-traumatic stress disorder,  
25 meaning after.

1           Second, saying things like in the last paragraph  
2 on page 236, after experiencing the stressor , in terms  
3 of the last -- second to the last sentence, beginning on  
4 page 236, the sentence, in using the words survivors often  
5 describe painful guilt feelings about surviving when others  
6 did not, suggesting that it would have happened after those  
7 who didn't survive didn't, and after the traumatic event  
8 occurred, when it said the characteristic symptoms -- in  
9 the first indented paragraph on page 236, the characteristic  
10 symptoms involve reexperiencing the traumatic event, and  
11 opposed to experiencing the traumatic event, and in  
12 addition to that, near the end of the second indented  
13 paragraph, the phrase, or the sentence: Frequently, there  
14 is a concomitant physical component to the trauma which may  
15 even involve direct damage to the central nervous system.

16           And my supposition that that direct damage would  
17 have occurred after the traumatic event --

18           MR. MILLER: Doctor Mileti , I think my question  
19 was much more limited than your answer is.

20           BY MR. MILLER: (Continuing)

21           Q     Let me ask you. Your statement, diminished  
22 responsiveness, if it occurs, usually begins soon after  
23 the traumatic event.

24                     Do you see that in the testimony?

25           A     Oh, yeah, and that is a sentence right out of



1 here, you are right.

2 Q And it is not in quotes in your testimony, is  
3 it?

4 A Well, I may not have quoted it exactly.

5 Q Now, right above that sentence, Dr. Miletic,  
6 you state that DSM-3 states that diminished responsiveness  
7 to the external world is not a characteristic response  
8 during an emergency. Do you see that statement in the  
9 testimony?

10 A Yeah, because we are --

11 Q Can you please show me in DSM-3 where that  
12 is stated?

13 A That is what my last answer was.

14 Q Would you show me the particular place that  
15 you are saying that comes from?

16 A No, I didn't quote that. If you finish the  
17 rest of the sentence that you pointed to, diminished  
18 responsiveness to the external world, referred to as  
19 psychic numbing, where emotional anesthesia usually  
20 begins soon after the traumatic event.

21 Q Right. I understand that. It says that  
22 it usually begins soon after the event, but your statement  
23 says that diminished responsiveness to the external world  
24 is not a characteristic response during an emergency.

25 And I am asking you, could you please show me

1 in DSM-3 where that is stated?

2 A Well, I would assume that if there is a trauma  
3 associated with an emergency, it would happen during the  
4 emergency rather than after it, and that is just my --

5 Q So you have made an inference, from your  
6 reading of DSM-3, isn't that correct?

7 A Which I think any reasonable human being  
8 would make. The whole point of this is that it is  
9 classified as a post-traumatic stress disorder, not a,  
10 'in the midst of traumatic stress disorder.'

11 Q Dr. Mileti, you seem to be equating post-traumatic  
12 stress disorder with diminished responsiveness, is that  
13 right? Are you saying the two are one and the same?

14 A What I was attempting to do in my testimony  
15 and today, is to say that psychic numbing, if it can occur,  
16 is associated with having experienced, in the past tense,  
17 a traumatic event.

18 Q Yes, sir. But are you saying that diminished  
19 responsiveness is the same as post-traumatic stress  
20 disorder, which is what is discussed in DSM-3 and the  
21 pages you have cited.

22 A They are not perfectly equal, because you could  
23 have post-traumatic stress disorder that might not involved  
24 diminished responsiveness, but if you had diminished  
25 responsiveness, it would be associated with a post-traumatic

1 stress disorder.

2 Q Diminished responsiveness could occur from  
3 stress, correct?

4 A If stress was such that it would be characterized  
5 as traumatic.

6 Q And stress, Dr. Miletic, need not be post-traumatic  
7 stress, isn't that correct?

8 A Stress that would be traumatic that would result  
9 in diminished responsiveness would be the sort that was  
10 occurring after the trauma.

11 I am not saying that people don't experience  
12 stress. In fact, I went to great lengths in my testimony  
13 to catalog all the little numbers that people have about  
14 how much stress there was in emergency workers at Three  
15 Mile Island.

16 And I have also said on other issues that stress  
17 is a characteristic of people who evacuate. I believe  
18 that the evidence suggests in emergencies that stress is  
19 not something that is negative.

20 Q Now, Dr. Miletic, looking at the first -- page  
21 236 of this document marked EP-66, going back to your  
22 definition of trauma, which Judge Shon has pointed out  
23 to me I have to be careful the way I use -- this says,  
24 doesn't it, that the trauma may be experienced along, and  
25 it gives the examples of rape or assault , or in the



1 company of groups of people -- and it gives the example  
2 of military combat.

3 And then it says stressors producing this  
4 disorder include natural disasters, such as floods and  
5 earthquakes, isn't that right?

6 A I remember what you just read. I don't see  
7 it yet. Could you tell me again where it is?

8 Q It is in the third paragraph on page 236.

9 A I have it, yeah.

10 Q Now, that says, doesn't it, Dr. Miletic, that  
11 floods and earthquakes can produce trauma?

12 A Oh, yes. And indeed they can. Traumatic  
13 events can occur.

14 MR. MILLER: Judge Laurenson, at this time  
15 I would like to move SC EP-66 into the record.

16 JUDGE LAURENSEN: Is there any objection?

17 MS. MONAGHAN: No objection, Judge Laurenson.

18 MR. PIRFO: The Staff has no objection.

19 MR. ZAHNLEUTER: No objection.

20 JUDGE LAURENSEN: Suffolk County Exhibit EP-66  
21 will be received in evidence and bound in the transcript  
22 following this page.

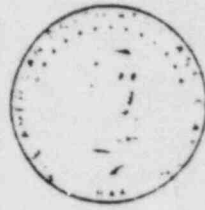
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23 (Above referenced document,  
24 Suffolk County Exhibit EP-66  
25 is received in evidence.)

(Document follows)



SC EP-66



**Diagnostic  
and Statistical Manual  
of Mental Disorders**  
(Third Edition)

308.30 Post-traumatic Stress Disorder, Acute

309.81 Post-traumatic Stress Disorder, Chronic or Delayed

The essential feature is the development of characteristic symptoms following a psychologically traumatic event that is generally outside the range of usual human experience.

The characteristic symptoms involve reexperiencing the traumatic event; numbing or responsiveness to, or reduced involvement with, the external world; and a variety of autonomic, dysphoric, or cognitive symptoms.

The stressor producing this syndrome would evoke significant symptoms of distress in most people, and is generally outside the range of such common experiences as simple bereavement, chronic illness, business losses, or marital conflict. The trauma may be experienced alone (rape or assault) or in the company of groups of people (military combat). Stressors producing this disorder include natural disasters (floods, earthquakes), accidental man-made disasters (car accidents with serious physical injury, airplane crashes, large fires), or deliberate man-made disasters (bombing, torture, death camps). Some stressors frequently produce the disorder (e.g., torture) and others produce it only occasionally (e.g., car accidents). Frequently there is a concomitant physical component to the trauma which may even involve direct damage to the central nervous system (e.g., malnutrition, head trauma). The disorder is apparently more severe and longer lasting when the stressor is of human design. The severity of the stressor should be recorded and the specific stressor may be noted on Axis IV (p. 26).

The traumatic event can be reexperienced in a variety of ways. Commonly the individual has recurrent painful, intrusive recollections of the event or recurrent dreams or nightmares during which the event is reexperienced. In rare instances there are dissociativelike states, lasting from a few minutes to several hours or even days, during which components of the event are relived and the individual behaves as though experiencing the event at that moment. Such states have been reported in combat veterans. Diminished responsiveness to the external world, referred to as "psychic numbing" or "emotional anesthesia," usually begins soon after the traumatic event. A person may complain of feeling detached or estranged from other people, that he or she has lost the ability to become interested in previously enjoyed significant activities, or that the ability to feel emotions of any type, especially those associated with intimacy, tenderness, and sexuality, is markedly decreased.

After experiencing the stressor, many develop symptoms of excessive autonomic arousal, such as hyperalertness, exaggerated startle response, and difficulty falling asleep. Recurrent nightmares during which the traumatic event is relived and which are sometimes accompanied by middle or terminal sleep disturbance may be present. Some complain of impaired memory or difficulty in concentrating or completing tasks. In the case of a life-threatening trauma shared with others, survivors often describe painful guilt feelings about surviving when many did not, or about the things they had to do in order to survive. Activities or situations that may arouse recollections of the traumatic event are

often avoided. Symptoms characteristic of Post-traumatic Stress Disorder are often intensified when the individual is exposed to situations or activities that resemble or symbolize the original trauma (e.g., cold snowy weather or uniformed guards for death-camp survivors, hot, humid weather for veterans of the South Pacific).

**Associated features.** Symptoms of depression and anxiety are common, and in some instances may be sufficiently severe to be diagnosed as an Anxiety or Depressive Disorder. Increased irritability may be associated with sporadic and unpredictable explosions of aggressive behavior, upon even minimal or no provocation. The latter symptom has been reported to be particularly characteristic of war veterans with this disorder. Impulsive behavior can occur, such as sudden trips, unexplained absences, or changes in life-style or residence. Survivors of death camps sometimes have symptoms of an Organic Mental Disorder, such as failing memory, difficulty in concentrating, emotional lability, autonomic lability, headache, and vertigo.

**Age at onset.** The disorder can occur at any age, including during childhood.

**Course and subtypes.** Symptoms may begin immediately or soon after the trauma. It is not unusual, however, for the symptoms to emerge after a latency period of months or years following the trauma.

When the symptoms begin within six months of the trauma and have not lasted more than six months, the acute subtype is diagnosed, and the prognosis for remission is good. If the symptoms either develop more than six months after the trauma or last six months or more, the chronic or delayed subtype is diagnosed.

**Impairment and complications.** Impairment may either be mild or affect nearly every aspect of life. Phobic avoidance of situations or activities resembling or symbolizing the original trauma may result in occupational or recreational impairment. "Psychic numbing" may interfere with interpersonal relationships, such as marriage or family life. Emotional lability, depression, and guilt may result in self-defeating behavior or suicidal actions. Substance Use Disorders may develop.

**Predisposing factors.** Preexisting psychopathology apparently predisposes to the development of the disorder.

**Prevalence.** No information.

**Sex ratio and familial pattern.** No information.

**Differential diagnosis.** If an Anxiety, Depressive, or Organic Mental Disorder develops following the trauma, these diagnoses should also be made.

In Adjustment Disorder, the stressor is usually less severe and within the range of common experience, and the characteristic symptoms of Post-traumatic Stress Disorder, such as reexperiencing the trauma, are absent.



**Diagnostic criteria for Post-traumatic Stress Disorder**

A. Existence of a recognizable stressor that would evoke significant symptoms of distress in almost everyone.

B. Reexperiencing of the trauma as evidenced by at least one of the following:

- (1) recurrent and intrusive recollections of the event
- (2) recurrent dreams of the event
- (3) sudden acting or feeling as if the traumatic event were reoccurring, because of an association with an environmental or ideational stimulus

C. Numbing of responsiveness to or reduced involvement with the external world, beginning some time after the trauma, as shown by at least one of the following:

- (1) markedly diminished interest in one or more significant activities
- (2) feeling of detachment or estrangement from others
- (3) constricted affect

D. At least two of the following symptoms that were not present before the trauma:

- (1) hyperalertness or exaggerated startle response
- (2) sleep disturbance
- (3) guilt about surviving when others have not, or about behavior required for survival
- (4) memory impairment or trouble concentrating
- (5) avoidance of activities that arouse recollection of the traumatic event
- (6) intensification of symptoms by exposure to events that symbolize or resemble the traumatic event

**SUBTYPES**

**Post-traumatic Stress Disorder, Acute**

A. Onset of symptoms within six months of the trauma.

B. Duration of symptoms less than six months.

**Post-traumatic Stress Disorder, Chronic or Delayed**

Either of the following, or both:

- (1) duration of symptoms six months or more (chronic)
- (2) onset of symptoms at least six months after the trauma (delayed)

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1 BY MR. MILLER: (Continuing)

2 Q Now, going on to page 53 of your testimony, Dr.  
3 Mileti, you state that stress did exist in utility emergency  
4 workers at TMI, yet these workers did not become incapacitated  
5 as the contention alleges would occur with utility emergency  
6 workers in a radiological emergency at Shoreham.

7 Do you see that?

8 A (witness Mileti) Yes.

9 Q First of all, Dr. Mileti, isn't it more fair  
10 to say that the contention talks in terms of the fact that  
11 stress may occur in emergency workers; not that stress  
12 would occur?

13 A I will have a look.

14 (Witness peruses document)

15 Well, what it actually says is especially when  
16 the tasks to be performed may be accompanied by high levels  
17 of stress and fatigue, so who knows if the 'may' meant  
18 stress or if it meant maybe high levels versus low levels.

19 Q And, Dr. Mileti, towards the end of -- right  
20 at the end of that first full paragraph on page 53 of  
21 your testimony, we are back to this comment where you say  
22 that stress probably would enhance their ability to meet  
23 the demands of the situation, and not to detract from it.

24 Do you see that?

25 A Yes.

1 Q You are talking there about the effects of stress  
2 on LERO workers, correct?

3 A Yeah, I think that is the whole point of my  
4 testimony.

5 Q And this is your judgment, this statement,  
6 correct?

7 A No, it is much more than my judgment. It is  
8 based on scientific record of how stress affects behavior  
9 in emergencies, which is just like an upside down smile  
10 on a great big chesser cat, just like it is on how it  
11 affects behavior during non-emergency times.

12 The point is, when does it start going on the  
13 downside? In emergencies it is when there is a tramatic  
14 event experienced.

15 COURT REPORTER: Will you slow down, Mr.  
16 Mileti?

17 (Laughter)

18 WITNESS MILETI: I beg your pardon again.  
19 I do apologize.

20 BY MR. MILLER: (Continuing)

21 Q Back to my question, Dr. Mileti, your statement  
22 on page 53 of the testimony is based upon your judgment  
23 and your review of what you characterize as the data  
24 regarding stress and its performance, and what it does  
25 to the performance of emergency workers, isn't that correct?

1           A       The existing data that is available to the  
2 social and behavioral scientists, yes.

3           Q       Your understanding of that data.

4           A       Again, I am limited by being human and have  
5 to perceive what I read in order to understand.

6           Q       Now, going on to Question and Answer 32,  
7 Mr. Varley, the question says: How do you propose to  
8 simulate stress in drills and exercises; and then you  
9 among others sponsors an answer that talks about the  
10 fact that stress is not specifically simulated in LERO  
11 drills or exercises. However, the drills and exercises  
12 themselves may be stressful situations.

13                   Do you see that?

14           A       (Witness Varley) Yes, I do.

15           Q       Now, do you recall, Mr. Varley, during your  
16 deposition discussing stress and whether there would be  
17 training in the LILCO drill program to impose stress  
18 in the training of LERO workers?

19           A       Yes, I do.

20           Q       Do you recall saying, Mr. Varley, that you  
21 were not an expert in the field of stress, and that you  
22 could not characterize whether an individual's performance  
23 in a drill situation is stressful or not?

24           A       That is correct.

25           Q       And do you recall, Mr. Varley, in response to

1 the question asked whether you were aware of whether stress  
2 would be simulated in LILCO training for LERO workers,  
3 saying that you did not know of any particular method  
4 that one would use to develop stress in a drill situation?

5 A Yes, I remember that.

6 Q And, Mr. Varley, are the statements you made  
7 during your deposition regarding stress and the -- the  
8 imposition of stress during training still true?

9 A Yes, they are.

End 10 10

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1           Q     So I gather, Mr. Varley, that where you say on  
2 page 53 that the drills and exercises themselves may  
3 be stressful situations, that is speculation on your part,  
4 isn't it?

5           A     No. I think to clarify what went on between  
6 my deposition and what this particular testimony statement  
7 states is that when giving my deposition, I was under the  
8 impression, when talking with the counsellors, that they  
9 were asking me how, in fact, IMPELL intended to put  
10 individuals under stressful conditions such as, to use  
11 an analogy, something like training a police officer by  
12 holding a gun to his head and making him feel the stress of  
13 that situation, something that we would do external to the  
14 drill or something that was beyond the normal conduct  
15 of the drill, what were we going to do physically or  
16 purposefully with the drill scenario to create stress.

17          Q     Are you trying to say, Mr. Varley, that you were  
18 confused at your deposition?

19          A     I was confused as far as what you were trying  
20 to imply in the ability to create stress in individuals.

21          Q     You are not confused today, are you?

22          A     I don't believe I am confused as far as being  
23 able to represent in the testimony that participating in  
24 a drill is a stressful situation since I have participated  
25 in drills and felt the pressures of the drill response, no.

1 Q Now, Mr. Varley, at your deposition you were  
2 also asked about two comments, I believe, in the IMPELL  
3 proposal, training proposal, to LILCO, both of which  
4 regarded stress training. One said that -- well, in  
5 the proposal IMPELL offered to provide training for  
6 traffic control personnel in confrontational skills and  
7 stress control.

8 Do you recall that in the proposal?

9 A I would have to see the proposal again to refresh  
10 my memory.

11 (Pause.)

12 Q Mr. Varley, I have handed you a copy of  
13 the IMPELL training program proposal. It says, EDS Nuclear,  
14 but EDS Nuclear was the predecessor of IMPELL; isn't that  
15 correct?

16 A That's correct.

17 Q Now, on page 8 of that proposal there is a  
18 statement under the heading Traffic Control and it  
19 says, "EDS can also provide training for these people in  
20 confrontational skills and stress control."

21 Is that right?

22 A Yes, I see that.

23 Q And on the next page, under the heading Bus  
24 Drivers, it says, "In addition, EDS can also provide  
25 LERO bus driver personnel with training in confrontational

1 skills and stress control."

2 Do you see that?

3 A Yes, I do.

4 Q And isn't it a fact, Mr. Varley, that when  
5 asked in your deposition if such training in stress control  
6 and confrontational skills was being provided by IMPELL,  
7 you said no?

8 A That's correct.

9 Q So is it your testimony today that such training  
10 in stress control and confrontational skills has indeed  
11 been provided to LERO workers by IMPELL?

12 A No. We have not provided that type of training.

13 A (Witness Mileti) If I might supplement that  
14 answer, it would be --

15 Q Excuse me, Dr. Mileti.

16 MR. MILLER: Judge Laurenson, I would like some  
17 guidance from the Board. I am not sure how Dr. Mileti  
18 can supplement an answer where I have asked Mr. Varley  
19 if IMPELL has provided such training. The answer is clear,  
20 and I am not sure what there is to supplement.

21 This looks like it is redirect coming up.

22 JUDGE LAURENSON: That is the question. I can't  
23 tell, since Dr. Mileti hasn't submitted an answer, whether  
24 he has any information on that or not, but that is the  
25 question. You have correctly stated it.

1                   WITNESS MILETI: I just wanted to say that I  
2 am the reason why IMPELL didn't do it. It occurred to  
3 me that it would be misleading to suggest to bus drivers  
4 that they needed to have confrontational skills. It would  
5 ill prepare them for what they really experience when they  
6 are trying to drive the busses and, therefore, would be  
7 inappropriate training in my regard, in spite of the fact  
8 that some organizations like FEMA and others across the  
9 country are engaging in stress control classes and  
10 ten years ago it would have been EST classes.

11                   I thought it would be better to keep LERO  
12 workers thinking and stressed in an emergency because I  
13 think that will help their behavior. I don't think we  
14 want to eliminate the stress of an actual emergency.

15                   MR. MILLER: Judge Laurenson, I move to strike  
16 Dr. Mileti's answer as not responsive to my question.

17                   JUDGE LAURENSEN: It will be stricken.

18                   WITNESS BERGER: Mr. Miller, may I comment?

19                   BY MR. MILLER:

20                   Q Well, Mr. Berger, I might move to strike it, but  
21 you can comment.

22                   A You have that --

23                   Q If your answer supplements Mr. Varley's answer.

24                   A I helped write the proposal.

25                   May I comment?



1 Q Yes.

2 A At the time the proposal was written, I was  
3 out in California and received a phone call from  
4 Mr. Dennis Behr who actually put the proposal together  
5 and asked for an opinion as to the type of items that  
6 we should include in the proposal.

7 Stress and confrontation control was put into  
8 the proposal at my request. I had not, at that particular  
9 point in time, examined the individuals that we would  
10 be training, but Mr. Behr asked me for a list of items  
11 that we thought might be included that LILCO may have an  
12 interest in. And that was the only reason it was included.

13 Q Mr. Berger, I gather from what you are saying  
14 that at the time that the proposal was presented to LILCO,  
15 you thought training in confrontational skills and stress  
16 was a good idea for the LERO organization?

17 A I didn't say good idea. That wasn't my words.  
18 My words were, I was asked what particular training issues  
19 we might include in the proposal, and I suggested stress  
20 and confrontation control. It was a subject at that particu-  
21 lar point in time that we were teaching inside of IMPELL  
22 to our employees. And we said that they may have an  
23 interest in that area.

24 There was no specific -- we did not examine at  
25 that point in the proposal preparation the population to be

1 trained, and it was just a suggestion. It did end up in  
2 the proposal.

3 Subsequent to that, LILCO, for whatever judgment  
4 or reason on their part, decided not to ask us to seek  
5 someone out to run the class.

6 Q Let me ask you, Mr. Berger, you say that at  
7 the time the proposal was made to LILCO, you were, in fact,  
8 conducting such stress training within IMPELL.

9 Why were you doing that?

10 A We had a number of employees out on the west  
11 coast who indicated in a needs analysis that we conducted  
12 inside of our corporation that they would like to know  
13 more about stress management, personal stress management.

14 Q Do you believe, Mr. Berger, that training in  
15 confrontational skills and stress management is of value?

16 MS. MONAGHAN: I am going to object to the  
17 form of that question. It is vague and ambiguous. I  
18 think you have to put "value" in some sort of context here.

19 JUDGE LAURENSEN: Sustained.

20 BY MR. MILLER:

21 Q Would you look, please, at page 54 of the  
22 testimony. There is a statement, Mr. Daverio, the last  
23 paragraph -- I am sorry, the first full paragraph of  
24 page 54, which talks about the fact that the drill and  
25 exercise scenarios were structured and run on a strict

1 timetable.

2 Do you see that?

3 A (Witness Daverio) Yes, I do.

4 Q And I gather that it is your testimony that  
5 because these drills and exercises were run on a strict  
6 timetable that the drill participants would in effect  
7 receive some possible training under stressful situations?

8 A That's correct.

9 Q Now, can you tell me, Mr. Daverio, in these  
10 drills and exercises, are the participants of the drills  
11 and exercises aware of the timetable for the drill or  
12 exercise?

13 A They would be aware of the start time, as we  
14 have mentioned many times. We give them that information.  
15 And they would probably generally be aware of the finish  
16 time, would be somewhere between 4:00 and 5:00 in the  
17 afternoon. But they have no idea of what is in the middle.

18 Q So --

19 A Except for in the case -- one of -- if you  
20 asked me an example of what this is, it is an example of  
21 a timetable where someone might know the timetable. The  
22 transfer point coordinator, of course, has a timetable  
23 of bus routes and he has seen that before, but that is what  
24 he is expected to perform as part of his procedure. He  
25 does not have a timetable though as to when he will be sent

1 out or things like that, or when the first bus will arrive.

2 They will get there when they get there.

3 Q Well, Mr. Daverio, is it correct to say then  
4 that this paragraph regarding the strict timetable, if indeed  
5 such a method can provide training in stressful situations  
6 for participants, that in the LILCO training program such  
7 training would have been limited to supervisory personnel?

8 A No, not necessarily.

9 Q Well, let's take the example of some of  
10 your field personnel, traffic guide, again.

11 The traffic guides, you have said, generally  
12 weren't aware of the timetable for the drill other than  
13 the fact that they may have known when the drill began  
14 and when the drill was to end; is that correct?

15 A Right. But the timetable that we have that we  
16 know may put stress on them -- take an example, the bus  
17 driver. He has a route that he has to run that he has  
18 some time estimates that he has to somewhat meet, that that  
19 would be somewhat stressful for him. There would also  
20 be some stress in timetable to be able to efficiently move  
21 people through a staging area to get them mobilized through  
22 that area.

23 So while not everyone may every time be on a  
24 strict timetable, it provides that there are many examples  
25 of it each time we run a drill. And maybe Mr. Varley can



1 expand to that.

2 Q Well, Mr. Daverio, let me follow up with you  
3 in your example of the bus drivers.

4 Isn't it true that under the drill scenarios,  
5 what bus drivers were told was to go out and drive a  
6 route -- using a car, not a bus -- and drive the route  
7 or drive for two hours, whichever comes first, and then  
8 come back?

9 A In some scenarios they were; in others they weren't.

10 Q And under my scenario which was used in your  
11 training program, are you saying that that imposed some  
12 kind of a timetable, strict timetable on the participant  
13 which some how led him to be exposed to a stressful  
14 situation?

15 A His stressful timetable would be the ability to  
16 run the route in the time specified in the -- at the  
17 transfer point coordinator's package.

18 Q Although he wasn't told he necessarily had to  
19 run the route. He was told to go out and drive the route  
20 or drive for two hours and then come back.

21 A As I stated, not all drills were run that way.  
22 In a particular drill, that was true. In some drills, they  
23 ran the whole routes.

24 Q And in running those routes, Mr. Daverio,  
25 are you saying that bus drivers were told, you have a

1 specific amount of time to run that route and do it and  
2 then come back and report it?

3 A I can't answer that exactly. Maybe Mr. Varley  
4 can.

5 Q Mr. Varley, was that ever the case in your  
6 training program where bus drivers were told that?

7 A (Witness Varley) Could you repeat the content  
8 of that --

9 Q Did you ever tell a bus driver, leave this  
10 transfer point, you have a specific amount of time,  
11 whatever that time would be, to run your route. You must  
12 run the route and then get back here and report in?

13 A That could quite possibly have happened with the  
14 transfer point coordinators. I wasn't at the transfer  
15 points to know that.

16 Q For the bus drivers, Mr. Varley.

17 A If you will allow me to finish. The transfer  
18 point coordinator's responsibilities entailed being able  
19 to dispatch busses on a particular bus schedule. For  
20 him to be able to maintain that bus schedule, the busses  
21 that are out on the routes have to get back in prior to  
22 their need to be dispatched a second time.

23 So if the transfer point coordinator is to do  
24 his job correctly, he has to not only insure that the bus  
25 leaves but that the bus returns before it is needed for the

1 second time of being dispatched.

2 To the extent that the transfer point  
3 coordinators work with the bus drivers in being able to  
4 essentially run a bus system within a particular bus route,  
5 that type of discussion may have gone on.

6 In addition, I think as far as bus drivers and  
7 feeling some stress or pressure as far as being able  
8 to meet their job commitments, bus drivers in some cases  
9 were required to go from the staging area to bus companies  
10 and then to transfer points.

11 Their need to be at the transfer point at the  
12 beginning of the schedule of running bus routes necessitated  
13 that they do the intermediate activities as quickly and  
14 as resourcefully as they could. So there was pressure  
15 in that sense.

16 Q Well --

17 A But I think overall what this particular paragraph  
18 is tryin to allude to is the fact that we set up the  
19 drill scenario with the timed sequence of events of an  
20 accident as it unfolds. The participants are not aware  
21 of what that time sequence of events are.

22 As the individuals are made aware of the various  
23 steps within the scenario and asked to respond to them,  
24 we do not allow them the luxury of having the amount of  
25 time they need to complete all the steps for, let's say, an

1 alert before we enforce a site area or a general  
2 emergency to occur.

3 So they may be in the midst of trying to do  
4 everything that an alert is required to do in the procedures  
5 and because of the strict timetable that we try and  
6 impose, the site area or the general emergency may be  
7 on top of them. And they are confronted with a new  
8 set of circumstances before they have been able to  
9 completely conduct all the steps in an alert.

10 And in that sense, what we are trying to say  
11 in this paragraph is that puts what we feel pressure on  
12 the participants as a result of that.

13 Q Now, Mr. Varley, did you write the portion of the  
14 answer above the paragraph we have just been talking  
15 about that says, "Everyone wants to do his job correctly  
16 and appear competent and capable in the eyes of the  
17 evaluator"?

18 A I agreed with that portion of it. I don't  
19 remember whether I wrote that particular portion.

20  
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25  
END 11



#12-1-SueT 1

2 Q Well, you heard our discussion yesterday about  
3 some of the horseplay and, if you will, lack of seriousness  
4 by participants during the drills and exercises.

5 Do you still believe that is a true statement?

6 A (Witness Varley) Yes, I do.

7 Q Now, the next paragraph says the participants  
8 in a drill or exercise are unaware of the situations or  
9 surprise subsituations that the scenario will present.

10 Mr. Varley, does every drill or exercise contain  
11 the surprise subsituations you refer to?

12 A I couldn't say offhand. I would have to go  
13 back and read all of our scenarios to know the answer to  
14 that. I just don't remember.

15 Q Can you give me a percentage off the top of your  
16 head as to the ones that do?

17 A I would have to look at the scenarios to know  
18 whether it was a hundred percent or some other percentage.  
19 I couldn't say without going back and reviewing.

20 Q It could be well under fifty percent, couldn't  
21 it?

22 A I can't answer that question.

23 Q The Answer 33, Mr. Daverio, talks about the  
24 repeat training given to LERO workers.

25 Could you tell me your estimate of the total  
hours spent in the training for each LERO worker on an

#12-2-SueT 1

2 annual basis. Maybe we can talk just in terms of their  
3 classroom training first.

3

4 MS. MONAGHAN: Objection. I think that this type  
5 of question gets into the level of detail that is precluded  
6 by the Waterford decision.

6

JUDGE LAURENSEN: Overruled.

7

8 WITNESS DAVERIO: If you give us a moment, I  
9 think we can get that information for you.

9

BY MR. MILLER: (Continuing)

10

Q All right.

11

A (The witness is going through documents.)

12

13 (Witness Daverio) As far as classroom training,  
14 we have it by job title. If you want me to give you,  
15 after looking at this page, an average?

15

16 Q That's fine. Do you want some more time? We  
17 could do this over the lunch break if you want.

17

18 A Average time per classroom training is fifteen  
19 hours and fifteen minutes.

19

Q Fifteen hours and fifteen minutes?

20

A That's correct.

21

22 Q That's for the retraining of LERO personnel  
23 during the course of a year, correct?

23

A Only classroom training.

24

Q During the course of the year?

25

A During the year.

#12-3-SueT

1 Q Now, is there a way for you to give me the  
2 average amount of time spent during the course of a year  
3 for participation in drills and exercises?

4 And again if it's possible to do it, maybe you  
5 could just look at your data over the lunch break.

6 A We may be able to come up with a number. We  
7 don't have a computer printout with us that gives us  
8 that number.

9 Q And let me ask this, Mr. Daverio. I believe  
10 we established yesterday that the job, specific training,  
11 classroom training, is repeated on an every-other-quarter  
12 basis; correct?

13 Or is -- I'm sorry. I should change that.  
14 The job specific classroom training is offered on an  
15 every-other-quarter basis; is that correct?

16 MS. MONAGHAN: The question has been asked and  
17 answered.

18 JUDGE LAURENSEN: Overruled.

19 WITNESS DAVERIO: Job specific training would  
20 be offered twice a year but there is some job specific  
21 training every quarter.

22 BY MR. MILLER: (Continuing)

23 Q And a member of LERO is supposed to repeat  
24 his job specific training in a subject area once per  
25 year; correct?

#12-4-SueT<sub>1</sub>

A Yes, as Mr. Varley discussed yesterday.

2 MR. MILLER: Judge Laurenson, this would be a  
3 good time for the lunch break.

4 JUDGE LAURENSEN: Are we up to Contention 41?

5 MR. MILLER: We are getting very close.

6 JUDGE LAURENSEN: Maybe we could get to that  
7 point before we break for lunch. The afternoons do get  
8 a bit long here.

9 MR. MILLER: If we can take a break, that's  
10 fine.

11 JUDGE LAURENSEN: Rather than take a break now,  
12 we will take our luncheon recess now.

13 (Whereupon, the hearing is recessed at 12:34 p.m.,  
14 to reconvene at 2:00 p.m., this same day.)  
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#12-5-Sut

A F T E R N O O N      S E S S I O N

(2:00 p.m.)

JUDGE LAURENSEN: All right. We are back on the record now. The hearing is resumed.

Mr. Miller.

Whereupon,

HARRY N. BABB,

GARY J. BERGER,

MATTHEW C. CORDARO,

CHARLES A. DAVERIO,

DENNIS S. MILETI,

WILLIAM F. RENZ,

-and-

RONALD A. VARLEY

resumed the stand as witnesses on behalf of Long Island Lighting Company and, having previously been duly sworn, were further examined and testified as follows:

WITNESS DAVERIO: Mr. Miller, I will give you those numbers from yesterday. You asked us yesterday how many people had resigned from LERO since its inception. I've got a number from the people back in Hicksville of fifty-one resignations since its inception, or about three percent.

CROSS EXAMINATION

BY MR. MILLER:

Q Mr. Daverio, fifty-one resignations in LERO since

#12-6-SueT

1 LERO was formed a year or so ago; is that what you are  
2 saying?

3 A That was the question I asked, and that was  
4 the answer I got.

5 Q Let me make sure I understand, Mr. Daverio,  
6 these are resignations from LERO but not from LILCO;  
7 correct?

8 A The fifty-one people have resigned from LERO;  
9 that's correct.

10 Q Do you know, Mr. Daverio, if in all cases those  
11 persons have been replaced?

12 A It's my understanding that based on our discus-  
13 sions yesterday there are, I believe, forty-two places not  
14 filled right now, based on that hundred and sixty-six,  
15 a hundred and twenty-four I think we talked about yesterday.

16 Whether any one of these people is also one of  
17 those persons -- because, remember that was a time frame  
18 number I gave you from March 6th to May 23rd, anyone who  
19 left I can't say. But there is that forty-two number.  
20 That's the number that I'm aware of as short from the  
21 eighteen hundred we discussed.

22 Q Mr. Daverio, before the lunch break we were  
23 talking about Answer 33 which begins on Page 54. And  
24 on Page 55 going on to Question 34, there is a statement --  
25 the question actually says: Will an annual refresher

#12-7-SueT 1

training program be sufficient to maintain the training level necessary for LERO workers to perform their jobs.

2

Do you see that?

3

4

A That's what the question reads; that's correct, yes.

5

6

Q Can you tell me -- well, you are not on this answer, Mr. Daverio. Let me ask this of Mr. Varley.

7

8

A I was added to this I think in the errata, but you can ask Mr. Varley if you like.

9

10

Q I'm sorry. Okay. Mr. Daverio, can you tell me, how is it that LILCO will know that the annual refresher training program, as you call it, will be sufficient to maintain the training level necessary for LERO?

11

12

13

A I think, as we have stated a couple of times, that would be by passing a FEMA-graded exercise annually.

14

15

Q So, is it your testimony, Mr. Daverio, that you will not be able to determine the sufficiency of the training program until the FEMA exercise is held, whenever that may be?

16

17

18

19

A No. Internally, we would be looking at our exercise to make sure that we felt that we could pass the FEMA-graded exercise, but the final evaluation from the regulatory bodies, in my opinion, would be the FEMA-graded exercise. We wouldn't go into that unless we felt that our program was good.

20

21

22

23

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#12-8-SueT

1 Q The thing, Mr. Daverio, that sufficiency of the  
2 training level necessary for LERO is in part determined  
3 by persons in LERO not showing up for training assignments?

4 A Of course, if people didn't get the training  
5 that we felt necessary I wouldn't feel comfortable with  
6 FEMA-graded exercise.

7 Q Do you know, Mr. Daverio, if there have been  
8 drills and exercises conducted by LILCO where LERO personnel  
9 did not show up?

10 A Of course.

11 Q Do you still have SC Exhibit 63 and Exhibit 64,  
12 Mr. Daverio?

13 A Yes, I do.

14 Q Why don't we look first at SC Exhibit 63, which  
15 is the report of the February 8th exercise?

16 A I have it.

17 Q There are a number of places in this summary  
18 report, aren't there, where personnel not showing up for  
19 the exercise are noted; isn't that correct?

20 A It wouldn't surprise me if that statement is in  
21 here in more than one place. I'm not sure I accept your  
22 generalization that it's everywhere.

23 Q Looking at Page 11, Mr. Daverio, which is the  
24 first page of the report --

25 A That's correct.



#12-9-SueT1

1 Q -- this refers to a press conference that Dr.  
2 Catacosinos held, and because of that conference the staf-  
3 fing of the emergency news center was reduced when two of  
4 the three managers in a facility were not present; isn't  
5 that correct?

6 A In actuality, that's part of the on-site program,  
7 that position. It turns out, because the news center is a  
8 place where both on-site and off-site personnel are, that  
9 comment was left in what they gave you. But that emergency  
10 news manager is not a LERO position.

11 Q Would you look please at what is numbered as  
12 Page 14 of the report?

13 A I have it.

14 Q This deals with the comments from the operation  
15 of the emergency operation center; correct?

16 A Yes.

17 Q Now, do you see the second paragraph where it  
18 says that only one key individual, the decontamination  
19 coordinator, was not present?

20 A Yes, I see that.

21 Q How do you define key individual? Is that  
22 the seven supervisory personnel that we referred to  
23 yesterday?

24 A No. The decontamination coordinator is not one  
25 of those seven personnel.

#12-10-SueT

2 Q Do you have an idea, Mr. Daverio, as to how  
3 many individuals in LERO assigned to the EOC would be  
4 classified as key individuals?

5 A I would say that close to everyone except the  
6 administrative staff personnel would be key in the EOC.  
7 Most of them have an important function to provide, though  
8 I don't know if there were others missing at this drill.

9 Q Do you know, Mr. Daverio, how the writer of  
10 this report used the term "key individual?"

11 A Reading it, I would have interpreted it as  
12 I said, that almost everyone at the EOC is a key individual.

13 Q You don't know though what the person who wrote  
14 the report meant by it?

15 A Not specifically, no. I may have asked him,  
16 but I don't remember at this time.

17 Q And I take it, Mr. Daverio, from what you have  
18 said that you do not know how many, if any, other personnel  
19 did not report to the EOC for this exercise?

20 A No, I didn't say that. We keep statistics of  
21 who appears at all our drills. And I may not have the  
22 number in my mind, but we do keep a record of how many  
23 people are there and the percentages.

24 Q Can you --

25 A So we can identify who doesn't show up.

Q Are you in a position to tell me now, Mr.

#12-11-SueT

1 Daverio, how many other personnel did not report to the EOC  
2 for this exercise?

3 A We don't have that information with us right  
4 now.

5 Q If you look, Mr. Daverio, at Page 16 of the  
6 February 8 report, this has to do with the exercise of  
7 the staging areas; correct?

8 A That's correct.

9 Q And the first paragraph says several key people  
10 in the staging area were not drilled in the positions which  
11 they were assigned, gives the example of the lead traffic  
12 guide, doesn't it?

13 A They were there. That's what Mr. Varley talked  
14 about this morning, I believe, about the problem that we  
15 had scheduled some people to this exercise that probably  
16 shouldn't have been at an exercise.

17 Q Can you tell me, Mr. Daverio, for the staging  
18 areas how many of the key personnel for the staging areas  
19 were not present at this exercise?

20 A To the best of my knowledge, they were all at  
21 this exercise. I can give you a generalization that at  
22 our exercises in general we get over ninety percent attendance.  
23 I would say that that -- I can say that with confidence.

24 Q I'm sorry. Mr. Daverio, when I read this I  
25 thought that this was saying that several key people were

#12-12-SueT

2 not present at the exercise for the staging areas. Are  
3 you telling me that doesn't say that?

4 A I don't believe that says that. That says  
5 they were not drilled. I think they were there. That was  
6 the problem Mr. Varley alluded to, that we had some people  
7 there who shouldn't have been at an exercise but needed  
8 more prompting to get it done.

9 Mr. Varley may have some details on that.

10 Q Are you saying that the people were there but  
11 they performed emergency jobs that they weren't assigned  
12 to perform?

13 A I think what occurred here is we upgraded some  
14 personnel and they had not been drilled in that lead  
15 position and, as Mr. Varley stated, we had put them in an  
16 exercise where they shouldn't have been.

17 He has something to add to that.

18 (Witness Varley) I think Mr. Daverio may have  
19 just covered it. In this particular passage, what it is  
20 saying is that several key people in the staging area were  
21 not drilled in the positions to which they were assigned  
22 for this particular exercise. In fact, they were assigned  
23 for this exercise as lead traffic guides. They had, in  
24 fact, been upgraded to fill a position of lead traffic guide  
25 from previously having been traffic guides.

So, in fact, the people were all there. The



#12-13-SueT

1 required positions were filled but in this particular case,  
2 like I talked about this morning, this was their first  
3 experience in the field in that new position.

4 Q And it's your testimony, Mr. Varley, that at  
5 the February 8 exercise, all the personnel, in fact,  
6 reported?

7 A No, that's not what I said. What I said was  
8 for this particular instance, this is not noting that  
9 someone didn't attend.

10 Q Can you tell me, Mr. Daverio, or Mr. Varley,  
11 at this time can you tell me how many personnel in LERO  
12 did not report for the February 8th exercise?

13 MS. MONAGHAN: That has been asked and answered.

14 MR. MILLER: We were talking, Judge Laurenson,  
15 before I believe about the EOC personnel.

16 JUDGE LAURENSEN: Overruled.

17 WITNESS DAVERIO: We don't have that detailed  
18 information. But the ninety percent number I gave you  
19 that I think is higher, but as a conservative number, I  
20 think ninety is a fair estimate, is for all people who  
21 were required to respond.

22 These drills would have about nine hundred people  
23 responding. So, we may get in the mid-eight hundreds to  
24 low eight hundreds out of the nine hundred, I believe.

25 But we don't have that information directly.

#12-14-SueT1

That's from recollection.

2

BY MR. MILLER: (Continuing)

3

Q When someone misses a drill or an exercise,

4

Mr. Daverio, an exercise of that size where you have got

5

as many as nine hundred people supposed to report, what

6

do you do to make up for the fact that they have missed an

7

exercise like that?

8

A We are running another program in June where

9

everyone is again being scheduled, and we would evaluate

10

whether they came to the June exercises. If we see a

11

recurring problem of the same person not appearing, we

12

would take some appropriate action. I think I stated that

13

before.

end #12 14

Joe flws 15

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1           Q       In the interim period, four month period,  
2 between the February exercise and the exercise you are  
3 contemplating in June, is there anything done with respect  
4 to making up for the personnel who did not report to an  
5 exercise or drill?

6           A       No, we ran no drills between those dates. We  
7 ran some table tops, but no drills.

8           Q       Would you look, please, as SC EP-64, Mr.  
9 Daverio, and again in this report for the February 15th  
10 exercise there are instances of persons not showing up,  
11 aren't there?

12          A       It wouldn't surprise me, as I said, but I  
13 would have to read it to see if that is true or not.

14          Q       Would you look at page 9, please. Again, this  
15 -- just for sake of clarification. These reports are broken  
16 down into three areas; the emergency news center, the  
17 emergency operations center, and the staging areas,  
18 correct?

19          A       That's correct.

20          Q       And looking at the section regarding the  
21 emergency operations center on page 9, the first paragraph  
22 says: Two kek individuals, the RECS communicator and the  
23 decontamination coordinator were not present.

24                   Do you see that?

25          A       I see that.

1 I think you have to read the next sentence  
2 to see that both positions were filled adequately, though,  
3 during that drill and handled that well.

4 Q Mr. Daverio, can you tell me if you look back  
5 on page 14 of Exhibit 63, at that February 8th exercise,  
6 it was also the decontamination coordinator who, as a key  
7 individual, was not present at the EOC, correct?

8 A They were two different people.

9 Q Same position, but different people?

10 A Yes, these were two different shifts of people  
11 who were being drilled.

12 Q Can you tell me, Mr. Daverio, or would your  
13 answer be the same as it was for the February 8th exercise,  
14 regarding the number of personnel overall who did not report  
15 to the February 15th exercise. Is that again something  
16 that you do not have the data for now, and it would be  
17 roughly in your opinion approximately ninety percent did  
18 show up?

19 A Ninety is a conservative estimate. I don't  
20 have the data to give you a better number than that.

21 Q And if you look at page 12 of the February 15  
22 exercise, Mr. Daverio, where it says in all three staging  
23 areas only two key individuals did not report for the  
24 exercise. The bus dispatcher at Patchogue, and a transfer  
25 point coordinator from Port Jefferson.



1 Do you see that?

2 A I see that.

3 Q And it says in the next paragraph a number of  
4 bus drivers, traffic guides and route alert drivers also  
5 did not report for the exercise.

6 Do you see that?

7 A I see that. I also see that all staging areas  
8 were fully staffed, so I assume that some appropriate action  
9 was taken in the next paragraph.

10 Q Yes. Do you know what time this exercise was  
11 supposed to begin? It was 9:00 or 9:30, wasn't it?

12 A Yes. They all begin around 9:00.

13 Q And it says staging areas were fully staffed  
14 and activated by around noon, correct?

15 A That is correct.

16 Q Now, when it says that a number of bus drivers,  
17 and traffic guides, and route alert drivers did not report,  
18 do you have any idea what that number is?

19 A No. But that again would fall into the overall  
20 number of percentage that I gave you.

21 Q Mr. Daverio, I have the backup documentation for  
22 these drills and exercises. Would this number surprise  
23 you at all? At the February 8th exercise, there is a  
24 comment here that says: Not all the traffic control points  
25 were able to be manned. The following were manned -- and

1 it has a listing, and it says, right below that: The  
2 following were missing from the exercise, I guess, and  
3 it says the total equals 25 out of 56.

4 Would it surprise you that 25 out of 56 traffic  
5 guides were not available to staff traffic control posts  
6 during the February 8th exercise?

7 A I am not sure, without looking at that comment  
8 that that is what it is, but I don't think that is  
9 correct.

10 Q I will open it to the page I was looking at.

11 A It doesn't say that. It says the traffic control  
12 points weren't being able to be manned. I am not sure that  
13 that can be equated to the personnel that appeared.

14 Q Well, you are saying -- this says not all the  
15 traffic control points were able to be manned, and you are  
16 saying that might not mean that traffic guides didn't show  
17 up?

18 MS. MONAGHAN: Objection. I think what is  
19 happening right now is that Mr. Miller is taking an opportunity  
20 to read into the record those portions of the critiques  
21 which he couldn't get in otherwise in terms of evidence.

22 It seems to me that this has very little probative  
23 value, and this line of questioning shouldn't be permitted  
24 to continue.

25 MR. MILLER: It seems probative to me if there

1 is a possibility that 25 out of 56 traffic guides didn't  
2 report to a particular staging area for an exercise.

3 JUDGE LAURENSEN: Overruled.

4 WITNESS DAVERIO: Could you repeat that question,  
5 because I have lost the train of thought.

6 BY MR. MILLER: (Continuing)

7 Q I am trying to clarify your last comment, Mr.  
8 Daverio. You said --- the statement says, you will agree,  
9 won't you, that not all the traffic control points were  
10 able to be manned.

11 Do you see that?

12 A That is what it says.

13 Q And are you telling me that that statement does  
14 not necessarily mean that there were not traffic guides  
15 available at this staging area to man those traffic control  
16 points?

17 A That is correct.

18 Q Can you give me an explanation as to why you  
19 would not man a traffic control point during an exercise?

20 A The problem I have is twofold; one, I have  
21 one page out of probably more than one for that commentor,  
22 but let me do a little speculation on what might be contained  
23 on the pages before or the pages after.

24 It could be two things; one, the scenario may  
25 have called for those amount to be manned because it wasn't

1 a full ten mile evacuation. I don't know that.

2 And as you brought up yesterday with Mr. Varley,  
3 it could have been they were there, but they were car pooling  
4 two to a car, so that we couldn't man all the posts.

5 I am not sure what that means yet.

6 Q Mr. Daverio, do you see the comment below the  
7 listing of the traffic control points that were manned,  
8 and it says the following were missing -- and it has a  
9 number of traffic control points listed -- and then it has  
10 total equals 25 out of 56.

11 A It says from a message. I am not exactly sure  
12 what the controller would have meant. It could have been  
13 that a message that came from the EOC that was missing  
14 those in his opinion.

15 It doesn't say the position was missing.

16 Q Mr. Varley, can you shed any light on this?

17 A (Witness Varley) No, I can't. I believe what  
18 we are trying to do is make something out of something that  
19 is not enough documentation in front of us to be able  
20 to decipher this.

21 Q Well, I am relying on the written word, Mr.  
22 Varley, what are you relying on?

23 A I am relying on the fact that we have incomplete  
24 data to try and draw the conclusions that you are asking  
25 us. It would be much better if we had the attendant



1 sheets here for that particular staging area to know how  
2 many traffic guides appeared that day.

3 Q I would request, Mr. Varley, that you look at  
4 those attendant sheets and come back and tell us what they  
5 say.

6 A I can't do that now while I am on the stand.  
7 We are going to have to get computer printouts out of our  
8 program to do that.

9 Q Mr. Daverio, I am going to hand you another  
10 page of this same -- sorry, this is from the February 15  
11 exercise, which is the other exercise we have talked about.

12 Do you see in the middle of that page where it  
13 says: 66 of 76 traffic guides; seven of ten road crews;  
14 one of two route spotters; 20 of 22 route alert, have signed  
15 in. The rest are no shows ?

16 A Can I see that?

17 Q Now, would you agree with me, Mr. Daverio,  
18 that in this exercise those personnel as I just stated did  
19 not show up, according to this comment sheet for the  
20 February 15th exercise?

21 A That appears from what is there.

22 Q Now, with the exception of the 20 of 22 route  
23 alert drivers, do any of the rest of those job positions  
24 in LERO come out to the 90 percent attendance rate which  
25 you say is a conservative estimate?

1           A       That was an overall estimate for all facilities.  
2 I didn't say it was for a staging area or any one job.

3           Q       Yes, sir. But none of those come out to 90  
4 percent attendance rate, do they?

5           A       The 7 out of 10 and 1 out of 2 aren't close.  
6 The 66 out of 76 might be close to ninety percent.

7           Q       Mr. Daverio, would you flip in four pages,  
8 please. There is a page where it says Item 4, with the  
9 four circled. Do you see that?

10           MS. MONAGHAN: Mr. Miller, do you have an  
11 additional copy of that that I might look at please.

12           MR. MILLER: I will be glad to hand out copies  
13 to everybody, if you would like. Judge Laurenson, would  
14 the Board like copies of these documents?

15           JUDGE LAURENSEN: I was just wondering whether  
16 we ought to reconsider our decision to allow you to  
17 question on them, because it seems to me now you are getting  
18 to the point where we are doing just what Ms. Monaghan said,  
19 and that is through this questioning, based on these  
20 documents -- in fact, you are putting into the record  
21 evidence that is almost identical to that which we had  
22 excluded this morning.

23           MS. MONAGHAN: In fact, Judge Laurenson, it is  
24 identical, because the document that the paralegal for  
25 Mr. Miller just handed me was the exact same exhibit that

1 the Board excluded this morning.

2 MR. MILLER: Judge Laurenson, I need a clear  
3 clarification then from the Board.

4 We had a discovery dispute with LILCO, and on  
5 June 1, the Board ruled that the documents requested by the  
6 County were indeed required to be produced by LILCO, and  
7 the County could use these documents only if they could  
8 show a pattern of some sort in -- with respect to training  
9 deficiencies in the County's view.

10 Now, I believe that the Board is beginning to  
11 say to the County: We gave you the documents, but you  
12 can't use them.

13 I have asked these witnesses limited questions.  
14 I have tried to keep my questions to the summary reports  
15 which have been admitted into the evidence. I have been  
16 unable to get certain answers from Mr. Daverio. I think  
17 with the use of these documents we are clarifying the  
18 record. We are putting particulars on the record as to  
19 personnel not showing up, and I am using the documents in  
20 a very limited extent, and I think clearly the County  
21 is permitted to do that.

22 I am not going through these pages one by one.

23 MS. MONAGHAN: I don't think that we are  
24 clarifying the record at all. I think the witnesses have  
25 testified that they are not in a position to make any

1 judgments based on the documents that are being shown to  
2 them by Mr. Miller.

3 They would have to know the totality of the  
4 circumstances in order to be able to assess whether the  
5 point that Mr. Miller is making was, in fact, true.

6 MR. MILLER: What totality of the circumstances  
7 do you need to know when the written page gives you a list  
8 of people who did not show up, and the rest are no shows.  
9 The documents speak for themselves in that regard.

10 There is no reason for us to dispute that.  
11 There is no reason these witnesses have to dispute that,  
12 and I am trying to state on the record the extent of  
13 personnel who do not show up for the drills and exercises.

14 I think the extent of that indicates that it  
15 could well be in excess of the ninety percent figure used  
16 by Mr. Daverio.

17 MS. MONAGHAN: Mr. Miller, looking at the documents  
18 that you are -- it is a little bit unclear to me exactly  
19 which ones you were looking at before -- but taking the  
20 second page, which I think was what you read, you are  
21 looking at time lines here, which were done by the drill  
22 controllers and observers over a period of time, and  
23 different events happened at different periods of time.

24 So the fact that there were so many traffic  
25 guides at a particular point in time does not necessarily



1 indicate that that is all the traffic guides that there  
2 were.

3 MR. MILLER: I think that you are grossly  
4 speculating now, Ms. Monaghan.

5 JUDGE LAURENSEN: Okay. We will consider  
6 this matter and be right back with you.

7 (Board retires to chambers.)

8 MR. ZAHNLEUTER: I have a point of clarification.  
9 While Mr. Miller was cross examining the witnesses, I  
10 thought he was cross examining about Suffolk County EP-65,  
11 and apparently Ms. Monaghan thought that, too.

12 While you were deliberating, I obtained from  
13 Mr. Cook, who is the County's legal assistant, the actual  
14 pages that Mr. Miller was using, and contrary to my  
15 understanding, and contrary to Ms. Monaghan's statement,  
16 they are, indeed, different than Suffolk County EP-65,  
17 and I just wanted to make that clarification so that we  
18 all are aware of it.

19 JUDGE SHON: Pardon me, Mr. Zahnleuter. They  
20 are different from Suffolk County EP-65, but they are  
21 simply other sheets from the same general collection,  
22 are they not?

23 MR. ZAHNLEUTER: Well, I am not the sponsor  
24 of this but, yes, it appears that you are correct.

25 JUDGE SHON: That is what we thought, that is  
what the Board thought.

1 JUDGE LAURENSEN: Well, we have considered  
2 again the question of these documents and the use to which  
3 they can properly be put in this case, and it is our  
4 conclusion that in order to yield admissible evidence  
5 here, at a minimum, it would take a summary analysis of  
6 the data and documents that we previously ordered LILCO  
7 to produce, and the attempted use of the raw data in the  
8 nature of small sub-sections is not persuasive, and  
9 merely adds bulk to the record which the NRC regulations  
10 prohibit.

11 We find that the use of these evaluation forms  
12 to cross examine the LILCO witnesses about the small sub-  
13 sections of LERO workers participating in a drill or  
14 exercise shall not be allowed.

15 The objection is sustained.

16 MR. MILLER: Judge Laurenson, let me make sure  
17 I understand your ruling.

18 End 13

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1           Are you saying that the county is henceforth  
2 precluded from using the documents produced by LILCO,  
3 pursuant to the Board's order of June 1, in any way  
4 throughout the course of these hearings, during my  
5 cross-examination of the training issues?

6           JUDGE LAURENSEN: It is hard to imagine every  
7 possible use of the documents. I am not sure that I can  
8 answer your question. But I think that what we have said  
9 is that the two attempts that you have used so far have  
10 not been successful and that without some sort of  
11 determination that, in fact, we are getting a fair  
12 representation of what is in these documents, the isolated  
13 selection of a few pages out of the large stack that has  
14 been described several different ways to us we feel  
15 presents a biased record that is of no value to us in  
16 our job of finding the facts and writing a decision on this  
17 case.

18           That is the problem that we identify.

19           MR. MILLER: I would like to make sure, again,  
20 that the Board understands exactly what these documents are.  
21 We were given documents by LILCO which relate to four  
22 different drill or exercises -- November, January 28, 1984,  
23 February 8, and February 15, 1984. I represent to the  
24 Board that the great, great, great majority of the  
25 documents related to two of those four exercises, the

1 two in February. The November information was piecemeal;  
2 the January information was very limited, in addition,  
3 there were a number of blank pages.

4 The February information was the substantial  
5 part of the information presented.

6 Now, taking that into account, there is only  
7 one EOC which is activated either during an emergency or  
8 during a drill or an exercise. There are only three staging  
9 areas which are activated, either during an emergency  
10 or during a drill or during an exercise. These documents  
11 that I was talking to Mr. Daverio about relate to the  
12 staging areas and the EOC in the two exercises for which  
13 the county was given information.

14 Now, if that is not probative and relevant  
15 to the issues before this Board, I don't understand what  
16 could be.

17 JUDGE LAURENSEN: The testimony that I had in  
18 mind was the -- I think the general statement made by  
19 Mr. Daverio that something like 90 percent of the LERO  
20 people showed up for the drill. And then you attempted to  
21 challenge him on that by showing that, I guess, in one  
22 area 25 of 56 traffic posts were not manned or something like  
23 that.

24 We find that evidence is exactly what we are  
25 talking about that is not probative of anything, that if you



1 want to challenge the testimony concerning the number of  
2 people who showed up, you can't do it by going through  
3 piece by piece in 50 different sections to do this,  
4 unless you have analyzed the total number to show that,  
5 in fact, he is wrong and that maybe only 40 percent of the  
6 people showed up. That is the kind of evidence that we would  
7 be interested in hearing.

8 But not to go through each traffic guide,  
9 each route alert driver in all three different staging areas.  
10 This is just not a productive use of the record and,  
11 frankly, everyone's time is too valuable to take it up on  
12 this sort of minutiae.

13 MR. MILLER: Judge Laureson, we can only work  
14 with the documents we have. We are working with the  
15 documents that were produced by LILCO. We are working with  
16 what we have. If it would help the Board, we will produce  
17 for the Board the entire stack -- we will take out the  
18 blank pages, if you would like -- so the Board can see for  
19 itself what we are talking about here.

20 JUDGE LAURENSEN: We are telling you that was  
21 your responsibility to do that analysis and that that is  
22 what the county's job is; not to present a stack eight  
23 inches high, but to present an analysis, if that is what  
24 you are trying to show, what those documents establish.

25 MR. MILLER: I think the county did its job and

1 did an analysis and we have broken down the paper presented  
2 by LILCO into succinct, sufficient areas which address  
3 specifically the LILCO testimony. In this case, personnel  
4 not showing up for the drills and exercises, which  
5 contradicts LILCO testimony which says, "Participants are  
6 exposed to their training in the drills and the exercises."

7 They are obviously not exposed if they don't  
8 show up.

9 Now, we have done an analysis and we are trying  
10 to present that to the Board through cross-examination,  
11 which is sometimes difficult. I don't think we in good  
12 faith could be expected to do any other kind of analysis  
13 than we have tried to do here.

14 JUDGE LAURENSEN: You haven't convinced us you  
15 have an analysis. You have done a selection. You have  
16 gone through apparently and picked out various pieces of  
17 paper in this stack, and that is not an analysis by our  
18 definition. That is a selection process, and this is  
19 what we are concerned about, of putting this kind of  
20 information into the record which will indeed present a  
21 biased result that would be of little -- would be of  
22 no value to us, rather, in our decision making process.

23 MR. MILLER: Judge Laurenson, I just don't  
24 understand how during cross-examination you can conduct  
25 the kind of statistical analysis which the Board seems to

1 want the county to do. This is cross-examination.

2 If it was our witness panel up there on direct,  
3 perhaps that would be possible. This is paper provided to  
4 us by LILCO, and these are LILCO's witnesses. And during  
5 the course of cross-examination, I think we are doing the  
6 best we can do with material we have to work with. And  
7 it is probative and it is relevant.

8 (Pause.)

9 Judge Laurenson, I think under the circumstances,  
10 in light of the Board's rulings and what the Board has  
11 said, the county would like to make an offer of proof.  
12 I think it can be done rather briefly, but I think it is  
13 necessary for the sake of the record.

14 The offer of proof would be pursuant to  
15 Section 2.743(e).

16 If the county would have been permitted to  
17 have gone through and questioned the LILCO witnesses  
18 regarding personnel, LERO personnel not showing up for  
19 drills or exercises, it is the county's position that the  
20 county would have demonstrated a systematic failure of  
21 LERO personnel to participate in drills and exercises.

22 We would have demonstrated this specifically  
23 by looking at various comments provided by LILCO and/or  
24 IMPELL controllers and observers of the drills and  
25 exercises.

1           In particular, we would have demonstrated for  
2 the two exercises in February of 1984, for which  
3 documentation has been retained and provided to the county,  
4 that at the EOC, at the staging areas, the two main  
5 areas of concern expressed in the documentation regarding  
6 these exercises, personnel did not report for the exercises.

7           We would have shown in particular the issues that  
8 we have already discussed with Mr. Daverio, which are  
9 on the record. We would have shown further, if permitted  
10 by the Board, that a comment sheet provided in the LILCO  
11 documentation showed eight other traffic guides failed to  
12 show up, two were extremely late, two went home sick,  
13 three had medical problems, one route spotter and one  
14 route alert driver were all no shows for another aspect  
15 of the February exercise.

16           We would have demonstrated that in addition to the  
17 traffic guides we have talked about and the route alert  
18 drivers and so forth, that a number of bus drivers failed  
19 to show up for the drill. In particular, one comment  
20 sheet shows -- says the following, "The following did  
21 not show up: bus drivers, eight; route alert drivers, two;  
22 traffic guides, three."

23           We would have shown, Judge Laurenson, if we would  
24 have been permitted, that on another comment sheet there  
25 is the following statement: "The staging area also did not



1 have enough route spotters; only one showed up."

2 I think that these are illustrative of the  
3 point that we want to make. I can state for the record  
4 they go across the February 8 and February 15 exercises,  
5 and they show systematically, again, that personnel have not  
6 reported for these drills and exercises.

7 BY MR. MILLER:

8 Q Mr. Daverio, looking again at page 55 of the  
9 testimony, would you agree with me, Mr. Daverio, that  
10 during the course of drills and exercises conducted by  
11 LILCO there have been problems in the sufficiency of  
12 staffing for certain LERO positions indicated in those  
13 drills and exercises?

14 MS. MONAGHAN: Objection. The question is  
15 vague and ambiguous with respect to the word "sufficiency."

16 BY MR. MILLER:

17 Q Well, what I am asking, Mr. Daverio, has LILCO  
18 learned from its drills and exercises that -- from IMPELL --  
19 that drill participants, drill observers, drill controllers  
20 believe some LERO emergency positions are inadequately  
21 staffed?

22 A (Witness Daverio) I know of some examples of  
23 that, yes.

24 Q What examples come to mind, Mr. Daverio?

25 A The first one I can think of is, I know we have

1 increased the number of lead traffic guides in the staging  
2 area from the early drills to the later drills. We have  
3 also increased, based on comments, included a staging  
4 area, administrative staff to help with the communications.

5 We have, I think, made a modification to the  
6 dosimetry record keeper numbers, number of people. The  
7 transfer point coordinators have changed over the time  
8 based on comments.

9 There are other comments. I am not sure we  
10 have acted on all of them. Some are still being considered,  
11 but those are examples that I can think of.

12 Someone else on the panel may have more.

13 Q Are there examples, Mr. Daverio, would they  
14 include comments that the number of decontamination and  
15 monitoring personnel should be increased?

16 A Yes, that was there and that is one we are still  
17 considering. We haven't made a final decision.

18 Q What about comments that the number of security  
19 personnel should be increased?

20 A That, I believe, we are going to do, but I  
21 don't know if the assignments have been made yet. We have  
22 looked at that one, yes.

23 Q What about comments that there should be two  
24 bus drivers assigned to every bus, one to drive the bus,  
25 one to read the maps? Have you heard that comment before?

1 A Yes, I have.

2 Q Is LILCO going to adopt that comment?

3 A Not at this time.

4 Q What about comments in the same regard with  
5 respect to the route alert drivers? Have you heard that  
6 comment before?

7 A Yes. I am familiar with that one. I don't think  
8 we have made a decision to do that one either.

9 Q What about the comment that every traffic control  
10 post should be staffed by at least two traffic guides;  
11 have you heard that one before?

12 MS. MONAGHAN: Objection. I think we are  
13 going back over the same type of nonprobative evidence  
14 that the Board just admonished us against doing in terms  
15 of the specific comments by specific controllers.

16 I think as Mr. Daverio has testified, yes,  
17 some of those comments have come up. But I don't see  
18 that a litany of comments about what positions might be  
19 more fully staffed is really probative of the evidence here.

20 MR. MILLER: Judge Laurenson, I haven't looked  
21 at a single piece of paper. This goes to the adequacy  
22 of the staffing of LERO. I am not sure what could be more  
23 probative.

24 JUDGE LAURENSEN: The objection is overruled.

25 WITNESS DAVERIO: I forget which --

1 BY MR. MILLER:

2 Q The last question, Mr. Daverio, was, have  
3 you heard comments that every traffic control post should  
4 be staffed by at least two traffic guides?

5 A I have heard that comment. Some of them have two,  
6 and that is our intention right now is to leave that alone.

7 Q Your intention now is to maintain staffing for  
8 some traffic control posts at one traffic guide?

9 A As testified to Mr. -- under transportation,  
10 that is intended to be left alone.

11 Q Do any examples, Mr. Daverio, come to mind  
12 as to where you have received comments regarding inadequate  
13 staffing of LERO positions?

14 A One other one that just popped into mind while  
15 you were talking is, there is a comment that is still  
16 under consideration concerning two RAD health coordinators  
17 or an assistant RAD health coordinator to help with that  
18 effort.

19 Like I said, other panel members may be familiar  
20 with other ones, but those I am aware of.

21 Q Mr. Daverio, looking at answer 34 on page 55,  
22 it says about halfway down, "In addition to conducting the  
23 classroom training during the year, drills and exercises  
24 are scheduled on a quarterly basis as well."

25 Do you see that?



1 A Yes, I do.

2 Q Mr. Daverio, do all LERO members participate  
3 in drills and/or exercises every quarter?

4 A Could you restate that? I am not sure I got  
5 the question.

6 Q I am trying to understand, is it your testimony  
7 that all LERO personnel participate in drills and/or  
8 exercises on a quarterly basis?

9 A One third of LERO would participate on a  
10 quarterly basis.

11 Q Now, for the typical LERO person, how many  
12 drills or exercises would that person participate in during  
13 the course of a year?

14 A It is in the plan, in figure 521. It defines  
15 what drills we run or exercises quarterly and who  
16 participates. I haven't done the mathematical  
17 addition of what that means.

18 Q And in the plan, Mr. Daverio, where it says,  
19 for example, that traffic guides will participate in  
20 such and such an exercise, does that mean all traffic  
21 guides?

22 A All traffic guides at least once a year would  
23 participate in each one that there is a dot next to.

24 Q So with respect to what is said in the plan,  
25 when you look at that matrix, that means that for a

1 particular emergency position, people assigned to that  
2 position will participate in those drills and exercises  
3 at least once during the course of the year; is that  
4 right?

5 A I guess the only one I have a problem with is  
6 number 9 which is the annual exercise. Of course, only  
7 one team or one shift would be in the annual exercise,  
8 but as to the other positions, each of these dots would be  
9 at least once a year. They would have to participate in  
10 that type of drill which we schedule every quarter.

11 Q Mr. Daverio, what you just stated about the  
12 annual exercise, are you saying that for the FEMA graded  
13 annual exercise, only one third of LERO participates in  
14 that exercise?

15 A One shift of LERO which is one third of the  
16 personnel, unless the scenario calls for a shift change.  
17 It is actually a little bit more than a third.

18 Q Does LILCO intend, Mr. Daverio, if and when  
19 FEMA graded exercises take place, that on an annual basis  
20 you would rotate the personnel involved so as to insure all  
21 LERO personnel would at some time participate in such an  
22 exercise?

23 A I think that is the intent in 0654 that over a  
24 five-year period, you try to exercise the complete thing,  
25 the complete emergency plan. Though in any one year you

1 might not. So I think that would be our intent.

2 Q And under your present intent, Mr. Daverio,  
3 it could be as much as three years before some individuals  
4 of LERO participate in the FEMA graded annual exercise;  
5 is that correct?

6 A That is correct.

7 Q Now, if you would look at the last paragraph  
8 of answer 34, it talks about attendance at classroom  
9 training and participation in drills and exercises.

10 Let me ask you this, Mr. Berger, do you  
11 believe that this attendance in the classroom training  
12 and the participation in drills and exercises is  
13 necessary in part within LERO because adults tend to forget  
14 material rather quickly?

15 A (Witness Berger) No, that is not my belief.

16 Q Do you believe that adults do not tend to forget  
17 material rather quickly?

18 A I believe adults do retain information presented  
19 to them in an instructional manner.

20 Q Retain for how long?

21 A Depends on how it is presented.

22 Q Could you tell me, Mr. Berger, briefly, what  
23 factors affect the retention of information by adults?

24 A In an educational setting?

25 Q Well, in a training setting.

1           A     Generally it is my belief that research indicates  
2 where an adult is allowed to participate in some hands-on  
3 experience to become involved in the educational process  
4 that retention does increase.

5                     That is one factor.

6                     Another factor is the amount of senses that are  
7 involved in the learning process. For example, if an  
8 individual only hears something, the learning retention  
9 is not as long as if someone hears as well as seeing  
10 something.

END 14

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#15-1-SueT 1

Q Is there anything else?

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A (Witness Berger) Well, also obviously practice of the skill would increase retention. I consider that hands-on.

4

5

Q You lump practice of the skill in with the hands-on experience?

6

7

A No. I don't lump it in. I say it's another -- that would be another factor. If I'm allowed to --

8

9

Q Now, Mr. Berger --

10

A I would like to finish my answer, please, Mr. Miller.

11

12

Q I'm sorry.

13

A I would increase the learning by actually practicing the skill, as an example, rather than participating in a discussion in the class, a case study in the class.

16

17

There are probably several others. But those are the ones that come to mind at this time.

18

19

Q Would you say, Mr. Berger, that of those three general factors you listed that the practice of the skill would be most important of the three?

21

22

I'm talking in the context of LERO.

23

A I think that practice of the skill is an important factor. It's not the only factor.

24

25

If the individual has not had an opportunity to

#15-2-SueT

1 understand, if you will, or to see the skill, practice  
2 would obviously provide no benefit.

3 Q Now, Mr. Berger, again with respect to LERO  
4 practice of the skill would be accomplished, would it not,  
5 through the drills and exercises if everything works  
6 according to the way LILCO hopes it is going to work?

7 A I would include two other aspects. There are,  
8 in some of the modules I believe, Mr. Miller, an opportu-  
9 nity for individuals to manipulate, handle, practice, if  
10 you will, the equipment during the class portion. I  
11 believe that's at least my last understanding in the  
12 dosimetry modules, they handle the dosimeters.

13 The other aspect I believe would be tabletops.

14 Q Now the tabletops, Mr. Berger, under the LILCO  
15 training program, although they are called tabletop drills,  
16 wouldn't it really be more accurate to say they are tabletop  
17 discussions?

18 A Mr. Miller, I haven't attended a tabletop and  
19 have not personally observed that. I would like to defer  
20 that question to Mr. Varley.

21 Q Mr. Varley, the tabletops generally consist of  
22 participants in LERO with an instructor sitting around a  
23 table and discussing procedures in LERO, things of that  
24 sort; is that a fair summary?

25 A (Witness Varley) It depends upon the particular

#15-3-SueT 1

2 concept being addressed by the tabletop. By and large  
3 what occurs at a tabletop is that there is a scenario  
4 developed prior to conducting the tabletop and a group of  
5 individuals who have related job functions within LERO  
6 are brought into the tabletop session, and the instructor  
7 walks the individuals through that particular accident  
8 situation with the individuals and their procedures in front  
9 of them, indicating their appropriate responses to the  
10 accident as is presented by the instructor.

11 And there is then discussion within the group  
12 about a particular step if there is a philosophy behind  
13 it or how the group is going to interrelate among themselves  
14 to accomplish a particular step. So that they gain some  
15 proficiency amongst themselves in working through the inter-  
16 related procedures.

17 Q Now, Mr. Berger, keeping in mind Mr. Varley's  
18 explanation, do you believe that the tabletops are, or  
19 constitute, practice of the skill?

20 A (Witness Berger) Well, I think they do to the  
21 extent that it is a walk-through, if you will, of the  
22 procedure. And my understanding is that the procedure  
23 replicates the action that the individual is supposed to  
24 take out in the field.

25 What we are essentially trying to do here, Mr.  
Miller, is a building block concept of first exposing the

#15-4-SueT1

2 individual to the skill, giving him an opportunity in a  
3 limited fashion to practice the skill through the table-  
4 tops and continuing to advance the complexity of that  
through the drills and then into the exercises.

5 Q Dr. Mileti, on Page 56 you make some statements  
6 about stress and trauma.

7 Would you answer this question yes or no,  
8 please?

9 (Laughter.)

10 A (Witness Mileti) It was them; it wasn't me.

11 (Laughter.)

12 Q In the middle of the page, Dr. Mileti, you state  
13 that stress and trauma do not, in community-wide emergencies,  
14 emerge to interfere with the ability of people to do things.

15 Now, are you equating community-wide emergencies  
16 in general with radiological emergencies?

17 A The kind of --

18 Q Yes or no, please.

19 A Sorry. Yes.

20 Q Now, Dr. Mileti, on Page 56 you seem to be saying  
21 that stress will motivate people during an emergency; is  
22 that correct?

23 A I imagine you could have that interpretation.  
24 I don't know that that's exactly what I meant.

25 Q Well, let me just try to clarify it this way. On



#15-5-SueT

1 Page 47 of the testimony, you made a statement where you  
2 said that -- it's about middle of the page -- stress may  
3 motivate people to rise to the occasion.

4 Now, is your testimony on Page 56 any different  
5 from your testimony on Page 47?

6 A I think I have the same thoughts behind every-  
7 thing that I wrote.

8 Q So it's your testimony that stress may motivate  
9 people during an emergency; is that correct?

10 A I think it's good to have some stress in an  
11 emergency, yes.

12 Q And that stress may motivate people, correct?

13 A Yes.

14 Q Dr. Miletì, at the bottom of 56 and continuing to  
15 57, you mention again DSM-3. Can you tell me, yes or no,  
16 please, does the DSM-3 specifically address stress during  
17 a radiological emergency?

18 A I think that --

19 Q Yes or no, Dr. Miletì, please. Can you answer  
20 it that way?

21 A Yes.

22 Q Your testimony is that the DSM-3 does specifi-  
23 cally address stress during a radiological emergency?

24 A Without being able to explain it, it's the only  
25 fair answer I can give.

#15-6-SueT1

Q Why don't you explain it?

2 A Because I think the DSM-3 is trying to give  
3 those who might read it an understanding of how it is  
4 and when it is that people might come to have a post-  
5 traumatic stress disorder. And they catalogue examples of  
6 the sorts of events in which a post-traumatic stress  
7 disorder might or could occur.

8 And in that sense, I think one should not say  
9 because they did or didn't pick a particular example from  
10 all those that might characterize life on earth that their  
11 explanation is or isn't applicable to the ones they did or  
12 didn't use.

13 Q Dr. Mileti, would you say that post-traumatic  
14 stress disorder, as discussed in DSM-3, is a disease?

15 A I don't know if I would want to call it a  
16 disease, but it is a response to having experienced a  
17 traumatic event that some people manifest.

18 I don't know to what extent it might be con-  
19 sidered a disease or not.

20 Q Do you believe, Dr. Mileti, that all stress is  
21 post-traumatic?

22 A No.

23 Q Let's go on to Contention 41 which begins on  
24 Page 57. Mr. Renz, you have been very patient.

25 A (Witness Renz) Thank you, Mr. Miller.

#15-7-SueT

1 Q On Page 58, Mr. Renz, there is discussion about  
2 the two-way radios used in LERO; is that right?

3 A That's correct.

4 Q Could you tell me, Mr. Renz, the percentage of  
5 LERO workers who use two-way radios on a frequent basis?  
6 In LILCO, I'm sorry. A frequent basis within LILCO.

7 A I don't think I could give you a percentage off  
8 the top of my head, position by position. I could explain  
9 who does, in general terms.

10 Q Well, Mr. Renz, would you agree with me that  
11 the use of radios under normal work conditions, on a day-to-  
12 day basis, is not the same as the use of radios during an  
13 emergency?

14 A I suppose that would have to depend on what  
15 your daily use of the radio would involve.

16 Q Well, during an emergency, Mr. Renz, there may  
17 be more radio traffic, for example, than you would have on  
18 a daily, day-to-day work basis; wouldn't that be correct?

19 A That would depend on the specific situation. If  
20 you can give me an example, I will try to respond.

21 Q Well, someone who works in LERO as, say, a  
22 traffic guide, traffic guides use radios in LERO, right?

23 A That's correct.

24 Q Now, can you tell me someone who is assigned  
25 as a traffic guide in LERO who, as a LILCO employee, would

#15-8-SueT

1 use a radio on a day-to-day basis? It can be anybody?

2 A Would you give me a minute to refer to OPIP 2.1.1  
3 which gives a listing of those individuals within LILCO  
4 that fulfill LERO positions?

5 (Witness going through document.)

6 On Page 31 of OPIP 2.1.1, LILCO working under-  
7 ground foreman would be one example.

8 Q Excuse me, Mr. Renz. That's an underground  
9 foreman, you said?

10 A Yes. Serves as a traffic guide. Utility worker  
11 underground, Utility Clerk-B, underground L, Clerk-B.

12 There are a few traffic guides that do utilize  
13 radios on a frequent basis in their day-to-day jobs.

14 Q Now, Mr. Renz, during an emergency at Shoreham  
15 when a traffic guide is at his traffic control post, would  
16 you think that there would be more radio traffic -- I'm  
17 sorry, let's talk about the scenario of a ten mile evacua-  
18 tion, would you think there would be more radio traffic  
19 during the course of that evacuation than the individuals  
20 you have just mentioned would experience typically in  
21 their day-to-day jobs with LILCO?

22 MS. MONAGHAN: Objection. I think we went into  
23 this extensively in the communications area of the testimony  
24 with respect to the number of radio communications that  
25 could be expected by traffic guides while at their traffic



#15-9-SueT 1

control posts. It seems to me this is repetitive and cumulative testimony.

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JUDGE LAURENSEN: I think there is some overlap, but there is really an overlap in the contentions and I guess we have to develop a record on Contention 41.

The objection is overruled.

WITNESS RENZ: I don't know that I can make that comparison. Some sample testimony given and in the communications testimony provided, some time ago by now, addressed the opinion that the bulk of traffic guide communications would be prior to the setup and after the dismantlement of a given traffic guide location.

Underground lines, personnel or other utility clerks that work in operating departments that use or utilize radios on a daily basis might have a considerably larger use, depending on the day, depending on the set of circumstances that day.

I don't think I can draw that comparison.

BY MR. MILLER: (Continuing)

Q You would agree with me, wouldn't you, Mr. Renz, that some LERO personnel expected to man a radio, two-way radio, are certainly more inexperienced with respect to use of mobile radios than other LERO personnel?

A I would agree to that statement.

Q And I think, Mr. Renz, you will recall that we

#15-10-SueT 1

2 have discussed this before, one person assigned to LILCO's  
3 single radio, single-channel radios, can shut down the  
4 channel; isn't that correct?

5 MS. MONAGHAN: Objection. This has been covered  
6 in the communications area.

7 JUDGE LAURENSEN: This is also the subject of  
8 the testimony I think on these pages. The objection is  
9 overruled.

10 WITNESS RENZ: As I believe was covered in  
11 testimony given on communications, and as is specifically  
12 addressed in one of the training modules, there is a time-  
13 out feature on the mobile radios that we utilize in the  
14 field that after sixty seconds that timer will discontinue  
15 the transmission of that radio.

16 That's my response.

17 BY MR. MILLER: (Continuing)

18 Q But, Mr. Renz, we've discussed, haven't we,  
19 that even with that time-out feature under certain condi-  
20 tions that feature would not prevent one person tying  
21 up an entire channel of LILCO's single-channel radios;  
22 isn't that correct?

23 MS. MONAGHAN: Same objection.

24 JUDGE LAURENSEN: I know you have asked these  
25 questions before, and I know Mr. Renz has answered them  
all.

#15-11-SueT 1

2 MR. MILLER: Judge Laurenson, I'm trying to do  
3 this just for background purposes. I am beginning the  
4 communications section of the training testimony. I don't  
5 intend to go back through a long line of questions on  
6 communications, but I think to set the tone of my questions  
7 I need to establish a little background.

8 JUDGE LAURENSEN: Overruled.

9 WITNESS RENZ: Not in excess of one minute.

10 BY MR. MILLER: (Continuing)

11 Q Let me make sure I understand. You are saying  
12 that with that time-out feature, under no conditions can  
13 a radio channel be tied up by one user for more than one  
14 minute?

15 A If the user gets on and off that channel fre-  
16 quently, he can tie up that channel for as long as he wishes  
17 if it's intentional. But I have no reason to believe that  
18 that would be the case.

19 Q Now, Mr. Renz, during the drills and exercises  
20 that have been conducted to date the personnel like traffic  
21 guides have been provided some opportunity to use mobile  
22 radios; is that right?

23 A That's correct.

24 Q Now, is it fair to say, Mr. Renz, that the use  
25 of these radios has, for the most part, consisted of calling  
in and reporting arrival at a traffic control post by the

#15-12-SueT 1

traffic guides?

2           A     For the most part, communications has been in  
3 a number of areas as the drill progresses. In other words,  
4 when the radio is installed, there is communication to  
5 check, when he is ready to be dispatched there may be  
6 communications. When he has arrived at his point, those  
7 types of communications are the bulk of communications  
8 during the drills. Yes.

9           Q     And focusing on traffic guides, you are saying  
10 that the traffic guide may use his radio at the time the  
11 radio is installed; correct?

12          A     That's correct.

13          Q     At the time he leaves the staging area, you  
14 said?

15          A     Yeah, that should be the same communication but  
16 it may or may not be.

17          Q     Okay. But that could be one communication.  
18 And then the second communication would be when the traffic  
19 guide gets to his traffic control point and transmits to  
20 the staging area, saying that he is at his post; is that  
21 right?

22          A     As I recall the procedure, that's correct.

23          Q     With respect again to traffic guides, Mr. Renz,  
24 typically do they broadcast any other transmissions other  
25 than the two that we have just discussed?



#15-13-SueT 1

2           A        During the drills or the exercises? Beyond  
3 the subscenario situations that have been previously  
4 addressed by other members of the panel, that is the bulk  
5 of their communications. They might radio back in to  
6 receive further instructions for some reason or other  
7 in addition to that.

8           Q        Now, Mr. Renz, if -- let me ask you this. During  
9 the course of the communications training, is there any  
10 training provided to LERO personnel with respect to what  
11 they should do if a radio malfunctions?

12           A        I don't believe that's covered in the class-  
13 room portion of the training program. I believe that's  
14 covered in the drills and exercise portion.

15           Q        You are saying there is a subsituation for  
16 traffic guides, for example, a radio malfunctioning?

17           A        Well, I'm saying, as I recall, the comment  
18 sheets that we went over in the communications testimony,  
19 in virtually every case that I can recall, if there was a  
20 failure of a radio there was some action taken to get a  
21 spare radio to replace that one.

22           Q        Oh. Okay. I understand what you are saying.  
23 The -- what you are saying is that during the drill or  
24 an exercise, if a radio malfunctions the traffic guide  
25 or whomever it is using the radio would either go to the  
staging area and get another radio or somehow be provided

#15-14-SueT 1

with a second working radio?

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A I'm saying that's one option.

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1           Q       My question, I didn't make it clear, is there  
2 any training for LERO personnel who use radios with respect  
3 to what they should do during an emergency if a radio  
4 malfunctions.

5           A       I don't know if that specific point is addressed.  
6 However, individuals within LERO who use radios are trained  
7 on other modes of communication that are available in a  
8 LERO response.

9                   As I recall, in a couple of cases where there  
10 have been radio problems that have developed in the field,  
11 that individual might have gone to another location where  
12 he knew a radio existed, whether it was the same positional  
13 area or a different position within LERO.

14                   I know that these problems have been resolved  
15 in that fashion in a number of cases.

16           Q       Mr. Varley, do you recall any sub-situations  
17 in the course of drills or exercises where there has been  
18 a scenario given to LERO personnel regarding their radios  
19 malfunctioning, and what they should do in that event?

20           A       (Witness Varley) What I recall are some  
21 instances where radio failures have been identified and  
22 corrective actions have been taken within the course  
23 of the drill, such as -- I believe transfer point coordinator  
24 on maybe one or two occasions, who has the same type of  
25 radio as the traffic guide. I believe that particular

1 radio malfunctioned after he got it to the transfer point,  
2 and there were compensating measures taken so that he could  
3 continue to communicate over another radio system.

4 We have not, to date, written into our  
5 scenarios specific examples of where we tell a traffic  
6 guide when he gets to his post: Now your radio has failed,  
7 take some action.

8 MR. MILLER: Judge Laurenson, maybe this would  
9 be a good place for the mid first break.

10 JUDGE LAURENSEN: All right, we will take  
11 a ten minute recess.

12 (Short recess taken)

13 JUDGE LAURENSEN: Mr. Miller?

14 BY MR. MILLER: (Continuing)

15 Q Mr. Renz, could you look at page 61, please,  
16 of the testimony?

17 A (Witness Renz) That would be fine, but could  
18 I amend an earlier response to a certain degree.

19 I stated before the Break that in the classroom  
20 training there was no instruction, to my knowledge, that  
21 if a radio should fail that there were alternate actions  
22 to be taken. I had the opportunity during the break to  
23 look through the workbooks, and in a number of areas in  
24 both Module 12 and 14, traffic guidance and transportation,  
25 respectively, is the following statement: Pick up mobile



1 radios and check --

2 Q Mr. Renz, excuse me. Could you just give me  
3 the page.

4 A Certainly. Module 12, page 26 of 37. It is  
5 a document entitled, Traffic Guide Procedure.

6 Q Okay. Will you make your statement.

7 A I was just going to point out that Item No. 5  
8 on that gave the participant instructions on what to do  
9 in case the radio should fail.

10 Q Mr. Renz, now that statement says, and we are  
11 looking at Attachment 5, which is -- looking at Attachment  
12 20, which is Volume 5 of 5, and Module 12, where it says,  
13 to the traffic guides: Pick up mobile radios and check  
14 operation of units. If radios should break down, use a  
15 commercial telephone or proceed to another radio equipped  
16 location,

17 Is that what you are referring to?

18 A Yes, that is what I am referring to.

19 Q Well, let me ask you about that, Mr. Renz. If  
20 you have a traffic guide at his post at an intersection,  
21 and his radio breaks down, the instructions given to him  
22 or to use a commercial telephone or to proceed to another  
23 location?

24 A If, in fact, he has to make a communication.

25 Q So, he leaves his post?

1 A It depends on the circumstances, I believe.

2 Q But it says here that he would leave his post  
3 because he would have to go to a commercial telephone, or  
4 he would have to proceed to another radio equipped location.

5 Isn't that what it says?

6 A It says that prior to him arriving at his  
7 post. All that statement says to me is if you find your  
8 radio fails, either get another radio, and then it provides  
9 other alternate forms of communication should another  
10 radio not be available.

11 A (Witness Daverio) Mr. Miller, I would like to  
12 add to that answer. If you remember, and I think Mr. Renz  
13 alluded to it earlier, the only time we expect the traffic  
14 guide to leave directing or guiding traffic and go to make  
15 a radio communication would be if there was a major problem  
16 and he wanted to get that information back to the staging  
17 area.

18 So, if he did go there and his radio didn't work,  
19 and it was something he felt significant, yeah, he would  
20 go find a commercial phone, or go to the next traffic  
21 control point, and make that communications.

22 A (Witness Cordaro) We also have to recall that  
23 if, indeed, a traffic guide did leave his post the evacuation,  
24 per se, doesn't completely fall apart, because it doesn't  
25 depend in whole on any one particular traffic guide.

1                   In the optimum sense, you would want him  
2                   to be there in all post manned, but in a situation where  
3                   you have a breakdown or a malfunction, if one or most  
4                   posts were vacated, it wouldn't mean that the evacuation  
5                   would be seriously hampered.

6                   Q       Now, Mr. Renz, I think that what you said  
7                   when we came back from the break is that you have been  
8                   able to search these workbooks and you have seen examples  
9                   where there is training for LERO personnel as to what they  
10                  should do when radios malfunction.

11                  Could you give me another example?

12                  A       (Witness Renz) Two pages after my first citation,  
13                  on page 30 of 37 of the same module, that directs road crews  
14                  to do the same.

15                  Page 34 of 37, it directs evacuation route  
16                  spotters to do the same.

17                  Q       And when you say, 'do the same,' in all cases  
18                  you are saying if the radios break down they are to use  
19                  commercial telephones, or they are supposed to proceed to  
20                  another radio equipped location.

21                  A       To facilitate the necessary communications, yes.

22                  Q       Anything else?

23                  A       In Module 14, which is the Transportaticn  
24                  module, on page 28 of 31, there is also a citation for the  
25                  transfer point coordinator.

1 Q And that is the same instruction again, isn't  
2 it?

3 A I believe so, yes.

4 Q Anything else?

5 A I think that is pretty much it. I believe the  
6 citations are also reflected in the procedures for those  
7 appropriate positions.

8 Q Now, Mr. Renz, if you will look please at  
9 page 61 of the testimony.

10 A I have it.

11 Q You reference at the beginning of your answer  
12 to Question 39, Module 8 of the LERO training program.  
13 Do you see that?

14 A Yes, I do.

15 Q Module 8 has recently been substantially  
16 revised, hasn't it?

17 A It has been revised, as I recall, to reflect  
18 those revisions that were pointed out during the  
19 communications testimony.

20 Q It has been revised, for example, Mr. Renz to  
21 show the new radio links and the different communication  
22 links that, as you pointed out, we discussed during the  
23 communications testimony, correct?

24 A Yes, I believe so.

25 Q Mr. Daverio, let me ask you this. It is true,



1       isn't it, that in fact a number of the attachments to your  
2       testimony -- for example, all of the workbooks -- have  
3       been revised recently?

4             A       (Witness Daverio) I wouldn't use the word, 'all.'  
5       I would say a lot of them have been. I don't know the  
6       exact number. Mr. Varley, I think, has that number, though.

7             Q       And the attachments to your testimony are not  
8       the revised versions of the training materials, are they?

9             A       No, they are not.

10            Q       Now, Mr. Renz, going back to page 61 of the  
11       testimony, Module 8, have you reviewed Module 8, both  
12       the workbook and the video tape?

13            A       (Witness Renz) Yes, I have.

14            Q       Well, Module 8 contains no information, does it,  
15       about how to use mobile radios?

16            A       Module 8 describes and portrays various  
17       communications that are utilized by LERO. The specific  
18       operation of a unit is not addressed in detail.

19            Q       And, as you state in your testimony, Mr. Renz,  
20       Module 8 is part of the classroom training program for all  
21       LERO personnel, correct?

22            A       That is correct.

23            Q       This is the case even for those LERO personnel  
24       who are not required to use communications equipment in  
25       performing their LERO job functions, correct?

1 A That's correct.

2 Q And, --

3 A (Witness Daverio) In our communications  
4 testimony, we include the phone as a communication link,  
5 and as we state, almost anyone could use the phone during  
6 an emergency.

7 Q Well, Module 8 discusses more than commercial  
8 telephones though, doesn't it?

9 A It discusses all the communications, including  
10 telephones.

11 Q Now, where it says, Mr. Renz, at the end of  
12 that first paragraph on page 61, LERO personnel whose  
13 LERO jobs require them to use communications equipment,  
14 practice using that communications equipment during drills  
15 and exercises.

16 Do you see that?

17 A (Witness Renz) Yes, I do.

18 Q Could you generally describe for me how they  
19 practice using their communications equipment. We have  
20 discussed traffic guides. What about other LERO personnel?

21 A For example, bus transfer point coordinators  
22 are dispatched to the field. They go through the same  
23 equipment installation and then radio check. They utilize  
24 their radio back to the staging area to communicate any  
25 significant points during the operation of that transfer

1 point.

2 Q Would it be fair to say, Mr. Renz, that during  
3 these communication drills and exercises, that for the  
4 most part LERO personnel assigned the use of radios make  
5 one or two transmissions during the course of the drill  
6 exercise?

End 16

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1           A     I wouldn't say one or two. But there have been  
2 occasions, depending on the drill or exercise, where, going  
3 back to the traffic guide, he may make a limited number of  
4 communications.

5           Q     Now, where it starts, the next paragraph, "Some  
6 emergency workers have experience in the use of  
7 communications equipment from their regular LILCO jobs,"  
8 do you see that?

9           A     Yes, I do.

10          Q     Can you tell me at all, Mr. Renz, give me an  
11 estimate of the percentage, rough percentage of LERO  
12 workers who have experience in the use of communications  
13 equipment in the LERO organization in the course of  
14 their regular LILCO jobs?

15          A     As I believe I stated earlier, when we were on  
16 page 58, I can't give you a percentage off the top of  
17 my head. However, I can cite for you specific positions  
18 that, as a rule, use communications on a daily basis.

19          Q     And could you tell me how you are going to  
20 define communications for the purposes of this? Is this  
21 radios or --

22          A     This is radio communication.

23          Q     Okay. Would you do that for me.

24          A     The LERO position that would use as a rule  
25 radio communications on a daily basis would include staging



1 area support staff assigned to that station in the given  
2 staging area, transfer point coordinators, bus dispatchers,  
3 and road crews.

4 Q And, Mr. Renz, if you were to give me an estimate  
5 of -- let me back up a minute. The four categories  
6 you have just listed for me, would they all be -- would  
7 it be fair to say that these categories are all examples  
8 of field personnel within LERO?

9 A With regard to their LERO position?

10 Q Yes.

11 A Staging area support staff are within the  
12 staging area. I wouldn't consider them field personnel,  
13 as well as bus dispatchers. Transfer point coordinators  
14 and road crews I would consider field personnel.

15 Q For purposes of my question, Mr. Renz,  
16 could you agree with me that or let's define field personnel  
17 as LERO personnel other than the emergency newscenter and  
18 the EOC and the emergency worker decontamination facility  
19 and relocation centers.

20 Okay?

21 A Then I would include staging areas for staff and  
22 bus dispatchers.

23 Q Now, could you tell me, Mr. Renz, provide me  
24 an estimate as to the percentage of LERO field personnel,  
25 using my definition, that would use radios on a day-to-day

1 basis or frequently in their LILCO jobs?

2 A No, I can't. I have already stated that.

3 Q The positions you have listed, Mr. Renz, could  
4 you give me an estimate as to the percentage of personnel  
5 that manned those positions with respect to the total number  
6 of personnel which man all field positions in LERO?

7 A All field positions using communications  
8 equipment? Radio communications equipment?

9 Q Yes. I realize this will be rough.  
10 Do you think 20 percent? Would that be fair?

11 A That is essentially the estimate I couldn't  
12 give you off the top of my head.

13 Q Mr. Renz, in their regular LILCO jobs, what  
14 training do LILCO personnel receive in the use of radios?

15 MS. MONAGHAN: Objection. I think that what is  
16 at issue here is the training that the LERO workers receive,  
17 and I think what Mr. Miller is getting at is a question of  
18 whether they bring any experience to the job. The kind of  
19 training that they get in LILCO is not pertinent.

20 MR. MILLEP: Judge Laurenson, I am looking at  
21 the sentence in the middle of page 61 which says, "Some  
22 emergency workers have experience in the use of communications  
23 equipment from their regular LILCO jobs."

24 JUDGE LAURENSEN: The objection is overruled.

25 BY MR. MILLER:

1 Q Let me reask my question, Mr. Renz.

2 Could you tell me generally what training  
3 LILCO employees who use radio equipment in their regular  
4 LILCO jobs receive in the use of that radio equipment?

5 A Formalized training by LILCO personnel who use  
6 that equipment in their daily jobs is what I would  
7 consider limited. They get the bulk of their training  
8 in the use of those radios in the daily operation of those  
9 radios. Day to day they become more proficient in their  
10 use.

11 Q So, Mr. Renz, is it fair to say that their  
12 training, for the most part, is made up of the practice  
13 that results from using the equipment on a frequent basis?

14 A I would say that the experience that we are  
15 addressing here is a result of that use on a daily basis,  
16 for most LILCO persons.

17 A (Witness Cordaro) Another factor to be  
18 considered here is that it is not necessarily the complexity  
19 of utilizing the equipment that requires the learning  
20 process. It is the knowledge of what's going on in the  
21 field and recognize the codes that are being used in the  
22 radio communications. And that is where their proficiency  
23 increases.

24 The equipment itself is very simple to use. It  
25 is very easily learned. We sent out people in the field with

1 essentially no orientation. And an excellent example of  
2 that is myself, when I worked as a summer student going to  
3 college as a company employee and had a radio in the car.  
4 And I was sent out without any orientation whatsoever,  
5 and it became very, very easy, within a matter of minutes,  
6 to utilize the radio.

7 And the radios we are proposing to use here are  
8 essentially the same types of devices.

9 Q Dr. Cordaro, in your experience, your summer job,  
10 was it important at all for you in the use of this radio  
11 to limit the time you spent on the radio?

12 A It became obvious from listening to the  
13 communications on the radio quite quickly in its utilization,  
14 yes.

15 Q I am saying, was it important to the job you  
16 were performing to limit your use of the radio?

17 MS. MONAGHAN: I am going to object to the  
18 question as being vague. I am not entirely sure what  
19 the term "important" means within the question.

20 JUDGE LAURENSEN: Overruled.

21 WITNESS CORDARO: Well, it was very, very obvious  
22 that the time on the radio had to be limited because of  
23 the number of people using that channel and the desire to  
24 communicate with headquarters. It was just very, very  
25 obvious, in the utilization of the radio, that it was



1 important to keep your messages brief.

2 BY MR. MILLER:

3 Q Did you ever, Dr. Cordaro, during your experience  
4 in this summer job, was there ever a time where you were  
5 unable to use the radio when you perhaps might have wanted  
6 to because the radio channel was being used by another  
7 user?

8 A Of course. But it was a matter of just waiting  
9 until that user finished using the radio and then trying  
10 to transmit my message.

11 Q And in the context of your summer job, Dr. Cordaro,  
12 I assume that having to wait to have access to that radio  
13 channel posed no real problem to you, did it?

14 A I don't believe it posed a real problem to me  
15 or from my conversations with others who utilize radios  
16 out of the same operating headquarters was it a problem to  
17 them.

18 Q There wasn't an emergency need for the use of  
19 that radio, was there?

20 A Sometimes there was emergency needs for the  
21 utilization of that radio, but the radios were never tied  
22 up for that extensive period of time.

23 Q Can you give me an example, Dr. Cordaro, of  
24 where you had an emergency need to use the radio in the  
25 course of that summer job?

1           A     I personally did not have an emergency need to  
2     utilitize the radio, but others who were on the same  
3     channel had this need to utilize the radio.

4           Q     Now, Mr. Renz, going back to page 61, you say  
5     -- this is about two-thirds down -- "In the case of  
6     traffic guides and other LERO workers who may not use  
7     communications equipment in their daily work, special  
8     communications training is provided."

9                     Do you see that?

10          A     (Witness Renz) Yes, I do.

11          Q     Are you saying, Mr. Renz, that LILCO employees  
12     who use radios in their normal jobs are not required to  
13     attend this training session?

14          A     It depends on the LERO position. In other  
15     words -- and in addition, the special communications  
16     training is not limited to, continuing that sentence,  
17     video tape training session on the use of mobile radios.

18                     There is also a demonstration drill, if you will,  
19     the first time that they do use the radios.

20                     However, in this case it was offered to traffic  
21     guides and lead traffic guides, as I recall off of the  
22     figure 5.1.1, the classroom matrix. We will be expanding  
23     that matrix to other LERO radio users, whether or not they  
24     have been previously familiar with the use of radio through  
25     their normal day-to-day jobs for consistency purposes.

1           Q     What I am wondering, Mr. Renz, is, under the  
2 LILCO program, do you sometimes exempt LILCO employees who  
3 in your opinion may be proficient in the use of radios  
4 from this special communications training you mention?

5           A     To my knowledge we haven't exempted anyone who  
6 has been slated to receive that training.

7           Q     Do you just not schedule certain individuals who  
8 may be familiar already with the use of radios for this  
9 training.

10          A     To my knowledge, that to me would be exempting.  
11 And as I just stated, we do not do that.

12          Q     When you say later in the paragraph, Mr. Renz,  
13 you mention the term "basic protocol" used in operating  
14 a mobile radio, could you tell me what you mean by  
15 "basic radio protocol"?

16          A     The term protocol is probably subject to many  
17 interpretations. The interpretation that I would proffer  
18 would be the desire to keep messages short, the use of  
19 -- the proper use of codes, if any are used, courtesy  
20 with the regard of waiting for a transmission to end before  
21 you initiate yours. Those types of particulars.

22          Q     Why do you think, Mr. Renz, it is desirable to  
23 keep messages short?

24          A     A radio -- the use of a radio frequency or  
25 channel is limited at any point in time to one communication

1 at any point in time.

2 It is always desirable to keep transmissions and  
3 communications as short as reasonably achievable.

4 Q Now, Mr. Renz, could you generally and briefly  
5 describe for me how you train LERO personnel in this  
6 protocol of radio use?

7 A As I recall from the training module 8A, which  
8 is entitled Mobile Radio Installation, such things as  
9 the proffer to keep your communications short, to use  
10 codes if you are familiar with them, not to step on other  
11 transmissions. Those types of things are demonstrated  
12 there.

13 As Dr. Cordaro stated earlier, it is also  
14 obvious to a considerable degree on how to use your radio  
15 from simply observing other radio users on that channel.

16 Q And did you say, Mr. Renz, the training includes  
17 how to use codes if you are familiar with them?

18 A No. I said -- I guess I would term the use of  
19 codes would be encouraged, but I don't believe we have  
20 taken the position that they are necessary to be used.

21 Q Could you tell me generally, Mr. Renz, either  
22 by example or description, what these radio codes are you  
23 are talking about?

24 A The radio codes that are used in LILCO on a  
25 daily basis, the ones that would be applicable in a situation



1 during a radiological emergency response, would primarily  
2 be those codes used for initiating and closing off a  
3 communication or transmission.

4 Q I am just trying to understand, Mr. Renz.  
5 Could you just give me an example of one?

6 A An example would be in trying to reach a unit,  
7 if the unit acknowledges you calling that unit, they  
8 might say, the code we use in the company is 36, as  
9 opposed to simply saying, go ahead.

10 Q Mr. Renz, your encouraging the use of these  
11 codes; you are not requiring it, correct?

12 A That is correct.

13 Q Now, wouldn't you agree with me that there is  
14 certainly the possibility of confusion among radio users  
15 if some individuals are using codes, such as the one  
16 you described, and others are not?

17 A Any confusion that might arise -- again, the  
18 number of codes that could be used or would potentially  
19 be used under these circumstances are relatively few in  
20 number. A listing of codes is provided in the packet  
21 that is handed out to the user of a mobile radio.

22 If that specific user is not familiar with  
23 those codes, he can refer to that insertion and get a  
24 general feeling for what codes are being used.

25 Q But, Mr. Renz, if there is a traffic guide staying

1 close to his intersection and his mobile radio must be  
2 used, and he is not familiar with these codes, wouldn't you  
3 agree with me that there could be confusion by that  
4 traffic guide as to what he is being told by the user of  
5 the frequency?

6 A I wouldn't agree with that. Simply as a  
7 result of the observations I have encountered, the use  
8 of the codes in the context in which they are used, if  
9 they are used at all, things like that, I wouldn't anticipate  
10 that being a problem.

11 A (Witness Varley) Mr. Miller, if I could add,  
12 shed possibly some light on this, when we were developing  
13 module 8A, it became apparent to us that in fact LILCO  
14 and the people that use LILCO radios, in fact, use the  
15 sign on and sign off codes. In talking with LILCO, it  
16 wasn't anticipated that they wanted every traffic guide  
17 or every individual that used a radio to be able to use  
18 these codes, but we wanted to make the people that were  
19 attending these classes aware that, in fact, these codes  
20 existed and that the people that were going to be using  
21 the radios that had LILCO experience, we had the feeling  
22 that some of these people were, in fact, going to use  
23 some of these codes because they used them on a day-to-day  
24 basis.

25 What we were trying to do is make all radio users

1 aware that these codes existed and that they could  
2 potentially hear some of these codes used because of the  
3 experienced radio users within LILCO using some of these  
4 codes out of habit.

5 As a result, we provided in the video tape  
6 an awareness that those codes existed and that we provided  
7 a handout to the people that went out into the field  
8 that listed the codes such that if someone on the staging  
9 area staff that was using a radio in conducting some type  
10 of communication happened to use one of these codes,  
11 that they would have the list there to use with them.

12 What we have seen, in fact, in drill practice,  
13 is that the use of codes is not used very much by  
14 anybody on a radio and that the few times that it is used  
15 it is used strictly in the terms of accessing on to or  
16 getting off of the radio. But any real radio transmissions  
17 that have to do with the conduct of the emergency, there  
18 is no structured code system for saying that a tree fell  
19 down in a particular intersection or that they want a  
20 traffic guide to go from one intersection to another.  
21 Those things aren't coded.

22 So there isn't a structured use of codes  
23 for every situation that arises. The fact that we don't  
24 use standard terminology, I think, generally, like I  
25 said this morning, has been pointed out throughout the drill

1 critiques, but we have not seen any instances where the fact  
2 that the people don't know the codes has detracted from the  
3 ability of that communications network to in fact allow  
4 the intended function to occur.

END 17

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#18-1-SueT 1

Q Mr. Babb, during the course of your police career, were radio codes used within the police department?

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A (Witness Babb) Yes.

3

Q And --

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A Not exclusively but, yes.

5

Q Did you have the same system, Mr. Babb, where the codes would be encouraged but not required to be used by the police officers?

6

7

A There was an attempt to insist upon the use of codes wherever practical; however, many times the code itself was supplemented with a brief description of the incident so as to clarify it in the minds of the receiver.

8

Signal 17 might be an investigation. And the radio dispatcher might indicate Signal 17 or 16, I believe was a fight, and very briefly to inform the officer give a very brief scenario in prose in addition to the code.

9

Q And, Mr. Babb, could you tell me why is it that the use of the codes was encouraged within the department?

10

11

Was it for the sake of clarity and understandability?

12

13

A I believe that would be part of the reason. Also, probably conditioned response upon the part of the officers. Certain codes would have a tendency to alert the officer very quickly. I believe a particular code

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#18-2-SueT 1

2 indicating an armed robbery, if that particular code came  
3 over the air, why then all ears on that frequency would  
4 respond. I think that would be part of the reason for it.

5 Q Mr. Renz, would you look at Page 62 of the  
6 testimony, please?

7 A (Witness complying.)

8 Q You are talking in the middle of the page about  
9 the DOE RAP personnel, and you say they will use their  
10 own communications equipment for which they receive train-  
11 ing through the DOE/Brookhaven area office.

12 Do you see that?

13 A (Witness Renz) Yes, I do.

14 Q Could you tell me, Mr. Renz, what training  
15 these personnel receive?

16 A With regard to their own program?

17 Q Yes.

18 A I am not intimately familiar with the training  
19 program for the Department of Energy RAP teams. I have  
20 an understanding of the communications equipment they  
21 utilize, but beyond that I don't believe I can respond to  
22 that.

23 Q Is it fair to say, Mr. Renz, that all you really  
24 know about this is that DOE RAP personnel receive training  
25 of some kind, but you know nothing concerning the details  
of that training?

#18-3-SueT

1 A I personally have a limited knowledge of their  
2 form of training.

3 Q Do you know how often they are trained?

4 A I cannot give specifics on their training  
5 program. No.

6 Q When you say, Mr. Renz: Therefore, DOE RAP  
7 personnel do not receive nor do they require the training  
8 in the use of communications equipment provided in the  
9 LERO classroom training program, what's the basis for  
10 that statement?

11 A The basis for that statement is the Department  
12 of Energy RAP team personnel are responsible for responding  
13 to any radiological or I assume there are other forms of  
14 emergency conditions within the Northeast region. As I  
15 recall, I believe they responded to the accident at TMI,  
16 for one example. They -- I am aware that they do conduct  
17 drills. DOE, if not this particular region then in another  
18 region responded to the exercise in the St. Lucie exercise  
19 earlier this year in Florida.

20 I am aware that the Department of Energy does  
21 have a certain amount of responsibility in this regard, and  
22 it's my impression that they do have a training program  
23 that addresses this.

24 (Witness Daverio) Also, Mr. Miller, you have to  
25 realize that Brookhaven National Lab does have a nuclear

#18-4-SueT 1

2 reactor on the site. They have an emergency plan for the  
3 site. And this is the radio frequencies they use within  
4 their own plan.

5 Q At the bottom of the page, Mr. Renz, you state:  
6 To assure that equipment and personnel are both in a  
7 constant state of readiness, communication drills will be  
8 developed during the life of the plant which require the  
9 designated LERO communicators to operate their respective  
10 communications equipment.

11 Do you see that?

12 A (Witness Renz) Yes, I do.

13 Q Now, these communication drills that you talk  
14 about have not been developed at this time, have they?

15 A Communications drills in this regard have not  
16 been developed yet. That's correct.

17 Q And to make sure we are on the same wave length,  
18 Mr. Renz, when you say LERO communicators at the top of  
19 Page 63, are those the LERO personnel that are stationed  
20 at the EOC during an emergency?

21 A Those are the personnel that are depicted on  
22 the LERO drill matrix which is Figure 5.2.1.

23 Q I'm just trying to make sure we have the same  
24 understanding. There are communicators, which maybe I  
25 ought to put it with a capital C , who are people who man  
the base stations, for example, at the EOC? And I guess



#18-5-SueT 1

2 you could use the term "communicators" to be anyone who  
3 uses communications equipment.

3

And in what sense are you using it in here?

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A I suppose in this context it is the communica-  
tors with the capital C. I would like to point out, and  
perhaps Mr. Varley can expand this response, I believe that  
since we are going to be conducting EOC/ENC staging area  
drills on a quarterly basis that at some point communica-  
tions drills of this nature will be incorporated into these  
other drills.

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(Witness Daverio) If you would like to, Mr.  
Miller, maybe I can clarify that a little. If you will  
look at Page 5.2-2 of our plan it talks about communica-  
tions drills and refers you to our OP1P 3.4.1 which talks  
about communications testing. And in there we list eight  
different types of tests and drills we will be performing.

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They vary from the tone alert that will be  
tested will be by WALK radio as part of the EBS to the  
tone alert radio that will be activated on an annual basis  
during our annual exercise. And it goes through and lists  
the types of time frame and the type of system. One of  
them would be the dedicated telephone system that LERO  
has.

24

25

That would require communicators, both at the  
EOC and the staging area, to be involved in that part of

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2 that drill. Our intent now is to, on a quarterly basis,  
3 put these type of -- these tests and drills into the  
4 quarterly larger drills by putting in preset messages to  
5 make sure not only that the communication link works but  
6 that the information that we want to pass over that link  
7 is proper and that's how we intend to do the test and the  
8 drill.

9 Q But at this point in time, Mr. Daverio, these  
10 drills that you intend to put into the training program  
11 have not been developed; is that right?

12 A I spoke to our intent, not to a drill that is  
13 already developed.

14 Q Could you tell me, Mr. Renz, or Mr. Daverio,  
15 in the sense we are using communicators how many personnel  
16 are we talking about?

17 It's a fairly limited number of personnel,  
18 isn't it?

19 A It varies by drill. The 8th drill we talked  
20 about is the LILCO paging system on a quarterly basis. That  
21 means we will have to hit a lot of pagers. So, it --  
22 you know, it's a hundred and fifty people there.

23 Some of the drills may involve a small number of  
24 people. Some of the drills may involve a large number of  
25 people. The overall communication net, can people communicate  
is also tested in any of our drills. We look at, do the

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2 phones work, is communication flowing properly. That is  
3 something we look at every drill.

4 The drills we are talking about here are separate  
5 drills structured only to look at the communication links  
6 that we lay out here that we think are important and I  
7 think are also required under 0654.

8 Q Yes. Mr. Daverio, these drills that you are  
9 talking about, are they just for the personnel who staff  
10 the LERO position of LERO communicator?

11 A No.

12 Q And one of the purposes, Mr. Daverio, these  
13 drills that you intend to develop would be to check the  
14 operability of the communications equipment; is that  
15 correct?

16 A That was one of the stated intentions.

17 Q Mr. Renz, would you look at Page 63, Answer  
18 41. The question is posed, how often will LERO workers  
19 who use communications equipment be drilled or exercised  
20 on the use of that equipment.

21 Do you see that?

22 A (Witness Renz) Yes, I do.

23 Q I guess I didn't think the question was really  
24 answered. Is there an answer you can give me in terms of  
25 a quantitative number? Perhaps on an annual basis, could  
you give me a number?

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2           A       I would like you to restate your question,  
3 because the number of drills per worker might vary depending  
4 on what worker that is.

5           Q       So, the answer would be there is no one number  
6 that would answer this question; is that correct?

7           A       In total, that's correct.

8           Q       Looking at Page 64, Mr. Renz, there is a discus-  
9 sion of the tablesps used in the communications training.

10           Is it fair to say, Mr. Renz, that the tablesps  
11 do not address how to use radio equipment?

12           A       The physical operation, I would say that's a  
13 fair statement. Purpose of the operation; in other words,  
14 why you are utilizing a radio communication, that is  
15 addressed in the tabletop.

16           Q       Mr. Daverio, at the bottom of 64 there is  
17 another statement about all communicators within LERO.

18           Could you tell me again, are you referring  
19 there to the personnel who man the emergency position of  
20 LERO communicators, or is this word being used in a broader  
21 sense?

22           A       (Witness Daverio) Well, in the staging area  
23 the people who man the radios are the staging area support  
24 staff normally, so they are not called communicators. But  
25 they are communicators. We don't -- everyone who uses a  
radio in a staging area is not called a communicator.



#18-9-SueT

Q I'm confused I think. You do have a position in LERO called the communicators?

A There are certain positions called that. That's correct.

Q And what I want to know is, is the word in your testimony on Page 64 referring to that emergency position?

A No. It's broader in scope, as I just stated.

Q Mr. Renz, looking at Page 65 there is a statement that say, the second part of Answer 42: 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.

Do you see that?

A (Witness Renz) Yes, I do.

Q Could you tell me briefly, Mr. Renz, what the intended objectives of the communication links exercised are within the LERO training program?

A I think that can best be responded to by referring to previous testimony given by Mr. Varley earlier today with regard to communications necessary to convey certain information in order to perform emergency response functions or get information from point to point

#18-10-SuqT

2 has been done during these drills. Whether or not there  
3 have been problems with certain portions of the equipment,  
4 I believe that relates to the words "playing key role"  
5 in the course of carrying out response actions and having  
6 those communication links fulfilling the intended objectives  
7 that those links were intended to fulfill.

8 In other words, in our impressions, based on  
9 observations of drills, emergency response functions were  
10 performed in an adequate manner.

11 Q Can you tell me, Mr. Renz, these intended  
12 objectives, are they stated anywhere to your knowledge?

13 A With regard to communications or with regard  
14 to each individual drill that this relates to?

15 Q Well, I am referring to the intended objectives  
16 of the communication links.

17 A It's inherent in that these objectives are  
18 inherent in the program. In other words, if given a  
19 certain scenario information has to get from a staging  
20 area to the EOC in order that some emergency response  
21 related action must be taken, that communication must be  
22 made.

23 Q And, Mr. Renz, those objectives, are they stated,  
24 specifically stated, in the drill scenarios or exercise  
25 scenarios?

A There are objectives --

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(Witness Varley) Mr. Miller, if I could maybe help in this particular area. I believe the way I read this passage is that the equipment fulfilled the intended objectives of the communication link. The objective of the communication link would be to allow communications from the staging area to a traffic guide or from the staging area to a transfer control point, or from the staging area to the EOC. As long as we were able to accomplish those objectives, then we feel that the objective of that particular communication link was, in fact, achieved.

Q Mr. Varley, the statement says that LERO personnel and the equipment fulfilled the intended objectives --

A Of the communication links.

Q Okay. Now, back to my question. With respect to these objectives, are they stated, specifically stated, anywhere in the drill or exercise scenarios?

A There is no need for the objectives to be stated in the scenario.

Q Are they specifically stated anywhere?

A I'm not sure. I might have to defer to Mr. Renz if there is an outline set of objectives for each communication channel. There may be.

(Witness Renz) I think what we are referring to here in intended objectives is those communication links



#18-12-SueT 1

2 necessary in order to provide for an overall radiological  
3 emergency response. I don't believe these intended ob-  
4 jectives are written down any place.

5 (Witness Daverio) Mr. Miller, you have to  
6 understand that in the drill, even if the on-site portion  
7 is not playing, and we set up a RECS communication which  
8 we have done in a drill, we don't hand the person there the  
9 form filled out and say: Here is what you just got on the  
10 phone. We have one of our controllers get on the phone,  
11 read it to him as if it would have occurred in a real  
12 emergency, and see if he can get it on the form and process  
13 it and move it through the form right, where the Director  
14 can make a decision, whether the communication links occur,  
15 whether the decision is then put out to the field teams  
16 through radios or telephones or however it's going to get  
17 there, and then whether those people can move.

18 That's the intended objective. The intended  
19 objective of the drill is to do all the things you want  
20 to within the drill. And the communications is being tested  
21 because we are using the links as if it was a real emergency  
22 in the drill.

23 And that's how we stimulate the activity.

24 Q Yes. I just want to know if these objectives  
25 are stated anywhere. I think I have an answer.

Mr. Renz, let me ask you, towards the bottom of



#18-13-SueT 1

2 Page 65, in Question 43, you -- there is the mention of  
3 radio discipline. Is it your understanding that radio  
4 discipline is the same as the basic radio protocol that  
we discussed earlier?

5 A (Witness Renz) I would say that they are  
6 comparable terms.

7 Q Well, if you distinguish in the use of the terms  
8 in any way, would you tell me how?

9 A I would not distinguish the terms personally.  
10 I don't know if you would.

11 Q And in your answer to Question 43, you were  
12 using radio discipline in the same sense as basic radio  
13 protocol?

14 A Yeah, I believe they are comparable.

end #18 15

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1           Q       Mr. Renz, it is stated in the middle of that  
2 answer that you do not provide instruction on the range  
3 of coverage of frequencies, since all frequencies have  
4 been verified through field use to provide coverage in  
5 response area of the LERO personnel.

6                   Do you see that?

7           A       Yes, I do.

8           Q       When discussing this issue, Mr. Renz, during  
9 the communications testimony, I thought that we had at  
10 that time testimony by you that there were, perhaps,  
11 areas within the EPZ where the range of the frequency  
12 had not been verified by LILCO.

13                   Since that testimony, are you saying here that  
14 LILCO has been able to verify that coverage of the  
15 response area by the radio frequencies is adequate?

16           A       I don't know that it was my testimony at that  
17 time that we had not verified that those frequencies were  
18 adequate.

19                   In any event, this refers to the use of these  
20 radio channels in the LERO training program, and indications  
21 I have received from our training personnel are that these  
22 radio facilities are adequate with regard to range.

23           Q       I remember, Mr. Renz, discussing with you, for  
24 example, the coverage going to the north shore area,  
25 and at the time your uncertainty as to whether radio

1 frequencies used by LILCO would, indeed, provide adequate  
2 coverage of that area of the EPZ.

3 Have you been able to ascertain that at this  
4 point in time?

5 A As I recall, the concern was whether or not  
6 radio communication would reach the area of the bluffs  
7 along the north shore. Traffic control points begin south  
8 of the actual, or literal north shore of Long Island.

9 I believe through the drill program we have  
10 experienced -- general indications to me are that the  
11 radio coverage for those traffic control locations are  
12 adequate.

13 Q Would you be able to testify, Mr. Renz, that  
14 the radio frequencies used by LILCO provide adequate coverage  
15 over the entire response area covered by LERO personnel?

16 MS. MONAGHAN: Objection. I think that is  
17 beyond the scope of these contentions. Mr. Miller had  
18 ample opportunity to go into this very issue, and I  
19 believe did go into these issues in connection with the  
20 communication testimony.

21 MR. MILLER: Judge Laurenson, I am looking at  
22 a very specific statement in this testimony which seems  
23 different from what was discussed during the communications  
24 litigation, and I am trying to ascertain what was meant  
25 by this specific statement in the LILCO testimony.

1 JUDGE LAURENSEN: Specifically, what statement  
2 are you questioning here?

3 MR. MILLER: On page 65, Judge Laurenson, there  
4 is, in Answer 43, there is a statement: Since all frequencies  
5 have been verified through field use to provide coverage  
6 over the response area covered by LERO personnel.

7 Now, I would like to ask Mr. Renz can he state  
8 today that LILCO has verified that adequate coverage is  
9 provided over the entire response area covered by LERO  
10 personnel.

11 MS. MONAGHAN: Judge Laurenson, I think you  
12 have to look at that statement, part of that in the  
13 context in which the question and answer are given, and  
14 that is why didn't you think it was necessary to provide  
15 training to LERO workers on what the range of radio  
16 frequencies were.

17 It is a training question here. We are not  
18 in the communications area.

19 JUDGE LAURENSEN: Objection is overruled.

20 BY MR. MILLER: (Continuing)

21 Q One more time. I would simply like to know,  
22 Mr. Renz, are you prepared to state that LILCO has  
23 verified that all radio frequencies used in LERO provide  
24 adequate coverage over the entire response area covered  
25 by LERO personnel?



1           A       (Witness Renz) With the definition of response  
2 area being that jurisdictional area assigned to a given  
3 staging area -- in other words, the Riverhead staging  
4 area takes up approximately a third of the EPZ -- the  
5 same is true of the Patchogue and the Port Jefferson  
6 staging areas -- yes, those channels provide coverage  
7 over their respective response areas.

8           Q       And, Mr. Renz, I take it then that you are  
9 saying that if you take the jurisdiction of the three  
10 staging areas, that LILCO's radio frequencies provide  
11 coverage of the entire EPZ?

12          A       I am sorry. Repeat that please?

13          Q       Well, are you saying that if you take the three  
14 staging areas and put their territorial jurisdictions  
15 together, LILCO's radio frequencies provide coverage of  
16 the entire EPZ, and I mean the entire EPZ?

17                JUDGE LAURENSEN: Just so we are clear, are you  
18 including the Long Island Sound in this, too?

19                MR. MILLER: I am sorry. I will take that out,  
20 Judge Laurenson. What I am trying to get at is back to  
21 this position that we discussed earlier regarding the bluffs  
22 in the north shore and places like that in the EPZ.

23                WITNESS RENZ: It is my understanding that in  
24 every facility that we have identified, such as traffic  
25 guide locations, it is my understanding that we can reach

1 and, therefore , can cover the entire EPZ with one of the  
2 three channels you are referring to.

3 BY MR. MILLER: (Continuing)

4 Q Mr. Renz, when you state in Answer 42 that  
5 the ultimate -- well, you say the final proof of any  
6 training program is ultimately the demonstration that  
7 an individual can put into practice the skills learned  
8 in the training program, and then you go on to talk about  
9 the drills that are being conducted to date, and how you  
10 believe the objectives have been -- the objectives of the  
11 training program have been fulfilled.

12 You would agree with me, wouldn't you, Mr.  
13 Renz, that there have been problems with respect to  
14 communications and radio equipment reflected during the  
15 course of LILCO training or exercises?

16 A Yes, I would.

17 Q Now, I would like to ask you about certain of  
18 these problems, Mr. Renz. Would you agree that there  
19 has been indications that technical equipment problems --  
20 indications of technical equipment problems with communication  
21 equipment not working?

22 A Yes, I would.

23 Q Would you agree with me, Mr. Renz, that there  
24 have been indications that general communications has been  
25 lax at times during the drills and exercises?

1 MS. MONAGHAN: Objection. The question is  
2 vague and ambiguous.

3 BY MR. MILLER (Continuing)

4 Q Mr. Renz, would you look at EP-63. Look at  
5 page 15 of EP-63, Mr. Renz. Do you see that statement  
6 in the middle of the page: General communications in the  
7 health services area was lax?

8 A I am sorry. Could you repeat the location?

9 Q It is on page 15 of Suffolk County EP-63.

10 A I see it.

11 Q So, back to my question, Mr. Renz, do you  
12 agree with me that there have been indications that  
13 general communications has been lax during the course of  
14 drills or exercises?

15 A With regard to telephone communications, and  
16 depending upon this observer's definition of the word,  
17 'lax.' Assuming those items, yes.

18 Q Are you saying that the only information you  
19 have regarding general communications being lax is with  
20 respect to the use of telephones?

21 A From the statement you pointed to, yes.

22 Q No. My question is broader, though. Do you  
23 have any indications, including the particular example  
24 we looked at in EP-63, from the drills and exercises that  
25 general communications has been lax?



1 MS. MONAGHAN: Objection. The question is  
2 still vague and ambiguous.

3 JUDGE LAURENSEN: Overruled.

4 WITNESS RENZ: I would have to say that depends  
5 on your definition of the term, 'lax' in the context of  
6 the item in which you show me. General communications  
7 in the health service area was lax, I don't know whether  
8 that was an equipment problem, or a person in that area  
9 -- I don't know what that due to.

10 BY MR. MILLER: (Continuing)

11 Q Well, read the next sentence, Mr. Renz. It  
12 says telephones will go unanswered for long periods of  
13 time if the person assigned to that desk was not present.

14 That explains, at least with respect to this  
15 particular comment, doesn't it, why general communications  
16 was lax.

17 A In this one particular instance, yes. Again,  
18 I can't answer you on a general basis pending the definition  
19 of the word, 'lax.'

20 Q What does the word, 'lax' mean to you, Mr. Renz?

21 A It can have any meaning, depending on the  
22 situation. In this case, the word lax was because the  
23 person wasn't physically present.

24 Q Why don't you give me what would be your general  
25 definition of the word, 'lax?'



1           A       If you can provide me with an example, I will  
2 give you the definition of the word, 'lax.'

3           Q       No. I am just asking you to define the word,  
4 'lax' for me. Any definition you want to give me.

5           A       Casual in some regard.

6           Q       Now, using that definition Mr. Renz, do you  
7 have indications from the drills and exercises conducted  
8 to date that general communications has been lax? Other  
9 than this particular comment in EP-63?

10          A       I cannot think of any general communications  
11 other than this instance off the top of my head that could  
12 be termed in my definition of the word, 'lax.'

13                   It doesn't mean that none have existed. I  
14 simply cannot think of any right now.

15          Q       Can you think of any examples, Mr. Renz, or  
16 have you heard comments by individuals regarding poor  
17 reception in radio communications during drills and  
18 exercises?

19          A       As I recall, in one of the summaries, that  
20 ro d crew developed poor reception, but I do not recall  
21 the reason for that development.

22          Q       Do you recall comments, Mr. Renz, regarding  
23 the fact that there has been too much radio traffic during  
24 the course of drills and exercises?

25                   MS. MONAGHAN: Objection. Unless Mr. Miller

1 can point to something in these summary reports, I am  
2 not sure whether what he is dealing with are the exhibits  
3 that have already been entered, or whether, again, he is  
4 trying to go back through the individual drill observers  
5 comments.

6 JUDGE LAURENSEN: These do sound remarkably  
7 like questions, or comments you might have found in some  
8 of those observers comments, Mr. Miller?

9 MR. MILLER: What difference does that make,  
10 Judge Laurenson? Wherever I found the comments, I am  
11 asking Mr. Renz if he has any cases that there could be  
12 these kinds of communications problems.

13 JUDGE LAURENSEN: Indications -- that is a  
14 general statement; does it add any evidence to the record  
15 different than the kind that we have excluded on the basis  
16 of our prior rulings today.

17 Without some specificity on your part as to the  
18 basis for it -- if we assume it is just individual  
19 observer's comment out of hundreds, then the question is  
20 whether it is worth taking all the time at this hearing  
21 to pursue, and I think that is the question Ms. Monaghan  
22 is raising.

23 Objection is sustained.

24 MR. MILLER: Well, Judge Laurenson, if the Board  
25 is asking for specific comments, I can provide those.

1 JUDGE LAURENSEN: Did you say we were asking  
2 for specific comments?

3 MR. MILLER: I thought the Board had just  
4 said without providing specific information regarding  
5 my questions, that the questions didn't have probative  
6 value, and I can provide the specific information if the  
7 Board would like.

8 JUDGE LAURENSEN: Well, if you can supply it  
9 from a document other than the raw data that we have  
10 already ruled on, you are welcomed to do that. To present  
11 it to the witnesses.

12 MR. MILLER: But I am precluded from using  
13 the raw data?

14 JUDGE LAURENSEN: That is correct.

15 BY MR. MILLER: (Continuing)

16 Q Mr. Renz, would you -- would you agree with me,  
17 Mr. Renz, that during the course of drills and exercises  
18 mobile radios have not always been available to drill  
19 participants for their use during the training exercises  
20 or drills?

21 MS. MONAGHAN: Objection. I don't see where  
22 that appears anywhere in either Exhibit 63 or 64. I may  
23 be wrong on that basis. If Mr. Miller can point it out,  
24 I will withdraw the objection.

25 JUDGE LAURENSEN: Are you asserting that that



1 is in either 63 or 64, or any other document besides your  
2 raw data, Mr. Miller?

3 MR. MILLER: Am I asserting that?

4 JUDGE LAURENSEN: Yes.

5 MR. MILLER: No, sir. I am not asserting  
6 anything. I am asking Mr. Renz a question.

7 JUDGE LAURENSEN: Objection sustained.

8 MR. MILLER: I will assert this, Judge Laurenson.  
9 I will assert that this is a prime example of comments  
10 from the backup documentation that went into the summary  
11 reports that are SC Exhibits 63 and 64 that do not appear  
12 in the summary report.

13 And I gather, again, that I am being precluded  
14 from asking questions based upon that documentation.

15 JUDGE LAURENSEN: Objection is sustained.

16 BY MR. MILLER: (Continuing)

17 Q Mr. Renz, have you been given a comment by  
18 drill observers and controllers following LILCO drills  
19 and exercises, that in general there is more exposure  
20 and/or practice in the use of radios needed in the course  
21 of the LILCO training program?

22 MS. MONAGHAN: Objection. I don't find that  
23 comment in either 63 or 64.

24 JUDGE LAURENSEN: Sustained.

25



1 MR. MILLER: Judge Laurenson, I think this  
2 would be a good time for the second break.

3 JUDGE LAURENSEN: Take a ten minute recess.

4 MS. MONAGHAN: Judge Laurenson, before we  
5 take the recess, would it be possible for Dr. Babb and  
6 Mr. Berger to be excused.

7 Dr. Babb again has his class at 6:00 o'clock  
8 and Mr. Berger has a plane to catch.

9 As I understand it, Suffolk County will have  
10 the opportunity to cross-examine Mr. Berger when we come  
11 back from the break.

12 MR. MILLER: Judge Laurenson, I would just like  
13 to state for the record, I think we should do this  
14 because we discussed it at some length after the lunch  
15 break, the county has made a proposal that we try to  
16 close out certain issues of the training testimony and  
17 in that way avoid some of the problems, perhaps, with  
18 Mr. Berger's leaving.

19 I take it that the Board has considered the  
20 county's proposal and has there is a better way to go  
21 about doing this. I would just like to make sure that,  
22 if I understand the Board's ruling correctly, Mr. Berger  
23 will be made available for any cross-examination required  
24 by the county and any examination by other parties some-  
25 time following the three-week break coming up.

1 JUDGE LAURENSEN: We are going to have to make  
2 some arrangements, you are right.

3 MR. ZAHNLEUTER: May I note for the record  
4 that the state does not waive any rights to cross-examine  
5 any of these disappearing witnesses.

6 (Recess.)

7 JUDGE LAURENSEN: Mr. Miller?

8 MR. MILLER: Judge Laurenson, in light of  
9 the Board's rulings regarding my use of the documentation  
10 with respect to drill and exercises that has been provided  
11 to the county by LILCO and in light of the fact that  
12 apparently the only question I can ask are questions that  
13 I can show specifically show up in the written summary  
14 reports prepared by IMPELL, which I might point out is  
15 an entirely subjective report on the part of one person  
16 at IMPELL, I again feel compelled to make an offer of  
17 proof. I will keep it brief.

18 JUDGE LAURENSEN: Well, I think we have taken  
19 too much time with offers of proof here. I am going to  
20 direct that you can make your offer of proof, but let's  
21 do it after the session is over because there is no need  
22 to do it while we are in session. You can add to the  
23 record at that time, but if we are going to be interrupting  
24 the course of the hearing for offers of proof throughout  
25 this whole period of cross-examination, we are going to lose

1 a lot of time.

2           You may make your offer of proof, but do it  
3 after the session is over.

4           MR. MILLER: Judge Laurenson, are you saying that  
5 the Board will not be present at the time that I make  
6 the offer of proof?

7           JUDGE LAURENSON: That's right. Just like we  
8 did before. That is our position on offers of proof.  
9 It is not a purpose for reconsideration. It is -- the  
10 purpose of an offer of proof is to make a record for you  
11 on appeal.

12           MR. MILLER: Judge Laurenson, I would say that  
13 the purpose of an offer of proof is also made in connection  
14 -- let me read what the regulation says.

15           Section 2.743(e), "An offer of proof made in  
16 connection with an objection to a ruling of the presiding  
17 officer excluding or rejecting proffered oral testimony  
18 shall consist of a statement of the substance of the  
19 proffered evidence."

20           In this case, Judge Laurenson, my offer of proof  
21 is compelled by the objections made by LILCO which have  
22 been sustained by the Board, and it seems to me that the  
23 Board should be present to hear the offer of proof in order  
24 to consider whether the Board has made the proper ruling.

25           JUDGE LAURENSON: We have ruled on all the objections

1 that have come up, and the offer of proof and what you  
2 have just read to us doesn't affect our decision.

3 The decision stands.

4 MR. MILLER: The problem I have is that then  
5 there is no way for the Board to consider whether it  
6 should reverse its position and allow me to ask questions  
7 about these documents which have been provided and which  
8 the county is prepared to conduct cross-examination upon.

9 JUDGE LAURENSEN: You have already asked the  
10 questions and we have sustained the objections.

11 MR. MILLER: But you are now telling me I  
12 can't even ask the questions without showing a specific  
13 reference in EP63 or EPC4.

14 JUDGE LAURENSEN: I don't remember saying you  
15 couldn't ask the question. Did I say that?

16 MR. MILLER: Well, it doesn't do much good for  
17 me to ask the question when you are not going to let the  
18 answer be given by the witnesses unless I can show a  
19 specific reference in admitted documents.

20 JUDGE LAURENSEN: As to the questions where you  
21 can only point to isolated comments by individual  
22 controllers and observers in this series of data that  
23 has been turned over to you, yes, I think our ruling is  
24 clear.

25 If that is what you are relying on to do your



1 cross-examination, you are correct. That is our position;  
2 that is our ruling.

3 And if you want to read into the record what  
4 all of these individual documents say, then there is no  
5 need for us to be here, but you may make your offer of  
6 proof after we have finished the hearing.

7 MR. MILLER: Judge Laurenson, I don't understand  
8 what the Board means when it says "isolated examples."  
9 What we have here are summary reports prepared, EP63 and  
10 64, prepared by an individual at IMPELL which is a  
11 subjective report. I have represented to the Board that  
12 I have questions drawn from the underlying documents used  
13 to prepare those reports which indicate that comments were  
14 not picked up and set forth in the written summary reports  
15 submitted into evidence, even when, I will represent,  
16 even when those comments cut across the bounds of all the  
17 exercises for which the county has been given documentation,  
18 even when, in one instance I am looking at, probably a  
19 number of 15 or 16 different comments by drill controllers  
20 or observers.

21 And those comments did not surface in the written  
22 report placed in evidence before this Board. And yet I  
23 am precluded from asking questions about these kinds of  
24 comments.

25 JUDGE LAURENSEN: In connection with this testimony,

1 yes, you are correct.

2 Now, if you wanted to challenge the IMPELL  
3 report, then that was something you could have done before  
4 you offered it in evidence, as to why items were not  
5 included in there or how they arrived at their decision.  
6 But you didn't do that.

7 MR. MILLER: Judge Laurenson, if the purpose  
8 of the proceeding is to set forth before the Board all  
9 relevant and probative evidence, that is what I am  
10 trying to accomplish here. And it seems to me the Board  
11 is telling me I have not the right to do that.

12 JUDGE LAURENSON: I guess you can draw your  
13 own conclusions.

14 (Pause.)

15 BY MR. MILLER:

16 Q Mr. Renz, would you look, please, at page 67 of  
17 the LILCO testimony, discussion of contention 44.D.

18 Mr. Renz, on page 66 you set forth your  
19 understanding of contention 44.D and, in fact, you quote  
20 what you understand the county's contention to be; is  
21 that right?

22 A (Witness Renz) We state what our understanding  
23 of the contention is and then we restate the contention.

24 Q Are you aware of the fact, Mr. Renz, that LILCO  
25 and you have used an old version of the county's contention

1 and that contention 44.D, as modified, does not even raise  
2 some of the concerns set forth in the LILCO testimony?

3 A I was not aware of that.

4 Q I think for purposes of clarity I should tell  
5 you what contention 44.D says.

6 44.D, Mr. Renz, says, "The provisions of the plan  
7 for quarterly testing of communications with federal  
8 emergency response organizations and states within the  
9 ingestion pathway do not provide for testing whether the  
10 content of messages is understood by emergency response  
11 personnel." And then gives a cite to NUREG 0654.

12 MR. MILLER: Judge Laurenson, I submit, in light  
13 of the fact that LILCO has used the wrong contention in  
14 its testimony and in light of the fact that question and  
15 answers 45 and 46 seem to address an issue which has been  
16 withdrawn by the county, the easiest thing to do is to  
17 have LILCO withdraw its testimony to these two questions  
18 and answers.

19 MS. MONAGHAN: Judge Laurenson, if Suffolk  
20 County was so concerned about whether or not we had  
21 used the appropriate contention and wishes to have this  
22 testimony, they should have moved to do so at the time  
23 that they moved to strike.

24 In addition, it seems to me that the modification  
25 that was made to contention 44.D, as read by Mr. Miller,

1 really doesn't change the thrust of the contention. And  
2 I believe that the testimony, as submitted by LILCO,  
3 generally addresses the contention 44.D even as revised  
4 by Suffolk County.

5 MR. MILLER: Well, the contention as modified,  
6 Judge Laurenson, says that the provisions of the plan  
7 "for quarterly testing," and then it goes on.

8 And this testimony goes to the fact that  
9 there is no provision for quarterly testing. They are  
10 entirely different animals.

11 I'll sit here and ask questions about testimony  
12 which seems to me to be irrelevant. We have withdrawn  
13 the contention in this respect, and I don't understand  
14 why LILCO would want to leave the testimony in the record.

15 JUDGE LAURENSEN: Well, at this point  
16 you didn't file a motion to strike. Does LILCO want to  
17 withdraw the testimony?

18 MS. MONAGHAN: May I just look at it for a  
19 moment, Judge Laurenson, please.

20 MR. MILLER: I am talking about question and  
21 answers 45 and 46. I think question and answer 47 are  
22 still relevant to the contention before the Board.

23 (Pause.)

24 MS. MONAGHAN: Mr. Miller, just so I am sure that  
25 I have the correct contention at this point, would you mind



1 reading it again for me, please?

2 MR. MILLER: The contention as modified says:  
3 "The provisions of the plan for quarterly testing of  
4 communications with federal emergency response organizations  
5 and states within the ingestion pathway do not provide  
6 for testing whether the content of messages is understood  
7 by emergency response personnel."

8 (Pause.)

9 MS. MONAGHAN: Judge Laurenson, I really don't  
10 understand the problem the county is having with leaving  
11 this testimony in there.

12 It seems to me to give some foundational basis.  
13 I don't really see the point of taking it out at this point  
14 in time; unless they have a strong objection to leaving  
15 it in, I would prefer to leave it in.

16 (Pause.)

17 JUDGE LAURENSEN: Just so everyone has the  
18 correct language, the correct quotation, I believe, of  
19 conteion 44.D can be found on page 72 of the county's  
20 testimony.

21 I have to admit, Mr. Miller, I don't see any  
22 significant change between the old contention and the current  
23 language in here in connection with this testimony.

24 Maybe you can identify for us what the --

25 MR. MILLER: The significant change, Judge Laurenson,

1 is that whereas previously the contention stated that  
2 the plan did not provide for quarterly testing.

3 I think following our putting that contention  
4 in, LILCO changed its plan and made that provision.  
5 We then withdrew that part of the contention.

6 JUDGE LAURENSEN: You just changed it. Instead  
7 of saying the plan doesn't provide for it, you said the  
8 plan's provisions for quarterly testing.

9 MR. MILLER: Well, it was a two-pronged contention  
10 before. One, the plan did not provide for quarterly  
11 testing and, two, the plan did not indicate how you test  
12 the content of messages.

13 We now are simply saying that there is no provision  
14 for testing the content of messages. We don't dispute  
15 that they have in their plan provision for quarterly  
16 testing.

17 Maybe this is all -- I think it is rather  
18 silly and I will just go on. I just thought we could  
19 save time.

20 JUDGE LAURENSEN: Let's move on.

21  
22  
23  
24  
25  
END 20

#21-1-SueT 1

BY MR. MILLER: (Continuing)

2 Q Mr. Renz, would you look at Page 68 of the  
3 testimony? You talk, in Answer 47, about the precompleted  
4 message forms which the communicators will -- let me  
5 back up.

6 You state that as part of your drills the  
7 communicators will be presented with a precompleted  
8 message form which the communicators will be required to  
9 transmit over the appropriate network.

10 Do you see that?

11 A (Witness Renz) Yes, I do.

12 Q Have these precompleted message forms been  
13 developed at this time by LILCO?

14 A No, they have not.

15 Q Now, once they are developed and utilized,  
16 Mr. Renz, wouldn't it be fair to say that what will be  
17 tested will be the accuracy of the transmission, not the  
18 understandability of the transmission?

19 A I'm sorry. You would have to draw the distinction  
20 between the two for me.

21 Q Well, do you think that recording a transmission  
22 accurately is the same thing necessarily as understanding  
23 the transmission?

24 A I suppose you could postulate messages that one  
25 could transmit that could be verified as accurate and yet

#21-2-SueT1

1 be not understandable to the receiver. I don't -- I  
2 would have to refer to 0654 to ensure in my own memory  
3 that -- or place in my mind that the understandability  
4 is intended to be tested in that regard.

5 If you will give me a few minutes.

6 Q Let me back up, Mr. Renz. I'm not sure I really  
7 want to take the time.

8 It's true, isn't it, that what LILCO intends to  
9 do at some time when they develop these precompleted  
10 message forms is to use them as a technique for testing  
11 whether messages are recorded accurately; isn't that  
12 correct?

13 A In addition to testing that communications link,  
14 yes, that's correct.

15 MR. MILLER: Judge Laurensen, I am not going to  
16 ask questions about 45 and 46. I think it's rather silly  
17 that LILCO will not withdraw them. And based on my re-  
18 presentation, I am not going to take the Board's time in  
19 that regard.

20 BY MR. MILLER: (Continuing)

21 Q Will you go on please, Mr. Renz, to Page 69,  
22 Contention 44.E, that talks about the free-play for  
23 decision making, doesn't it?

24 A Yes, it does.

25 Q Can you tell me, Mr. Renz, the definition you



#21-3-SueT 1

2 use in your answer to Question 48, from where is that  
3 definition derived?

4 MS. MONAGHAN: Mr. Miller, I don't believe  
5 that Mr. Renz's name is on that particular answer.

6 MR. MILLER: Okay. I'm not sure that if under  
7 the new rules, Judge Laurenson, I am precluded from asking  
8 Mr. Renz.

9 JUDGE LAURENSEN: I suppose you are allowed to  
10 ask, but I don't know whether that is going to give us  
11 any real productive information.

12 MR. MILLER: I will ask Mr. Daverio the question.

13 BY MR. MILLER: (Continuing)

14 Q I'm sorry. Mr. Daverio, do you remember the  
15 question?

16 A (Witness Daverio) Could you repeat it, please?

17 Q I'm looking at the definition of free play for  
18 decision making on Page 69. And I would like to know from  
19 where the definition is derived there as set forth in your  
20 answer.

21 A I don't believe we copied that from any  
22 particular document. I think that is our interpretation  
23 of what we mean when we say free play for decision making.

24 Q I have a couple of questions here for Mr. Berger.  
25 I guess we will save those.

Let me ask you, Mr. Daverio. The answer to

#21-4-SueT 1

2 Question 48, does this response, is it limited to free  
3 play for decision making during the annual FEMA-graded  
4 exercise?

5 A No.

6 Q So when you use the term "exercise" here,  
7 it's used in the broader sense than the FEMA exercise?

8 A We actually use free play during drills also.

9 Q The free play during drills, Mr. Daverio,  
10 would that be the subsituations that we have discussed  
11 earlier today?

12 A All situations are drilled. I think I have  
13 tried to explain this, and maybe I haven't made it clear  
14 yet, you don't necessarily stop something that normally  
15 happens. A message comes in over the RECS communications  
16 line like it would in an emergency. That is what stimulates  
17 the EOC to do whatever the procedures require it to do.

18 We only write the message that they are going to  
19 get from the site. The subsituations, other stimulus, we  
20 put in to allow free play based on that stimulation. Those  
21 are all the things we would do to allow the participants  
22 to make decisions and to go down different tracks depending  
23 on those decisions.

24 Q Can you give me an example, Mr. Daverio, of  
25 where you allow free play for decision making during a  
drill?

#21-5-SueT 1

2 A Sure. Just like I mentioned, the RECS communica-  
3 tion comes in over the RECS line to someone. That message  
4 goes in to the Director, and the Director then proceeds  
5 to take actions.

6 Now, in a drill you may have more hands-on  
7 activity by a controller and an observer to be helping  
8 him, but there still is some free play that you allow him  
9 to make and you correct him if he went the wrong direction  
10 to keep the drill in the right direction.

11 Q You have the prompting aspect that we talked  
12 about yesterday, right?

13 A In a drill, you may prompt. In a drill if you  
14 happen to get a Director who is very good, or a person in  
15 a job very good, you may not do any prompting. He may be  
16 able to make the thing happen correctly.

17 Q On Page 70, Mr. Daverio, it states that --  
18 middle of the page, the LERO organization must then make  
19 decisions about how to respond to the emergency situation.

20 Do you see that?

21 A That's correct.

22 Q When you say the LERO organization in this  
23 context, it's more accurate to talk about the personnel  
24 of the organization, isn't it?

25 Personnel make decisions, right?

A The -- I -- the way I would interpret that, the

#21-6-SueT 1

organization I guess makes a decision and then at the head  
2 a person makes the decision and then it's implemented by  
3 the organization.

4 Q So, are you saying that what you mean is that  
5 the Director, as the head of the organization, makes the  
6 decisions referred to on Page 70 and then the personnel  
7 of the organization implements those decisions?

8 A That's correct. But he gets many inputs from  
9 different people to make a decision. He would get radiation  
10 data; he may get other traffic guides at the staging area,  
11 what percentage of people are there. There are a lot of  
12 inputs to the Director, depending on the scenario, that  
13 he uses to make a decision on what is the protective action  
14 recommendation to be made.

15 Q And, Mr. Daverio, you would agree with me,  
16 wouldn't you, that there are many decisions made within  
17 LERO that are not made by the Director?

18 A That's right. I am just talking about in that  
19 one particular case.

20 There are many decisions that are made; you are  
21 correct.

22 Q You state later on in the answer to Question 49,  
23 the inclusion of free play in drills and exercises is  
24 inherent in the manner in which drills and exercises are  
25 conducted.



#21-7-SueT 1

Do you see that?

2 A Yes. I think I have just explained that.

3 Q How far down, Mr. Daverio, in the LERO organiza-  
4 tional hierarchy does free play for decision making go,  
5 in your opinion?6 A I'm trying to run through all the positions in  
7 LERO, Mr. Miller. There are many. If you let us take  
8 a second we can confer.9 Q Would it be fair to say that the free play for  
10 decision making aspect applies to the supervisory level  
11 personnel?

12 A Not in all cases.

13 (The witnesses are conferring.)

14 Were you waiting for us to confer? I wasn't  
15 sure you wanted us to.

16 Q Yes.

17 A Okay. And I think Mr. Varley will jump in with  
18 some additional remarks, but you can come up with examples  
19 in what you have defined as field forces where free play  
20 for decision making occurs. Staging area coordinators,  
21 which is at a staging area, he has got to decide how to  
22 brief people, how to get them out, how many people to move  
23 through. He gets an input from the EOC, and he has to act  
24 on it.

25 Bus transfer point coordinators, we stated many

#21-8-SueT

1 times, he has to get buses on to his route, so he may have  
2 a decision there.

3 You are accurate in that the more field oriented  
4 people have possibly less chances for decisions, but if  
5 there was one to be made in the scenario, in certain cases  
6 you would allow that.

7 Q Well, that's the question. There are opportuni-  
8 ties in the scenarios. Let me just back up.

9 When I asked you about supervisory level person-  
10 nel, I would include in that people like staging area  
11 coordinators and bus transfer point coordinators. If we  
12 can, let's distinguish between that level of LERO personnel  
13 and the field personnel which would be personnel who really  
14 are out there on their own, such as traffic guides and bus  
15 drivers and so forth.

16 A You are changing your definition of field person-  
17 nel from what you used just before, so --

18 Q Okay.

19 A -- as long as you understand you are changing your  
20 definition.

21 Q Okay. Now, does the free play for decision  
22 making under the drill and exercise scenarios, in your  
23 opinion, apply to LERO personnel other than the supervisory  
24 level personnel I've talked about and up in the organiza-  
25 tion?

#21-9-SueT

1           A       One case that comes to mind quickly is route  
2 alert drivers where they -- I think Mr. Varley is more  
3 familiar with the exact procedure -- get to a point and  
4 then have some choice as to how to drive through the  
5 route. They may have to make a decision, and they make  
6 that decision in our drills.

7                   I'm just trying to think if there are any others  
8 that jump into my mind from the scenarios I have seen. I  
9 can mention, I think, the transfer point coordinator. I'm  
10 confused of what your definition of field is. He is not  
11 at a staging area, he is at a transfer point. He may have  
12 to make a decision on how to dispatch buses on to the routes.

13                   Those are the two that I can think of off the  
14 top of my head. If someone else on the panel would like  
15 to add to that, I will defer to them.

16           Q       Can you tell me, Mr. Daverio, in your example  
17 of the route alert driver, can you describe for me what  
18 the free play for decision making is that that LERO person  
19 is able to exercise during the course of a drill or an  
20 exercise?

21           A       It's my understanding, though I think other  
22 panel members are more familiar, they get to the access,  
23 the entry point to a route and then they decide how to drive  
24 that route. We don't prescribe, you know, go left here,  
25 make a right here. We say: Here is the route we would like

#21-10-SueT1

1 you to run and you can go through it. And then they, as  
2 I think Mr. Weismantle told you, have a laminated map and  
3 they mark off where they have gone and then they bring that  
4 back to us. That would be a decision that he would have  
5 to make.

6 Q Can you think, Mr. Daverio, of any free play  
7 for decision making which is included in drills or exercises  
8 with respect to bus drivers?

9 A I believe it would be my opinion that the way  
10 the LERO plan is structured and the bus driver's function  
11 is there is really no free play. He goes -- he is told at  
12 the staging area to go to this bus company, following  
13 this route, go from that bus company to that staging area.  
14 He gets there. The transfer point coordinator gives him  
15 the bus route he is to run.

16 So I'm not sure we could give him decision  
17 making because of the way his job fits into the LERO organi-  
18 zation.

19 Q Mr. Daverio, with respect to route spotters, road  
20 crew members, traffic guides, would your answer be the same,  
21 that there is no free play for decision making with respect  
22 to those emergency jobs?

23 A If you might give us a second, since you have  
24 brought up a couple of different jobs that different people  
25 are more familiar with?



#21-11-SueT

(The panel witnesses are conferring.)

2 MS. MONAGHAN: Objection. The question is  
3 just a little bit vague. I assume that you are referring  
4 to free play for decision making in drills, Mr. Miller?

5 MR. MILLER: I am referring to free play for  
6 decision making anywhere in the drills or exercises  
7 conducted in the LILCO training program.

8 MS. MONAGHAN: Thank you.

9 JUDGE LAURENSEN: Do you withdraw the objection?

10 MS. MONAGHAN: Yes.

11 WITNESS DAVERIO: There were so many conversa-  
12 tions going on, I think I lost where we were.

13 BY MR. MILLER: (Continuing)

14 Q Mr. Daverio, I'm just asking, isn't it correct  
15 that with respect to other field personnel, specifically  
16 traffic guides, route spotters, road crew members, that  
17 there is no free play for decision making built into the  
18 drill or exercise scenarios for those individuals?

19 A I think, under my understanding of how the LILCO  
20 plan is structured, again those are not decision making  
21 positions and we don't provide them in the drills, though  
22 I think Dr. Babb has some free play for decision making,  
23 and he is not here, within the training he is doing with  
24 them in the street, an example being an emergency vehicle  
25 coming up and making a decision on letting him through.

#21-12-SueT

1 And I think we get to that later in our testimony, too,  
2 Mr. Miller.

3 Q Okay. Now, Mr. Daverio, the last sentence on  
4 Page 70, participants are provided with a set of circum-  
5 stances simulating an accident. They are then required to  
6 develop a set of response actions and to implement those  
7 actions under the observation of the drill controllers.

8 Do you see that?

9 A Yes, I do.

10 Q Under that definition of free play for decision  
11 making, you would agree with me, wouldn't you, that LERO  
12 field personnel, defined as bus drivers, traffic guides,  
13 route alert spotters, route spotters, road crew members,  
14 do not exercise free play for decision making in the  
15 context of the LILCO's drills and exercises?

16 A That was a long question, but I will try.  
17 I'm not sure -- I would agree that, as I just stated,  
18 those groups, the bus drivers, traffic guides, route  
19 spotters and road crews, because of the way the program  
20 is structured there is no free play during our drills.

21 Q They are not provided with, as you say, a set  
22 of circumstances simulating an accident, then required to  
23 develop a set of response actions and to implement those  
24 actions under the observation of the drill controllers,  
25 are they?

#21-13-SueT 1

2 A Not as far as decisions go, but they would do --  
3 they would make that action because what would happen is  
4 the EOC would say: We have to send out Bus Routes A, B,  
5 C and D. The staging area then has to find the right number  
6 of bus drivers, send those bus drivers to the bus company,  
7 to the transfer point, to get on the routes. So, in  
8 actuality, while they aren't actually making a decision  
9 they are part of the movement of the process in a free  
10 play.

11 Q Looking at Page 71, there is another statement,  
12 Mr. Daverio, in Answer 50. The drill participants are  
13 presented with accident parameters and information in much  
14 the same manner as the information would be available to  
15 them in a real accident.

16 Do you see that?

17 A Yes, I do.

18 Q This does not apply again, does it, to the field  
19 personnel within LERO that we have been talking about;  
20 isn't that correct?

21 A Sure, it does.

22 Q You are saying that traffic guides, for example,  
23 are provided with accident parameters and information?

24 A Sure. In the staging area they are briefed on  
25 the accident that the EOC has been stimulated with. They  
are given their dosimeters. They are being briefed on the

#21-14-SueT1

radiation that might be out there.

2                   They are getting the briefing.

3                   Q       Let me ask you, Mr. Daverio, are you aware of  
4                   problems during drills and exercises regarding the adequacy  
5                   or inadequacy of briefings provided to drill and exercise  
6                   participants?

7                   MS. MONAGHAN:  Objection unless it's contained  
8                   in Suffolk County Exhibit 63 or 64.  If Mr. Miller can  
9                   demonstrate that, I will withdraw the objection.

10                  MR. MILLER:  I didn't know that was a standard  
11                  for asking a question.

12                  MS. MONAGHAN:  It seems to me that it's the  
13                  same kind of question that goes to what was contained in  
14                  things like Exhibit 55, based on individual controller or  
15                  observer comments.

16                  MR. MILLER:  Judge Laurenson, Mr. Daverio's  
17                  response to my question said that they get this information  
18                  during their briefings.  I'm following up.

19                  JUDGE LAURENSEN:  Overruled.

20                  WITNESS DAVERIO:  It wouldn't surprise me that  
21                  somewhere in one drill one briefing wasn't as -- done as  
22                  well as I would like it to.  That wouldn't surprise me.  No.

23                  BY MR. MILLER:  (Continuing)

24                  Q       Isn't it true, Mr. Daverio, that during the  
25                  course of the exercises conducted in February there were many



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instances of inadequate briefings given to LERO personnel?

2

MS. MONAGHAN: Objection. Same basis as my prior objection.

3

4

JUDGE LAURENSEN: Sustained.

5

6

7

8

9

10

MR. MILLER: Judge Laurenson, I would ask for some clarification. I was given a response by the witness, I attempted to follow up to that response. And because a specific document does not perhaps reference the same response given to me by the witness, I am precluded from asking a question.

11

Is that the ruling?

12

13

JUDGE LAURENSEN: The ruling is that the objection was sustained.

14

15

16

I think we have been over this several times today. I don't know how many more times we are going to have to go through it.

17

18

19

MR. MILLER: Well, is the ruling based upon your order that I cannot refer or ask questions about the drill, exercise critique and evaluation of completed forms?

20

21

JUDGE LAURENSEN: The individual raw data, right.

22

23

24

BY MR. MILLER: (Continuing)

25

Q Mr. Daverio, for the purposes of this question, I'm not referring to the critique evaluation documents provided by LILCO. I'm referring to your knowledge.

And with that caveat, would you tell me, isn't

#21-16-SueT 1

2       it true that during the course of drills and exercises  
3       there have been numerous instances of complaints by control-  
4       lers and observers that briefings given to drill participants,  
5       exercise participants, were inadequate to keep them advised  
6       of the parameters regarding the accident and the information  
7       those participants needed to function properly during the  
8       course of the drill or exercise?

9           A       The question is long and had many different  
10       qualifiers in it. I guess up until the point where you  
11       said not able to function, that is -- up until then I  
12       could have answered it. At that point, I would say I don't  
13       know that any of the briefing problems caused a major  
14       functional problem.

15           Q       Okay. Let me try to amend my question without  
16       having to repeat it all.

17                    If you take out my phrase about unable to  
18       function, can you answer my question?

19           A       There were some poor briefings at times. And  
20       the best case that comes to mind, that I'm aware of, is  
21       the February 8th drill, and we have discussed that before,  
22       where we had certain people because of the increase in the  
23       traffic, the lead traffic guide function, we had people at  
24       the exercise who shouldn't have been at the exercise, they  
25       should have been at a drill, and it caused probably some  
      poor briefings to occur during that exercise. That would

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have occurred in that exercise, yes.

Q Now, Mr. Varley, are you aware as Manager of Training for LERO of complaints by IMPELL and LILCO observers and controllers that they have not been adequately briefed prior to the commencement of a drill or exercise?

MS. MONAGHAN: Objection. Same reason stated before.

JUDGE LAURENSEN: I don't think that's the same type of question. It's overruled.

WITNESS VARLEY: Mr. Miller, as I stated earlier, I don't know whether it was yesterday or the day before, that my involvement in the drill and exercise program essentially ended in the January time frame. And as such I have not had very close contact with the individuals that have been running the drills and the actual controllers at that time.

BY MR. MILLER: (Continuing)

Q So, you are not aware of any such complaints regarding inadequate briefings?

A (Witness Varley) I have seen some drill comment forms in preparation for testimony that would indicate that there have been cases where drill controllers felt that more information was necessary.

Q So, in preparing for your testimony here, Mr. Varley, you have looked through the critique and evaluation

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forms that were completed by observers and controllers for the drills that were provided to the County; is that right?

A I have seen some of them; I haven't seen all of them. Those documents were very large.

Q Mr. Daverio, perhaps you could clear something up for me. On Page 72, it says, three lines down, rather than following predeveloped 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.

Do you see that?

A (Witness Daverio) Yes, I do.

Q Now, on Page 54 of the testimony, you talk about the strict time tables which are used in the drills and exercises, and here you seem to be saying that there are no predeveloped time tables.

Is there a -- maybe that's just something you can clarify for me.

A I will try, and probably Mr. Varley may have something to add. It would be my understanding earlier on, as Mr. Varley explained, we do not -- when we set up a time line and we are going from a site area or an alert to a general emergency, we don't change that time line because they haven't finished all the activities required for the alert. What we are saying here is the participants



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2 don't know the predetermined time line or the accident  
3 scenario beforehand, and they must develop the appropriate  
4 responses and carry out the actions based on the informa-  
5 tion being provided to them.

6 I don't see them as inconsistent statements.

7 Q Would you agree that the participants do not  
8 know the predeveloped time frames of the exercise or drill  
9 scenario beforehand?

10 A I think, as we stated, they know what time to  
11 report, and because they know it's generally an eight hour  
12 drill they will know approximately when it's going to end.

13 Q Do the participants know the accident scenario  
14 beforehand?

15 A No.

16 MR. MILLER: Judge Laurensen, I think this  
17 would be a good place to stop for the day. I have an  
18 offer of proof to make.

19 JUDGE LAURENSEN: Before you do that, Mr. Glass  
20 has indicated to us during the last break that he wished  
21 to raise a question of scheduling at the close of today's  
22 proceeding.

23 MS. MONAGHAN: Judge Laurensen, could the panel  
24 be dismissed?

25 JUDGE LAURENSEN: Pardon me?

MS. MONAGHAN: Could we dismiss the panel?

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JUDGE LAURENSEN: Yes. We will reconvene the

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hearing at 9 tomorrow morning.

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(The panel of witnesses stood aside.)

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1 JUDGE LAURENSEN: According to the way things  
2 stand now, we will be off for three weeks after tomorrow,  
3 to reconvene here on Tuesday, July 10th, and according  
4 to the information I have at this point, we have two  
5 conflicting panels of witnesses scheduled for the same  
6 time, with the possibility of the carry over panel that  
7 we are hearing now.

8 I show the FEMA testimony as being specially  
9 scheduled for that day, along with the Suffolk County  
10 testimony, the Radford testimony on Contention 61.

11 Perhaps the parties have had some discussion  
12 along these lines and have arrived at an agreement of  
13 the order in which we are going to proceed that week?

14 MR. McMURRAY: Judge Laurenson, with respect  
15 to that particular issue, yes, the FEMA panel will be  
16 going forward beginning on Tuesday, July 10th.

17 I believe we have a tentative agreement among  
18 the parties that Contention -- Suffolk County's Contention  
19 61 panel, which I understand also is not going to take  
20 a long time, will go forward first thing on Wednesday,  
21 July 11th.

22 MR. GLASS: Our understanding is that that  
23 would take approximately half a day, and we have agreed  
24 to that.

25 JUDGE LAURENSEN: So, they would start at

1 nine o'clock on Wednesday morning, and the FEMA panel would  
2 come back thereafter?

3 MR. GLASS: That is right.

4 JUDGE LAURENSEN: Is that agreed by everyone.

5 MR. CHRISTMAN: Yes, sir.

6 MR. McMURRAY: Judge Laurenson, let me state  
7 one other thing. There are also some discussions going  
8 on, and I won't get into any details at all, about how  
9 to conduct the examination of Dr. Radford, so we will  
10 come back to that matter.

11 I don't think I need to say anything more  
12 about that.

13 JUDGE LAURENSEN: Let me ask if there has  
14 been an agreement as to what testimony the FEMA panel is  
15 going to offer during the week of July 10th?

16 MR. GLASS: We have not gotten into specific  
17 details on that matter. I think we still agree that we  
18 will not be going any further than the issues that have  
19 already been covered in the proceedings as of the close  
20 of tomorrow.

21 JUDGE LAURENSEN: But as you can see, we are  
22 in the middle of many of these matters, so I think this  
23 is something you should work out among yourselves, and  
24 advise us in writing at least one week in advance so we  
25 would ask that on July 3rd, after you discuss this, you



1 notify us in writing and serve all other parties with the  
2 specific pages or questions or however you want to identify  
3 it, what FEMA testimony will actually be heard during the  
4 week of the 10th.

5 MR. GLASS: We will be able to do that. That  
6 is no problem.

7 We have also provided Suffolk County with two  
8 dates for the depositions, and they are getting -- and  
9 they intend to get back to us, I think, sometime next week  
10 as to the issue of whether those dates are satisfactory.

11 MR. CHRISTMAN: Just so I have it on my notes,  
12 what are those two dates?

13 MR. GLASS: The two dates that we are discussing  
14 right now is June 27th, and June 29th.

15 MR. CHRISTMAN: Thank you.

16 MR. GLASS: We also have a question, it is  
17 rather obvious that the FEMA panel would not be completed  
18 during the week of July 10th through 13th, and we have  
19 proposed a second appearance for -- and this departs from  
20 the normal schedule, and would require the Board to start  
21 on a Monday -- but August 13th through 15th. That is a  
22 Monday through Wednesday, and that has to do with  
23 availability of the FEMA witnesses.

24 JUDGE LAURENSEN: The word August is not one  
25 that I like to hear. Is there any need that that be

1 decided today?

2 Do you have to make plans at this time, Mr. Glass?

3 MR. GLASS: Well, I am holding those dates open  
4 at this time. I just felt that we should notify the Board  
5 as early as possible as to that particular problem.

6 JUDGE LAURENSEN: Well, I think you can go ahead  
7 and tentatively schedule them so that they would be  
8 available during that time.

9 Do you mean by that that they are not going to  
10 be available after Wednesday of that week?

11 MR. GLASS: That is the situation at this  
12 particular point in time. One of the other driving forces  
13 is the ability to get out the testimony on the training  
14 material. People are involved in some other commitments  
15 right now, but they are hoping to get the training material  
16 out the week of August 6th, which would give the parties  
17 approximately a little less than a week to review that  
18 material before they came on the stand again, and we under-  
19 stand that particular problem. We have discussed it with  
20 the other parties.

21 MR. McMURRAY: Excuse me. Was that the week  
22 of August 6th, or August 6th?

23 MR. GLASS: The week of August 6th. I think  
24 we had originally discussed August 8th we would have it  
25 delivered in hand.

1 JUDGE LAURENSEN: Is it the expectation of the  
2 parties that the FEMA panel will take all of the week of  
3 July the 10th, with the exception of that other matter on  
4 the 11th?

5 MR. CHRISTMAN: I would expect so.

6 MR. McMURRAY: It is very difficult for me to  
7 judge. We haven't even decided who is doing it yet.

8 JUDGE LAURENSEN: I was wondering whether we  
9 should be looking beyond that in terms of what comes next  
10 in our schedule.

11 We still have some contentions we haven't gotten  
12 to, plus we have a current training panel that obviously  
13 is not going to be finished this week, and along with the  
14 County's training testimony.

15 MR. McMURRAY: I would propose that we just  
16 follow the schedule after the FEMA witnesses are cross  
17 examined, that we finish up with the LILCO training  
18 panel, and then the County's training panel goes forward,  
19 and then we go forward with the next cluster, which I  
20 believe begins with thyroid monitoring. 77.

21 MR. CHRISTMAN: I think what I propose will  
22 result in the same thing, but we would like to have a date  
23 certain to finish up our training panel, and I would suggest  
24 that it be the Tuesday of the week after the week of  
25 July 10th, which is the 17th of July, and over on the 18th,



1 if necessary, to finish our panel.

2 I am sort of assuming that FEMA will take the  
3 entire week of the 10th through the 13th, so if that were  
4 the case, then my proposal is I think the same as Mr.  
5 McMurray's, that is, we would finish FEMA that week, we  
6 would start on the following Tuesday with our training  
7 panel, finish them up, do the County's training panel, and  
8 we would be -- just complete the schedule as it is set  
9 forth now.

10 JUDGE LAURENSEN: Does that present any problem  
11 for the County?

12 MR. McMURRAY: I guess that proposal is fine  
13 with the County. It was our expectation that we would  
14 get to the issues in Cluster 17 in that second week, which  
15 is when our expert, Mr. Minor, is available, and so --  
16 hopefully he is available. If this goes over into another  
17 week, we will have to check his availability.

18 MR. CHRISTMAN: The obvious question would be  
19 what would we do if it didn't really take the whole week  
20 of the 10th to finish FEMA, and we ended up Friday with  
21 all the FEMA issues done. I don't think that is going  
22 to happen, but if that were the case, we could then, and  
23 assuming we would set a date certain for training to  
24 finish, I guess we would have to jump over training and  
25 start into that next cluster of issues on that Friday,



1 for instance. I think it is our witness panel, so we could  
2 produce them at that time.

3 MR. McMURRAY: The problem with that is that  
4 we have a lot of jumping around. We will be jumping into  
5 one contention. This is purely speculative -- we will be  
6 jumping into one contention, perhaps not finish it on  
7 Friday, and then going back to the training testimony the  
8 beginning of the second week, and then going back and  
9 finishing up whatever contention we hadn't finished on  
10 Friday.

11 I am not sure that that suggestion is really  
12 feasible.

13 MR. CHRISTMAN: Well, the problem is -- as you  
14 know, we have a large witness panel on training. They have  
15 already been here a whole week, and it is just difficult,  
16 particularly for the one who lives in California to have  
17 him on standby all the time, and it is just much better  
18 if we can have him scheduled for a date certain.

19 MR. McMURRAY: That is the same problem with  
20 our witness, Mr. Minor, who is also in California.

21 MR. CHRISTMAN: Well, we are talking about  
22 witnesses, and you are talking about somebody to sit by  
23 your elbow, and that is different.

24 MR. McMURRAY: When the issue is thyroid  
25 monitoring, it is not different.

1 MR. CHRISTMAN: Well --

2 MR. McMURRAY: Judge Laurenson, I think the  
3 bottom line is that we should just work it out among  
4 ourselves and report back to the Board.

5 JUDGE LAURENSEN: Well, we aren't going to be  
6 in a position to -- me to discuss this unless we do it  
7 this week, because people are going to be going in  
8 different directions. I have no problem with that.

9 MR. McMURRAY: What was proposed, which is that  
10 we have the FEMA witnesses the first week, plus our 61  
11 panel, with training then being finished up the second  
12 week -- the beginning of the second week is fine with us.  
13 Just as long as that is as far as the proposal goes.

14 JUDGE LAURENSEN: Then thereafter, I think Mr.  
15 Christman is proposing to go to the next cluster, 17, and  
16 he has raised the possibility of jumping that up a week.  
17 I realize that presents problem for a lot of people.

18 MR. McMURRAY: Well, it really does. I just  
19 don't think that Mr. Minor is available that week. I  
20 would have to look at my calendar, but I know that he is  
21 not available that week. I am talking about the first  
22 week.

23 JUDGE LAURENSEN: And those contentions -- or  
24 the testimony within that Cluster 17 be reordered somehow?

25 MR. CHRISTMAN: We would be glad to try to do

1 that, and if they representing that every one of them has  
2 to have Mr. Minor here, I guess that would be a problem,  
3 but we can be flexible on that.

4 JUDGE LAURENSEN: There probably isn't much  
5 point to put any more on the record on this now. I think  
6 Mr. McMurray's suggestion is a good one, that the parties  
7 ought to discuss this further among themselves.

8 I think since there is agreement on some things,  
9 we ought to put that on the record, and that is that the  
10 LILCO training panel will resume its testimony on July 17th  
11 here, followed by the County's training panel, and then  
12 we will go back to the regular order unless the parties  
13 agree otherwise.

14 Now, I would say if it becomes apparent after  
15 the depositions of the FEMA witnesses or whatever, that  
16 this may only take a day and a half or so, then I think  
17 probably some additional scheduling discussion should  
18 be in order.

19 All right, are there any other scheduling matters  
20 that anyone wants to take up now?

21 (NOTE: No response)

22 JUDGE LAURENSEN: All right. At this point, then,  
23 we will adjourn until 9:00 a.m., and the County may make  
24 their offer of proof.

25 (The Board Departs the Courtroom.)

1 MR. MILLER: Pursuant to the Board's ruling,  
2 the County hereby makes an Offer of Proof with respect  
3 to issues that would have been asked of the LILCO witnesses  
4 regarding comments, observations made by the observers and  
5 controllers of LILCO drills and exercises.

6 It should be noted that this Offer of Proof is  
7 being made on the bare record beginning at approximately  
8 6:17 p.m., without the Board's presence.

9 It should also be noted that in the County's  
10 opinion, the Board's action in this regard is error, and  
11 ignores the clear mandate of 10 CFR, Section 2.718c, which  
12 states that the Presiding Officer has the duty to, among  
13 other things, rule on Offers of Proof.

14 Beginning with the subject matter of  
15 communications, which was discussed somewhat with LILCO  
16 witnesses prior to the Board's precluding further questioning.

End 22. 17

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1           If the county would have been allowed to  
2     conduct its cross-examination, the county would have shown  
3     a number of patterns revealing problems in the area of  
4     communications and in particular radio equipment during  
5     the course of drills and exercises.

6           These patterns would have been as follows:  
7     technical equipment problems with communications equipment  
8     not working. For example, radios failing; two, general  
9     communications being lax; three, general radio protocol  
10    being inadequate and it would have been demonstrated  
11    that this problem has been a recurring problem throughout  
12    the course LILCO drills and exercises; four, poor reception  
13    in radios, including inadequate transmissions and  
14    receptions; five, too much radio traffic; six, radios not  
15    always available to drill exercise participants; seven,  
16    the need for more exposure and practice in the use of  
17    radio equipment.

18           Specifically, the county would have shown  
19    with respect to poor radio technique that the evaluation  
20    critiques completed by observers and controllers of the  
21    LILCO drills and exercises revealed a continuing and  
22    prevalent problem regarding poor radio technique.

23           These comments include, from the November 1983  
24    drill/exercise, the comment "poor radio technique in  
25    one case; real need for radio training for communicators" and

1 the comment "transportation support communicator unfamiliar  
2 with equipment; communicators unfamiliar with radio jargon."

3 The county would have shown that with respect  
4 to the drill conducted on January 28, 1984, there were  
5 comments including "communicators need to review jargon."

6 The county would have shown that with respect to the  
7 comments provided by observers/controllers during the  
8 February 8, 1984 exercise, there were comments regarding  
9 poor radio technique including the following:

10 "better radio protocol practice needed;" two,  
11 "general radio protocol training needed;" three, "poor  
12 radio etiquette;" four, possible horseplay by traffic guides  
13 or multiple callers stepping on each other;" five,  
14 "it was observed that traffic guides do not use LILCO  
15 call numbers and expressions when calling into the  
16 Patchogue staging area base radio, training is required."

17 The county would have shown additional comments  
18 regarding poor radio technique from the February 15  
19 exercise, including the following comments:

20 one, "two new communicators in EOC without  
21 training;" two, "communications with radiation health  
22 area very lax;" three, "too many traffic guides were calling  
23 the base in rapid succession without waiting for the base  
24 to respond to the first caller, this is either lack of  
25 courtesy on the air or fooling around by the drivers or lack

1 of knowledge in the use of the airways."

2           The next comment that would have been pointed  
3 out to the LILCO witnesses is the following: "poor  
4 radio etiquette by field personnel who have had no specific  
5 training on radio usage."

6           The next comment would have been, again from  
7 the February 15 exercise, "poor radio protocol and  
8 etiquette, holding mike up to car radios, joking and  
9 laughing around."

10           And the county would have shown further  
11 examples, including comments that communications were  
12 generally not good, "radio personnel need more training  
13 in handling questions asked of them and as to whom to  
14 direct questions," and the comment that "it appears from  
15 the traffic control standpoint that communications from  
16 the EOC is not good."

17           The county, again from the observer and  
18 controller comments would have shown that there was a  
19 general and pervasive problem in the communications  
20 training for LERO participants and those problems in part  
21 arise from more exposure to radios and practice with  
22 radios being needed.

23           The county would have shown, for example,  
24 that in the January 24 drill -- 28 drill, the comment  
25 was made "traffic guides have problems with radios."



1 The comment made from the February 8 exercise, "further  
2 training is required." And the comment made from the  
3 February 15 exercise, "radio personnel need more training  
4 in handling questions asked of them and as to whom to  
5 direct questions."

6 If the county would have been able to ask  
7 these questions of the LILCO witnesses, the county further  
8 would have shown, with respect to communications and,  
9 in particular, radio equipment, that there has been a lack  
10 of radio equipment provided to drill and exercise  
11 participants, that transmissions over radio equipment have  
12 been inadequate in some instances, that there has been  
13 a failure in general of certain communications equipment  
14 during the course of drills and exercises.

15 For example, with respect to the lack of  
16 radio equipment, comments include the following:  
17 from the January 24, 1984 drill, "lack of radios by  
18 field personnel." Again from the January 28, 1984 drill,  
19 "no radios for road crews."

20 From the February 8, 1984 exercise, comments  
21 showing that there were no radios for certain traffic  
22 guides, road crews, route alert drivers, route spotters.  
23 The county would have also shown that -- again from the  
24 February 8 exercise -- the comment was made that  
25 "road crew member in supervising car had difficult time with



1 radio equipment malfunction."

2 From the February 15, 1984 exercise,  
3 comments regarding the lack of radios include the following:  
4 "no radios for road crews, route alert drivers, route  
5 spotters, transfer point coordinators." And further  
6 comments from the February 15 exercise that "road crews  
7 need separate multi-band radios to be signed out just  
8 like traffic guides" and that "road crews are supposed to  
9 have multi-band radios which were not available."

10 Examples of the problems with inadequate  
11 transmissions over the radios would have included,  
12 from the January 28 drill, the comment "some traffic  
13 guides fade in receiving the radio transmissions,  
14 inadvertently cut off other guides in the process of  
15 transmitting." And the comment from the February 15  
16 exercise "radio reception in EOC for road crews very bad."

17 And example of the type of communications  
18 equipment failures noted in the LILCO drill and exercises  
19 comments include, from the January 28, 1984 drill,  
20 "Port Jefferson direct line inoperable."

21 In short, the county would have demonstrated to the  
22 Board numerous pervasive problems in the communications  
23 training that has been provided to the LERO drill and  
24 exercise participants. These examples would have been  
25 drawn from the documentation provided to the county by LILCO

1 and, to the county's knowledge, the only documentation  
2 retained by IMPELL or LILCO regarding the drills and  
3 exercises conducted to date.

4 With respect to questions regarding the  
5 inadequacy of briefings provided to drill and exercise  
6 participants, the county would have demonstrated, if it  
7 had been allowed to ask its questions by the Board, that  
8 the briefings have consistently failed to provide  
9 information necessary to drill and exercise participants  
10 to perform their tasks in the manner envisioned by the  
11 LILCO training program.

12 Comments regarding this inadequacy of briefings  
13 include the following: from the November 1983 drill,  
14 the comment "periodic updates were not performed,  
15 transportation support coordinator apprehensive about  
16 taking charge." Again from the November 1983 drill,  
17 in response to the question "were periodic updates made  
18 by the senior individual," the answer circled indicating  
19 "no, not the right information at the right time."

20 From the January 28, 1984 drill, the comments  
21 would have included the following: One, "briefing slow,  
22 late, inaccurate, for example, site area alert;" two,  
23 "briefings lack details;" three, "briefing" -- referring  
24 to bus driver dispatcher briefings -- "did not address  
25 current plant status, radiological status;" four, "briefings

1 were slowed again with lease agreement discussions, briefings  
2 were also performed with a lack of immediacy;" and five,  
3 "the staging area coordinator can do more to keep staging  
4 area staff, such as dosimetry record keepers, lead  
5 traffic guides and bus dispatcher, more aware of the  
6 overall effort."

7 From the February 8, 1984 exercise, the  
8 comments would have included the following: "No  
9 general emergency briefings at Port Jefferson and no  
10 radiological information given to people going out to the  
11 field."

12 The comment, "I was not aware of any briefing  
13 given to the transfer point controllers regarding radiation  
14 plume path." The comment, "There were no general  
15 briefings to staff regarding progress of emergency  
16 except brief messages to the leads that there was an  
17 alert and then site area emergency." The comment, "people  
18 not informed potential plume path and radiation levels  
19 at all; bus drivers not briefed on route or any information  
20 -- i.e., they are to depend only on given maps and routes.  
21 This may become a problem when they loose these maps."

22 The comment, "lead traffic guide was unaware  
23 of general emergency and never informed traffic groups;  
24 potassium briefings took place but there was no observed  
25 briefing on the actual release occurring at 1:00 o'clock."

1           The comment, "A lot of plant noise during  
2 dosimetry briefing, concern by senior LERO staff re loss  
3 of holiday."

4           The comment, "job specific briefings and dosimetry  
5 briefings were okay, but there was little in the way of  
6 general plant briefings or radiological condition briefing  
7 for the troops."

8           The county would have shown a number of  
9 examples, approximately seven different examples, of  
10 in response to the question, Were incoming staff briefed,  
11 the drill observer or controller checked "no."

12           And the comment, "Personnel were not urged to  
13 check dosimeters periodically."

14           Lastly, the comment from the February 8 exercise,  
15 "It seemed that in general people did not know much about  
16 what the dosimetry was about. Numerous people were  
17 asking questions about what to do with forms, who to see,  
18 what to do next, et cetera."

END 23

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2 From the February 15, 1984 exercise, the County  
3 would have shown that the comments of inadequate briefings  
4 for drill and exercise participants continued. Comments  
5 evidenced in the drill and exercise documentation provided  
6 to the County include the following: The comment, "No  
7 briefings relevant to plant status or radiological condi-  
8 tions." The comment, "Staging area personnel, dosimetry  
9 were not briefed regarding emergency status, protective  
10 actions, plume travel, other than status board posting.  
11 This is not enough."

12 The comment, "No general briefings regarding  
13 status of plant, plume, progress of evacuation, et cetera  
14 given."

15 The comment, "Not much radiological or plume  
16 data given to or sought by lead traffic guides."

17 The comment, "Road crews, route spotters, route  
18 alert drivers not given this data in briefings. This is a  
19 deficiency."

20 The comment, "No briefings with regard to plant  
21 status. No apparent radiological information at job  
22 briefings observed, though not supplied by EOC on a timely  
23 basis it was not specifically asked for either."

24 The comment, "Information about potassium iodide  
25 did not get down to the Riverhead."

The comment, "As far as I know, none of the

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1 transfer point coordinators were notified of radiation  
2 conditions in the areas they were going."

3 The County would have shown six separate evalua-  
4 tion sheets provided during the February 15th exercise,  
5 all indicating that in response to the question, were  
6 personnel going into the field properly briefed as to  
7 potential plume path and radiation levels, the answers  
8 were given as no.

9 Continuing with the February 15 exercise, there  
10 was a comment that, "There were no scheduled briefings,  
11 information was related in an individual manner. Some  
12 staff did not recognize the status board as being able to  
13 provide updating information."

14 And finally, the comment, "However, no background  
15 information reached these people such as protective actions,  
16 plume direction, et cetera." People in that context  
17 referring to dosimetry personnel at the staging area and  
18 the EOC.

19 Finally, with respect to the County's questions  
20 regarding briefings provided to observers and controllers  
21 for the LILCO drills and exercises, if the County would  
22 have been able to continue its questioning the County  
23 would have shown comments indicating that drills and  
24 exercise participants -- I'm sorry, drill and exercise  
25 controllers and observers themselves have not adequately

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1       been briefed during the course of the LILCO training program.  
2       For example, a comment would have been offered to the Board  
3       from the January 28th, 1984 drill as follows: "For  
4       future drills, controllers will need to be better briefed  
5       to prevent miscommunications which occurred early at the  
6       EOC. It is unacceptable to brief fellow controllers at  
7       different locations on how the events are to occur fifteen  
8       minutes on the day before the drill. This unfamiliarity  
9       caused confusion amongst the participants and also created  
10       inconsistencies in procedural usage."

11                 From the February 8, 1984 exercise, the County  
12       would have offered the comment to the Board, "IMPELL  
13       observers not briefed or knowledgeable enough on procedures."  
14       And also the comment, "Not sufficient observers."

15                 And finally the comment, "DOE observer created  
16       a lot of confusion in EOC. Took away from time and placed  
17       doubt in the mind of some of the people as to how DOE RAP  
18       would function."

19                 In summary, if the County would have been able  
20       to continue and conduct its cross-examination regarding  
21       questioning of the LILCO witnesses based upon the comments  
22       and evaluations performed by drill and exercise controllers  
23       and observers, the County would have demonstrated: One,  
24       inadequate training in the area of communications for LERO  
25       participants; two, that there have been inadequate briefings



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given to drill and exercise participants; and, three, that  
2 drill and exercise observers and controllers themselves  
3 have not been properly and adequately briefed prior to  
4 their involvement as observers and controllers in the LILCO  
5 drill and exercises.

6 That concludes the County's offer of proof.

7 (Whereupon, the offer of proof is concluded at  
8 6:45 p.m., Thursday, June 14, 1984. The hearing  
9 is to reconvene on Friday, June 15, 1984 at 9:00 a.m.)

10  
11 \* \* \* \* \*

12 END....

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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: Thursday, June 14, 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, Jr.*

Official Reporter - Signature