Original

# UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION

in the matter of

LONG ISLAND LIGHTING COMPANY

Docket No. 50-322-01-3

(Shoreham Nuclear Power Station Unit 1)

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UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION 2 BEFORE THE ATOMIC SAFETY AND LICENSING BOARD 3 In the Matter of: 5 LONG ISLAND LIGHTING COMPANY Docket No. 50-322-0L-3 (Shoreham Nuclear Power Station, : (Emergency Planning) 7 8 9 Court of Claims State of New York 10 State Office Building Room 3B46 11 Veterans Memorial Highway Hauppauge, New York 11787 12 Wednesday, June 13, 1984 13 The hearing in the above-entitled matter resumed 14 at 9:00 a.m., pursuant to recess, 15 BEFORE: 16 JAMES A. LAURENSON, ESQ., Chairman 17 Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission 18 Washington, D. C. 20555 19 DR. JERRY KLINE, Member Atomic Safety and Licensing Board 20 U.S. Nuclear Regulatory Commission Washington, D. C. 20555 21 DR. FREDERICK SHON, Member 22 Atomic Safety and Licensing Board U.S. Nuclear Regulatory Commission 23 Washington, D. C. 20555 24 25

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## PROCEEDINGS

JUDGE LAURENSON: Is everyone ready? All right, the hearing is back in session.

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

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

### CROSS EXAMINATION

#### BY MR. MILLER:

Q Gentlemen, would you please turn to Page 13 of the testimony?

A (Witnesses complying.)

Q Mr. Berger, on Page 13, there is a statement, the second sentence: The basic approach to training program design is presentation of the information to the learner, application of the information by the learner, and critique

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of the application by the instructor.

Do you see that?

A (Witness Berger) Yes, I do.

Q I take it from your testimony, Mr. Berger, that all three of these steps are necessary to a good training program; is that right?

A I believe so.

Q Is it your opinion, Mr. Berger, that these three steps are all that is necessary to a good training program?

A If your interpretation of the word "good" and my interpretation of the word "good" are the same thing, yes.

Q What about recruitment of the personnel in the training program so that you know who your trainees are and what their capabilities are? Would that be important?

A No. As an instructor, I've had many classes where before I walked into the classroom I had no idea who my student population was going to be.

What about the situation or conditions under which your trainees must work so that, for example, trainees know what to expect in terms of the work situation? Is that important?

A I'm unclear exactly, Mr. Miller, as to what your question is.

Q Let me try another one, then. What about the

receptiveness of the trainees to the information being presented? Is that important?

A Yes.

Q Is that included anywhere in these three steps you mentioned on Page 13 of the testimony?

A It's observable in the practice of the skill.

I think it's also the fact that the students come to the class shows an intent to learn, in the case of adults.

Q Would you say then, Mr. Berger, that if students in the case of adults do not come to the classes, that is that attendance would be low, that that would say something about the intent of the students or trainees to learn?

A Well, there could be a number of reasons why people do not attend classes.

- Q That could be one of the reasons, though?
- A It could be one of the reasons.
- Q Let me ask you about one more aspect then of a good training program. What about testing so that you can determine whether each trainee has the capabilities or the qualities to perform the tasks being taught? Is that important?

MS. MONAGHAN: I'm going to object to that question. I think it's beyond the scope of the admitted contentions.

JUDGE LAURENSON: Are you asking about testing

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for pre-selection --

MR. MILLER: No, Judge Laurenson. I'm trying to ask Mr. Berger about the steps in a training program which are important to ensure the soundness of a good training program.

JUDGE LAURENSON: Overruled.

WITNESS BERGER: One more time, Mr. Miller.

BY MR. MILLER: (Continuing)

Q Well, I'm just curious about the aspect of testing so that you can determine whether your trainees or students have the capabilities or the qualities to perform the material being taught. Is that important?

A Yes, I believe it is.

Q Mr. Berger, when you say application of the information by the learner, that would be the second step I guess.

A Right.

Q Do you mean by that the opportunity to practice?

A Yes.

Q Would you agree with me, Mr. Berger, that the conditions, for example, weather, equipment, stress under which practice is accomplished, is a significant part of the training process?

A Well, I think to the best of one's ability you want to try and simulate the actual working condition.

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So, conditions such as the ones I mentioned could be an important part of the training process?

Not necessarily all the conditions, no, because not all the conditions may consistently exhibit themselves during the course of the performance of the skill.

What about condition of equipment? Would you want to use in your training program the types of equipment that may actually have to be used by the trainee in a real life experience?

A Well, either the actual equipment or perhaps a mockup of the equipment, something that would simulate the actual equipment.

Mr. Berger, further down on Page 13 there is a sentence that says: First, information on tasks and skills is presented to LERO trainees.

Do you see that?

A Sure.

Do you distinguish between tasks and skills?

The task, as I would understand it, would be the job to be performed; the skills would be the actual performance of the job.

So, you do distinguish?

A Yes, I do.

Could you give that to me again, Mr. Berger?

Sure. The task, as I understand it, would be

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end #1 Joe flws the job to be performed. And the skills would be the ability to perform the job, in my understanding.

Q Okay. In that same sentence, Mr. Berger, when you read that sentence, do you mean to say that instructors under the LERO training program impart classroom knowledge to the trainees?

A In some cases, yes.

Q And I gather that this requires that the instructors to have acquired such knowledge beforehand, then; correct?

A In some cases, yes.

Q Well, in some cases, could an instructor who has not acquired knowledge regarding the material to be presented to the student beforehand, could such an instructor impart knowledge to his students?

A Well, the primary instructional vehicle, as stated in this sentence, is the video tape.

Q In the LERO program?

A Correct. In this particular sentence.

Q Yes, sir. But in the LERO program, instructors in the classroom setting are present also to answer any questions that may come up, correct?

A That is correct.

Q And to do so, they would need, wouldn't they, to have the knowledge necessary to be able to answer such questions?

A (Witness Varley) Perhaps I could --

Q I asked Mr. Berger, Mr. Varley, if he could answer the question.

A (Witness Berger) I am going to defer that to Mr. Varley.

Q Mr. Varley?

A (Witness Varley) Perhaps I can shed some additional light on this particular aspect.

Q If you are going to answer my question, that is fine. My question is: Under the LERO training program, where instructors are expected to be able to answer questions from the trainees, isn't it true that the instructors need to have adequate knowledge to be able to answer such questions?

A That is what I am going to try to answer for you. LERO classroom instructors are; one, prepared prior to going into the classroom to cover the material that is presented in the classroom, and that is identified by Mr. Dennis Bahr before they went into the classroom.

Additionally, each of the instructors was given the telephone number to call back to the LERIO office where the entire staff of LERIO who wrote the plan and procedures, who wrote the trainin program, were available to answer questions should there be a question come up in the classroom that was beyond the scope of the particular material being

1 presented that day.

So, there was not only an instructor in the classroom who was prepared to answer questions on the material being covered that day, but we also gave them the capability and the flexibility to respond to questions beyond the scope of the material that was being presented that day.

I hope that answers your question.

Q Let me see if it does. Are you telling me Mr. Varley that the LERO instructors did not have to be knowledgeable about the subject areas in teaching the classroom sessions?

A No, that is not what I said. What I said was they were knowledgeable on the material being covered that day, but in addition they had the capability of contacting people who were knowledgeable on the overall program should the question arise that was not on the material being covered that day.

For example, someone that taught -- one of the instructors that taught transportation may have not been in timately familiar with one of the other modules that was being presented in another classroom session.

If the question came up about that other session, he had a telephone number and could get the answers to that individual's question, and answer that individual's question

before they left the classroom that day. We thought that was important. Mr. Daverio, you are familiar with this telephone 3 number that Mr. Varley is talking about? 4 (Witness Daverio) Yes, I am. Was it ever used? Yes, it was. 8 Q Could you tell me how often? A It is not my telephone number. They didn't call 9 me. They called Mr. Varley. He might be able to tell you 10 how often it was used. 11 Mr. Varley, can you tell me then how often that 12 13 number was used? (Witness Varley) Yes. In the initial round 14 of training that went on from July, I believe, through 15 September, we would average about ten to fifteen phone calls 16 a week from instructors in the field. 17 Q How many classes were going on during that 18 initial period of time? 19 A I believe we were conducting two, maybe three 20 classes a day. So, it would be fifteen classes a week, I 21 believe. 22 23 So, you are saying during the initial stages, on the average, one call per class session would come into 24 LERIO? 25

- A I guess that is what an average would be.
- Do you know, Mr. Varley, whether the -- were you the person on the other end of the phone?
  - A Yes, I was .
- Q Were you always able to answer the questions being asked?
- A I answered most questions, and I also deferred questions to people in the technical group who had familiarity with certain procedures .
- Q When you had to defer to other persons, Mr. Varley, what did the classroom instructor do while waiting your response?
- A You have to understand the concept in which classroom training is conducted. There were times when the students were working on their workbooks, and the instructor was free to use the telephone to contact us back at LERIO. When he called, and if I did not have the answer immediately available, and wished to defer it to someone in technical group, it is merely the matter of transferrring the phone call over and it took maybe one or two seconds.
- A (Witness Daverio) Not only that, Mr. Miller, you have to realize early on in the program we realized that because of the magnitude and the overall concept of the program, everyone in LERIO works on the same floor.
  - Even if the phone was busy, all Mr. Varley had

the building, and everyone was right there that he would 2 3 need. O Mr. Varley, do you consider yourself -- let's talk about during the time of the initial classroom training. 5 At that time, did you consider yourself knowledgeable in 6 all the subject areas being taught by the LERO instructors? 7 (Witness Varley) To a large extent, yes. 8 And yesterday you told me, I think, that you 9 personally taught a couple of the class sessions. Taught 10 the Coast Guard, correct? 11 12 That is correct. 13 And what class sessions did you teach? I taught the accident management table tops for 14 the first series. 15 Do you consider yourself knowledgeable, Mr. 16 Varley, in matters relating to the traffic control aspects 17 of the LERO program? 18 Traffic control aspects as was outlined in the 19 20 procedures in the training material that we had developed. What about knowledgeable with respect to how 21 to teach trainees how to perform such traffic control 22 functions? 23 Again, you will have to remember that the class-24 room training was not intended and designed to teach traffic 25

to do was go out of his door and walk to the other end of

guides how to guide traffic. That is not the intent

of the classroom training sessions.

There weren't guestions along those lines

There weren't questions along those lines at that point.

Q The intent during the classroom training sessions was to impart general knowledge to the trainees?

A Like we said yesterday, the classroom training sessions were designed to give the individuals an awareness of the emergency plan, the implementing procedures, and the job responsibilities that were outlined in that program.

Like we said yesterday, the classroom training sessions were not considered the termination point of the training program, and we did not intend the classroom training sessions to have an individual leave the classroom training session with the capability to perform its job.

That is not the intent of the classroom training sessions.

Q And I think you told me, Mr. Varley, that that is why there was no testing of the student trainees during the classroom training sessions, is that right?

MS. MONAGHAN: Objection. I think that kind of question is outside the scope of the Contentions that have been admitted.

JUDGE LAURENSON: You are asking if that was his testimony yesterday?

MR. MILLER: Yes, sir. I think that is what 1 was said yesterday. 2 JUDGE LAURENSON: I remember that we had an 3 objection along these lines. I don't recall that testimony coming in. Objection is sustained. BY MR. MILLER: (Continuing) Mr. Varley, down towards the bottom of page 13 8 there is a mention about the drills -- it talks about 9 drills that occur early in the training process, and then 10 later talks about the later phases of the drill and exercise 11 program, do you see that? 12 (Witness Varley) Yes, I do. 13 Could you just tell me, generally, when were the early drilis? What period of time? We considered the early drills from the completion 16 of the classroom training, which was some time in September 17 or early October, through mid-January. 18 And the later drills, when were they held? 0 19 From January 28th on. 20 They are still on-going? 0 21 That is correct. A You mention, Mr. Varley, it says -- again towards 23 the bottom of the page -- during drills that occur early 24 in the training process, observers critique LERO workers 25

while they performed their LERO tasks to correct inappropriate

actions and reinforce appropriate performance. Do you

see that?

A Yes, I do.

Q Critiqueing trainees is not the same as testing trainees, is it?

A Under my definition of, 'testing' -- testing an individual in this particular instance allowing the individual to perform his job function in the field.

That is a test to see whether the individual can, in fact, carry out those functions.

The critiquing portion of that is the observer controller providing input back to that individual on whether he is doing the job properly or not. Again, we emphasize that early in the drill program the controllers and observers were there to help the individuals work through their particular job function, as it was the first time that these individuals had been out of the classroom into the field, in the facilities, using the actual equipment that they were to use during a real emergency.

Under those conditions the controllers and observers were there to assist and aid the individual where necessary to be able to perform that function.

End 2 24

Q If I understand yesterday's testimony correctly,
Mr. Varley, we have agreed, haven't we, that during these
drills many of the trainees are not actually observed
during the course of their performance by controllers or
observers; isn't that right?

A No, I don't think we agree on that.

Q I thought we had some testimony regarding perhaps two out of ten bis drivers are actually observed.

A (Witness Daverio) Yes, but we also stated that part of our drill and training program is their class two license training which is a week of supervised instruction on how to drive a bus, what to drive a bus, including classroom instruction, and eventually passing a test from the Department of Motor Vehicles.

That is part of the program also, Mr. Miller.

Q I understand that. I thought we had an understand ing and an agreement that during the drills many trainees are not observed during all aspects of the drills.

Now, are you disagreeing with that, Mr. Daverio?

A If you narrow it to the drills, that is what we stated yesterday.

A (Witness Berger) Mr. Miller, in the text, second edition, American Society of Training and Development, which is a standard in principle text used by most training and development people in the industry, interviews, job

sampling, simulation and visual observation are considered and listed as a performance test, in addition to paper and pencil testing.

In the issue of job sample or performance tests clearly states that a portion of the job may be observed to determine the participant's ability to perform a skill.

Q I understand that, Mr. Berger. What I am trying to get at is that not every LERO trainee is observed during all aspects of the LILCO drill program. Therefore, by definition there can be no critiquing or testing of that individual during those aspects.

Do you disagree with that?

A I disagree with that because, as Mr. Daverio pointed out and as also stated in the ASTD journal, the fact that the bus drivers were able to pass a state examination proving that they cound indeed drive a bus would be a job sample, a portion of the skill to be performed. Just as in the case of other LERO members going out and being able to drive a route would be a sample of the job to be performed.

Q I understand. I think we are talking about different things. My only question is -- I would like to try to establish a yes or no to this, if you could let me ask my question and if you would give me a yes or a no.

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Are all LERO trainees personally observed by controllers or observers during all aspects of the LILCO drill program?

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Yes or no? Anyone on the panel can answer.

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Yes or no?

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A (Witness Daverio) The answer is no.

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Q On page 14 there is a statement at the top of the page, "This standard design strategy has been the

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foundation of the educational process for LERO and is

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the basis for most emergency planning instruction througout

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the United States."

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Do you see that statement, Mr. Berger?

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A (Witness Berger) Yes, I do.

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Q I take it that this is your judgment then, correct?

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A To the best of my knowledge, most utilities

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throughout the United States, when it comes to off-site

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emergency planning, use a three-phase process of classroom

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instruction, drills, table top exercises, and FEMA graded

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exercise.

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Q Do you know, Mr. Berger, of any utilities that do not use this three-phase approach?

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A Not to the best of my knowledge.

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Q How many are you familiar with?

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We are talking about radiological response

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training?

A Yes. I understand that.

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I would say familiar with maybe ten, 15, both in the east coast, west, midwest.

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Q If I was to ask you to describe the training programs of these ten or 15, would you be able to do that?

Are you familiar to that extent?

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A I am familiar enough to know exactly what phases they use in training. I couldn't go through and describe every module that they have in their training program. But the general outline, if you will, of the type of training that is done, yes.

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Q In those training programs you are familiar with,

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Mr. Berger, do any of them use utility workers to

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perform all of the off-site emergency response tasks that

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need to be performed during a radiological emergency?

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A All of the tasks?

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Q The tasks that need to be performed.

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A Yes. You statement, I believe, was "all of the tasks."

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Q Let me rephrase it.

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The programs that you are familiar with, the ten or 15, do any of them use utility workers to perform the same kinds of tasks and skills that are required of the

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LILCO personnel under the LILCO transition plan?

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A Some of the tasks.

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How many? Which ones, which tasks are you talking about? Is this going back to the bus drivers at Indian Point?

Yes.

Any other examples?

For of -site radiological emergency planning, not that I can think of.

(Witness Daverio) I think as we stated yesterday, it wasn't only bus drivers. Con Ed and NYPA also provided support in the EOC in Rockland's compensating plan, in my understanding. They did dose assessment and other functions also. So it was more than just the bus drivers.

Q Let me just follow up with that for a second, Mr. Daverio.

Is it your understanding that at Indian Point the utility workers provide the primary bus drivers in the event of a radiological emergency?

It is my understanding in the compensating measures drills that were run, the busses were driven by utility workers.

Yes, sir. I am not asking about the drills that were run. I am asking, if there was an actual emergency, is it the utility workers that would be the primary bus drivers relied upon under the Indian Point plan?

A (Witness Renz) Perhaps I can respond to that. Although utility workers were exercised during the FEMA grade exercise, I don't recall whether the utility workers would be the primary responders in regard to the bus drivers. They are the primary responders in regard to the dose assessment area, at least at the present time.

Q Would you look, please, at page 15 of the testimony. Let me ask you a general question, Mr. Berger.

Would you agree with me that in training programs generally it is important to determine whether learning has occurred by the trainee?

A (Witness Berger) Yes, I would think at some point in time, Mr. Miller, you would want to determine that.

Q Now, looking at the first full paragraph on page 15, it says, "Upon completion of the classroom training, LERO personnel, with the exception of supporting organizations such as the U.S. Coast Guard, American Red Cross, et cetera, are required to participate in the drill and exercise program."

Do you see that statement?

A Yes, I do.

Could you tell me what non-LILCO personnel are required to participate in the LILCO drill and exercise program?

A I did not participate in the design of the drill

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END 3

or exercise program, Mr. Miller. But I believe Mr. Varley did, and I would defer to him.

Q Mr. Varley, could you tell me, I just want to know the specific organizations that you believe are required to participate in the drill and exercise program.

A (Witness Varley) Yes. If you will give me a minute to refer to the plan.

(Pause.)

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A (Witness Varley) I think to begin with, what we have to establish is the fact that what we were talking about in the context of this paragraph is the individuals that we have outlined in the LERO training program which are required to participate in the drill and exercise program.

It's my ominion, and we could defer to Mr.

Daverio on that, that we cannot require the United States

Coast Guard to participate but that we encourage them to

participate in a drill and exercise program to also allow

us to reinforce the knowledge that they received in class
room training.

Q Well, can we try it this way, Mr. Varley. Do you agree that the U. S. Coast Guard, in your opinion, could not be required to participate in the drills or exercises, correct?

A That would be my interpretation, yes.

Q Do you believe the American Red Cross could be required to participate in the drill or exercises?

A I don't believe they can be required. I believe they are requested to participate.

Q Okay. Now, what other support organizations does LILCO rely upon in its plan that you believe could be required to participate in the drills and exercises, if any?

A I believe ambulance personnel would be required

to participate.

Q Anybody else?

A Yeah. I believe the response to that would be the helicopter company, those people that Long Island Lighting Company has a contract with to provide services.

Q Anybody else?

A Anyone that would have a contract with Long Island Lighting Company.

Q Mr. Daverio, who else would that be other than the ambulance personnel and the helicopter personnel?

A (Witness Daverio) IMPELL. They provide the Radiation Health Coordinator to the EOC. So, they would be providing that function.

Depending, as we stated yesterday, in the FEMA-graded exercise, we may, in agreement with FEMA, run some bus routes with buses, and the bus companies to the extent they would be providing buses to us would be participating to some extent. And we have a contract for those.

Q Is that it?

A I'm looking at the list if you will give me a second.

(Pause.)

Just to amplify on what Mr. Varley said on the American Red Cross and the one that he didn't mention, the Department of Energy, while we can't require them to

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participate because we have no contract, we do have letters.

We have a letter of agreement with the DOE to respond, and

we have had discussions with both the Coast Guard and the

Red Cross, and from those discussions it is my understanding
they would participate, though we can't require it.

Now, there is a list of some drills, Mr. Daverio, on Page 15. Have those drills all been conducted to date?

A Yes, several times.

Q Are these the early drills that we referred to earlier, the ones that would have been in the roughly September to mid-January time frame?

A They are examples of the early drills; that's correct.

Q So they would have been in that time frame roughly?

A I am not sure that we have not run one of these drills since the early time frame. But they were the early time frame drills.

Q Now, how did LILCO document these drills, if at all?

MS. MONAGHAN: Objection. That question is vague. I don't understand how the witness can respond to a question where the term "document" isn't defined.

JUDGE LAURENSON: Sustained as to the form.

BY MR. MILLER: (Continuing)

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Q Mr. Daverio, did LILCO document in any way the performance of these drills?

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MS. MONAGHAN: Same objection.

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JUDGE LAURENSON: When you say document, are you asking whether they generated any papers or written

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materials? Is that what you mean?

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MR. MILLER: Yes, sir, that's what I mean,

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generated any records.

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JUDGE LAURENSON: The objection is overruled with that qualification.

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WITNESS DAVERIO: Yes.

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BY MR. MILLER: (Continuing)

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Q Could you tell me generally N

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Q Could you tell me generally, Mr. Daverio, what records were generated by LILCO to document these drills?

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A Well, there are many ways of documenting. It

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starts off with a schedule which says what date we are

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going to run the drill, leading to the notification to each

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person to participate in the drill and when we expected them

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to come, to outlines of the drill to be given to people so

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that they knew the types of things that were going to happen,

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to the scenarios that were run, to the participant comment

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forms, which were given to every participant, attendance

sheets, which told us who came, and -- excuse me a second.

documented so that we could track who was at what drill and

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And then all of that was put into a computer and

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what they -- what drill they did attend.

Q Were there any critique or evaluation forms by ... observers or controllers for these early drills?

A Yes, there were.

O Mr. Daverio, I'm not interested in schedule, the notification, the scenarios, or the computer. I'm interested in the remaining, so let's take them one at a time. The outlines of the drills given to participants.

Are you saying that the drill participants were informed beforehand about the drill, for example, where it was going to take place, the timing of the drill, et cetera?

A Yes.

Q Was that true in all cases in the early drills?

A Yes.

Q Has that been true in all cases in the later drills?

A If I could just confer for a second.

(The panel witnesses are conferring.)

We have sent out notifications to all our drills on the time, the date and the place and in the early drills, where and how to get there.

Q I gather then, Mr. Daverio, that at least to date there has been no drill or exercise conducted by LILCO which tested mobilization, tested whether participants would report without prior notice of the drill being conducted?

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MS. MONAGHAN: Objection. I think that that has been gone into extensively on the record of this hearing during the mobilization testimony and doesn't bear having repetitive testimony on it at this point.

JUDGE LAURENSON: Overruled.

witness daverio: We have not done a complete mobilization drill. We have done components and have time estimates. We have done a notification drill where we have checked out the call-out list to notify people and make sure that we could get them.

BY MR. MILLER: (Continuing)

Q Yes, sir. My only question is, have you had any of these kinds of drills that have been unannounced to the participants eforehand?

A We haven't reached that point yet.

Q Now, with respect to the participant comment forms, let me ask this of Mr. Renz.

Mr. Renz, you might recall during communications we discussed some of those participant forms. Do you remember that?

A (Witness Renz) To an extent, yes.

Q Has LILCO, Mr. Daverio, retained all the participant comment forms that were completed by participants following the drills or exercises?

A (Witness Daverio) I can't say that we have

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retained every one. We have a stack of them, and they have all been provided to you.

Q I want to just show you a piece of paper, Mr. Daverio. It has been completed. All I want to know is, has that drill participant form been used by LILCO in its drills?

MS. MONAGHAN: May I have a copy of that form that you are showing the witnesses, please?

MR. MILLER: You will have to look at his.

I'm just trying to establish if that is one of the participant forms that has been used by LILCO.

WITNESS DAVERIO: It's --

MS. MONAGHAN: Mr. Daverio, before you answer the question, I would like to see the form, please.

. (Ms. Monaghan approaches the witness table and reads the document.)

WITNESS DAVERIO: It is a LERO form, and it has been used. And I am not exactly sure how often.

BY MR. MILLER: (Continuing)

Q Do you have Attachment 25 to the testimony, Mr. Daverio? Would you look at that, please?

A (Witness complying.)

Yes, I see it.

Q The pages attached to the LILCO testimony as
Attachment 25, these are also samples of drill participant

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forms that have been used by LILCO; correct?

That's my understanding.

And it's your understanding that these forms, once completed by participants, have been retained by LILCO and provided to the County; correct?

Those that we have retained, that's correct.

Now, is it your understanding that the type of drill participant form which I just handed to has also been used by LILCO, retained by LILCO, and provided to the County?

A As I stated, that was a LERO form. I do not know how many of those exist. Mr. Varley may be able to give you more of a definition of how many do.

Mr. Varley, I would like to find out. Could you tell me?

(Witness Varley) I'm not sure that I can shed much more light on that particular aspect of it than Mr. Daverio. If I could look at that document one more time, please?

(The document is handed to the witness.)

What concerns me is that it appears there is a date of 12/15/84 on this document. What I would like to do is spend a moment and find out exactly what drill we conducted on 12/15/84.

Q Yes. Mr. Varley, let me make clear what I'm

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trying to get at here. I simply want to know if that is a form that was used in the LILCO training program, filled ... out by drill participants, retained by LILCO and/or IMPELL?

A In further looking at this particular document,
I'm going to try to answer your question. It appears that
this was used on a drill that we ran on February 15th of
'84. It's quite possible that what occurred was that a
particular facility used this form for the people operating
out of the facility to collect some information.

It was not our intent to collect information, and it may have been that the lead individual, the lead controller, for that facility was not aware and made up this form to pass out to the participants at that facility.

That's the best possible explanation I can give for this document. The fact that these in fact are in existence and the fact that we turned them over to you, indicates that, yes, in some form they were used during the February 15th drill.

Q Mr. Varley, were you involved in the recent search of IMPELL files and the production of documents to Suffolk County pursuant to request by me for such drill participant forms and critique evaluation forms by controllers and observers?

A With respect that I worked with our counsel to ensure that every drill comment form that we had in our files,

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both at IMPELL and at 100 Old Country Road were turned over to you, yes.

Q And would it surprise you, Mr. Varley, if I told you that that is the only form of that sort filled out by any drill participant that was produced to the County?

A No, it wouldn't surprise me, because as I stated just a moment ago there was no intent to collect drill participant comments in the February drills. So, it's quite possible that another reason that this particular form was produced was that you have to understand the process we go through when we prepare to run a drill at a particular facility.

We prepare bus driver packets, we prepare traffic guide packets. We put in all the appropriate information, whether that be Hagstrom maps, bus maps, driving instructions, et cetera. In the early drills, what we did was we also put in each packet a comment form for a particular job function that we wanted to obtain comments from.

It's quite possible that this may have been in a packet for some unknown reason that was not noticed when the participant went out, and the form got filled out when he was out in the field and just happened to turn it in. I am not familiar with this form and its origin. This is not one of our standard forms that we used in the early drill program, and I'm a little surprised that in fact this sheet

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was passed out. I'm not familiar with it.

Is the standard form, Mr. Varley, the forms that have been attached as Attachment 25 to the testimony?

Yes, they are. Yes.

Well, I gather you are telling me you are really not sure about this piece of paper but that there is some possibility that the forms that were used just weren't collected following the drills?

That possibility could exist.

If that's the case I guess, Mr. Varley, the drill participant forms, at least in that instance, didn't do much good did they?

There was no intent to have drill participant forms. So, there was no good or bad associated with it. We didn't intend to hand out drill participant forms in February. We weren't looking for them; we weren't looking for a return of them.

Was that because in February, Mr. Varley, you had observers and controllers that were evaluating the drill participants?

That's correct.

Q Let's talk about the last category of documents then, Mr. Varley, or Mr. Daverio, the critique and evaluation forms that have been completed during the drills.

To your knowledge, has LILCO or IMPELL retained

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all such critique evaluation forms once completed following a drill or exercise?

A Everything that we have retained was turned over to you recently in your latest request.

Q Well, that doesn't answer my question. Have you retained all the critique evaluation forms that have been completed following drills or exercises?

A No.

Q Could you give me a rough estimate, Mr. Varley, of how many drills and exercises have been conducted to date during the LILCO training program?

A If you give me a minute to look, I can come up with a fairly accurate number.

Q Just an estimate; it doesn't have to be on the nose.

A A very rough estimate would be sixty, seventy drills.

Q And do you know, Mr. Varley, how many critique evaluation forms for different drills or exercises were produced to the County?

A I know it was a stack of at least twelve inches.

Q Would it surprise you if I told you that the only evaluation critique forms produced to the County came from drills, one drill in November, one drill I think on January 28th of this year, two drills in February, one

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February the 8th and one February the 15th of this year, and then a drill held in late May by Mr. Babb regarding the traffic guides?

A Are you referring to the critiques as strictly the comments that were provided by the lead drill controller to LILCO management? Is that your definition of critique?

Q Well, you know the paper that was produced to the County. I'm talking about that paper.

And I'm getting at the fact that at least the way I read the paper it appears that we were given critique forms from drills held on five different dates and yet you are telling me there have been sixty to seventy drills or exercises conducted by LILCO.

And I'm wondering, does that mean that you retained five or so out of the sixty to seventy drills, records regarding the sixty or seventy drills that have been conducted?

A I think you have to understand the process that we are going through in preparing --

Q Yes, sir. I really don't want to know the process. I just really want to know the answer to my question.

MS. MONAGHAN: I believe the witness was trying to answer your question, Mr. Miller.

MR. MILLER: No.

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BY MR. MILLER: (Continuing)

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Q I don't want to know the process. I want to know if LILCO or IMPELL have retained the drill documents, these critique and evaluation forms, and whether they have only retained five or so from the sixty or seventy drills or exercises that have been held to date?

A Part of the number that I gave you for sixty or seventy drills includes table tops for which we do not collect critiques.

Q Okay. Let's exclude the table tops. How many -- what is your estimate of the drills or exercises that have been conducted to date?

A I would say thirty or forty.

Q Okay. Now, is it your testimony that you have retained the critique evaluation forms completed following drills or exercises, for only approximately five or so of the thirty to forty drills, exercises conducted to date?

A That doesn't surprise me that that is the number, no.

What I might like to add for the record is that the reason I say I am not surprised is that if you understand the process we go through the early drills, as we stated prior, were the first time that individuals were in the field, and as such, they were as much training experiences with the controllers and observers providing input to the participants; we in fact collected information from both the participants and the drill controllers, and that was factored into how we conducted future drills and exercises.

We didn't feel in the early drills and exercises that it was necessary to provide the formalized critiques as the organization had not progressed to the point where that was necessary.

It has been LILCO's position that starting with the January 28th drill, that we run the drills on a more structured format as far as critiquing the individuals and providing documented critique -- written critique material at the end of those drills and exercises.

Well, Mr. Varley, in light of that explanation 1 I feel compelled to ask a couple of more questions. The 2 later drills and exercises started around January 28, right? 3 That is correct. And could you give me an estimate of how many 5 of the later drills and exercises have been conducted by LILCO or IMPELL? I am not -- I don't really want to know 7 about the table tops. Just a moment, please. 9 (Pause) 10 From the January 28th drill to present we have 11 run five drills; three of which we have the written formal 12 critiques, and two most recent drills were just conducted 13 last weekend, yesterday, and those formal written critiques 14 are still in the process of being written. 15 You have run but five drills since January 28th? 16 That is correct. 17 Have you run any exercises? 18 I guess what we should clarify is that when I am 19 talking about drills, we are talking about the January 28th 20 drill, two drills in February, and two drills this month. 21 We have also run table tops extensively. 22 Are you including exercises in your ---A Yes. 24 Are you pretty sure about that number, Mr. Varley? 25

A Yes, I am.

Judge Laurenson, I have to look through some papers, but we will come back to this.

If you will look please at page 16 of the testimony.

The two drills or exercises, Mr. Varley, at the top of page

16, these fall within the category of the later drills,

correct?

A Give me a moment to refresh my memory.

(Pause)

Yes. If you will look at the two drills that are listed, I believe the EOC/ENC offstaging areas, EWBF drill, is the January 28th drill. The SNOOKS/LERO interface drill is prior to January 28th.

Q Mr. Varley, do you agree with Mr. Berger's comment yesterday that it is important to distinguish between drill and exercise?

A I am not completely familiar with exactly the context in which that discussion occurred. My impression is the difference between a drill and an exercise is as I stated yesterday.

Q Let me ask you if you could clarify for me these two drills or exercises that were mentioned at the top of page 16, were they drills or were they exercises?

Let me ask -- you know, look at Attachment 5, Mr. Varley.

My confusion comes, I look at the title and it says: LERO

Exercise/Drill Scenario.

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A I think your confusion is no different than the confusion that most people within the industry have when

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they use the term 'drill' and 'exercise.'

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Unfortunately, that term gets interchanged quite a bit, depending upon the individual and the time that they

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are talking about a particular activity that is being run.

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Ultimately, what is necessary is that everyone

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should understand that a drill -- during a drill, the controllers and the observers are allowed to coach the

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participants; during an exercise, the philosophy is that

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the controllers should not coach the participants. That

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they are there to observe the participants and let the

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participants function on their own merits.

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people interchange the term 'drill' and 'exercise.' Whether the particular drill on January 28th was a drill or an exercise, to the best of my knowledge the drill on January 28th was conducted as an exercise, not as a drill, and I defer to Mr. Daverio to get his opinion on that, but I believe that is the way that that particular activity was run as an exercise.

Sometimes, in discussions or in writing things,

Q Is it your recollection, Mr. Varley, that the training drills or exercises in February; the February 8th, and February 15th drills or exercises were also supposed to

have been conducted as exercises, using your distinction?

A Yes. I believe they were to be run as exercises.

Q Do you believe, Mr. Varley, that a -- I am referring now on page 16 to the statement regarding the yearly exercises conducted by FEMA. Do you see that?

A Yes, I do.

Q Do you believe that a once a year exercise provides sufficient field experience to emergency workers?

A I don't believe that that is what that statement says.

Q No, it doesn't. It says, 'useful.' I am asking you do you believe it also provides sufficient field experience.

A It provides another opportunity for field experience.

Q But not sufficient in and of itself, correct?

A I don't quite understand your term of sufficient, and what it implies.

Q Well, assume with me that you have no field experience for your emergency workers during the course of the year, with the exception of the annual FEMA exercise. Would that exercise, in your opinion, be sufficient with respect to the training of emergency workers?

A The LERO program is not designed to allow the FEMA annual exercise to be the field experience portion of

the training program.

So, in that context no, the FEMA exercise by itself is not intended to be sufficient for LERO to train its people with.

Q Mr. Berger, let me ask you, in Answer 6 on page 16, we are talking about video tape presentations. That is your area, right?

' A (Witness Berger) That is correct.

Q Is it your testimony that each video tape presentation made during the LILCO training program provided detailed information of the subjects taught? I am looking at the detailed explanation of the subject.

A In respect to an orientation to the subject being taught, yes.

Q What do you mean, Mr. Berger, with respect to the orientation of the subject matter being taught?

A Well, once again, Mr. Miller, in the design of the program, the classroom sessions are used to orient the LERO participants to the job function.

Q Are you saying, Mr. Berger, that under the concepts of the LILCO training program, the video tapes were detailed, in your opinion as they needed to be to accomplish the purpose of the classrooms?

A Yes.

Q You wouldn't say that by watching the videos 1 the trainee would have known how to perform his job, and could have gone out and done it? 3 The intent of the video tape, once again, was to orient the participant to the job function with follow-on 5 work being conducted in drills and exercises. 6 So the answer to my question would be what? 7 . A The answer to your question would be that it 8 is just a portion of the training. 9 And merely watching the videos would not adequately 10 prepare the trainee to go out and perform his job, correct? 11 A It is a portion of the training. It is not 12 intended to be the entire training program. 13 Q Mr. Varley, in that same paragraph there is a 14 comment about the workbooks. It says the student is required 15 to read the material in the workbook and complete a set of 16 review questions during the classroom session. 17 Do you see that? 18 A (Witness Varley) Yes, I do. 19 Some workbooks were take home materials, weren't 20 they? 21 That is correct. A 22 So that statement is not true in the case of 23 all the workbooks used in the LILCO program, is it? The 24 workbooks were not completed during the classroom session. 25

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A In -- I believe it is two particular instances, the workbooks were designed to be taken home and then review pages returned to LERIO.

Q Would you agree, Mr. Varley, that the purpose of the workbooks under the LILCO program was to reinforce the information presented in the video tape presentations?

A No, I wouldn't agree with that statement.

Q You would not agree with that?

A Not in these two particular instances. There were no video tapes designed for these particular modules, and the workbooks were designed, in fact, for the individuals to develop their awareness of that particular information in something other than a classroom setting.

Q Let's talk about the workbooks other than these two particular ones. Would you agree with my comment in other respects that the purpose of the workbooks was to reinforce the information presented in the video tape presentations?

A Either to reinforce or to expand or to complement the video cape, yes.

Q Will you turn to page 17. There is a statement that starts at the bottom of 16: Trainee works through a LERO workbook, and the attached review exercises. He verifies that he has remembered and understood the information contained in the video tapes.

Do you see that statement, Mr. Berger?

Yes, I do.

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Mr. Berger, or Mr. Warley, perhaps, should answer this; it is true, isn't it, that the review exercises in the workbooks were open book, correct?

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(Witness Varley) Yes, that is true.

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Well, if that is the case, isn't it true also that they neither verified that the trainee has remembered or understood anything, isn't that right?

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No. I think they did, in fact, verify. If they looked at a question, and that question didn't trigger a response, an understanding of what the question was asking for, then it was clear that he didn't remember or he didn't

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understand the information for which that particular question was designed.

Varley, that if anything, the trainee verified that he

had remembered or understood the information, or that he

had not remembered or understood the information during the

Well, wouldn't it be more accurate to say, Mr.

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time of the classroom session?

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I am not quite sure I understand that question.

Well, using the LILCO approach, with workbooks and an open book review, and these review exercises, isn't it true that if anything, what the trainee would have verified would be that he remembered and understood or did not remember

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and understand the information during the time of the classroom session?

A Yes, that is correct.

Q (Witness Daverio) I think, Mr. Miller, it is important to point out in your questioning about what they remember and what the workbook also did and the review exercise did, was that it showed them that they had the information. That workbook was designed for them to take home and use whenever they wanted.

Exercises, drills, and the FEMA exercise are not closed book exams. Actually, in those particular instances, you were frowned upon if you don't go to the procedure to make sure you are doing it correctly. So, there is nothing wrong with them referring to material to make sure that they understand what to do.

I think that is how the procedures are written. There is no way that you can expect everyone to memorize every procedure. They should know where to go look for it, how to get the answer, and how to respond to what is in the procedure.

A (Witness Berger) I think the other point, too, is that if a participant during the course of the classroom did not understand something as shown in the self-check exercise, it was incumbent upon the participant and the instructor to try and resolve that at that particular point

in time.

So, your point of maybe not understanding may have occurred in the classroom, but the issue is when the student left the classroom, did he understand prior to leaving.

So, if they couldn't answer the question, they were to pose it during the classroom, self-check.

o Mr. Varley, it is true, isn't it, that the review exercises that were completed by the trainees were not graded in any sense by the instructors at the classroom sessions.

MS. MONAGHAN: Objection. It is beyond the scope of the contentions.

JUDGE LAURENSON: Sustained.

MR. MILLER: Judge Laurenson, the problem I am having is that these witnesses keep going back to this method used by LILCO in the classroom setting, and they keep telling me that students would ask questions, and that they had the review exercises, and that that demonstrated an understanding, and the fact that they remembered the material presented, and yet there was no way to verify that from the standpoint -- I believe -- from the standpoint that the review exercises were not reviewed by instructors with respect to determining whether the trainees had, indeed, remembered or verified that he could understand

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the information.

My question is a logical follow-up question to the discussion we have been having this morning.

JUDGE LAURENSON: This was the argument you made in support of the Contention -- I don't recall the number any more, the one that we rejected, as to whether this was required, and we found at that time that it wasn't, and now the test is whether any of the questions that you are asking, or the testimony that the County is offering, is relevant to an admitted contention.

So, you are going to have to demonstrate that the questions you are asking, when there is an objection, are either relevant to specific testimony that LILCO has filed, or to a particular contention.

I don't see that graded exercises or graded testing falls into any of those categories. I will give you the opportunity to show us that it does.

MR. MILLER: Judge Laurenson, my argument would be that when LILCO makes a statement in their testimony that the trainee works through a LERO workbook and the review exercies, he verifies that he has remembered and understood the information contained in the video tapes, my question would be, who verifies that.

Let me ask that question.

BY MR. MILLER:

Q Mr. Varley, who verifies that the trainee remembers and understands the information contained in the workbook?

A (Witness Varley) I believe it states right in that particular sentence that the trainee himself verifies that he has remembered and understood, and I think if you will also look further down in this particular paragraph, it points out that an instructor is available to answer questions that may arise while a student is working through the workbook and that upon the class's completion of the questions in the workbook, the instructor conducts a question-by-question review of the materail presented.

Q And to whom does the trainee verify that he

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remembers and understands the information contained in the video tapes?

He verifies that to himself and the instructor verifies that the class understood the material in the question-by-question reviews.

(Witness Berger) Mr. Miller --

And the question-by-question review conducted by the instructor, Mr. Varley, is conducted while the trainess have their workbooks and still have the review exercises in front of them, correct?

A (Witness Varley) I believe, as Mr. Daverio stated, there is no closed-book process involved with the LERO program.

Q And the trainces have their review exercises in front of them during these question-by-question reviews, correct?

That's correct.

And it is your testimony that that allows the instructor to determine whether the information has been understood by the trainee; is that right?

That's correct.

(Witness Berger) Mr. Miller, it is accepted practice in educational circles, especially in dealing with adults, to use, if you will, a self-check exercise.

The issue here is not whether or not you receive

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a grade of 80, 90, or 100. The issue is whether or not you understand the material.

And so with the instructor and the participants going question by question through their self-check exercise, if an individual does not understand the material, they have an opportunity to clarify that at that particular point in time by, one, asking a question, two, having discussion, or three, as Mr. Varley has already stated, if the instructor is not in a position to answer the question, which all instructors are not in all cases, to call back to a number and receive an answer.

It is standard practice.

- Q Mr. Berger, you say the issue then is whether the student has learned the material, right?
  - A I am sorry, Mr. Miller?
- Q What you said to me is that the issue, therefore, is whether the student or trainee has learned the material.
  - A Has understood the material.
  - Q Has understood the material.

Now, under the LILCO program, what prevents the trainee, if he or she so desires, from simply looking up answers in the workbook and filling in answers in the review exercises without even reading the workbook?

A (Witness Varley) That is the intent of the review exercise, is for an individual to look at the question,

ask himself, do I know the answer to this question; if I don't know the answer to this question, to go back and look through the material to find the answer to that.

That is the whole intent of the review exercise.

Q I understand that is the intent, Mr. Varley, but that wasn't my question.

What prevents the student, the trainee, from merely going to the review exercises, looking at the questions, looking up the answers, and never really reading the workbook? What control do you exercise over that not happening?

A I think the who'e classroom environment is one such that the individual reads the workbook. I don't understand your concept that an individual would not read the workbook but would merely skip to the questions and attempt to answer the questions without having read the material.

That is rather ludicrous to me.

Q What is your basis for saying that that would not happen? It is a presumption on your part, isn't it?

A It is my experience as being an instructor and in watching the program being conducted that that is, in fact, out of the question.

Q Mr. Varley, we have established that you instructed but a few classes, so let's talk about the bulk of the classes where you weren't there and you didn't instruct.

It could happen that students, trainees would not look at the material in the workbook but would go to the review exercises and simply fill in answers as they saw fit, and there would be no control over that in the setting of the LILCO classes. Isn't that right?

MS. MONAGHAN: I object to this line of questioning. I don't think it is relevant. He is merely asking the witnesses to speculate about what might have happened outside of his own view.

JUDGE LAURENSON: I think this is relevant to the sentence at the top of page 17 as to whether the trainees have remembered and understood the information.

The objection is overruled.

WITNESS VARLEY: I guess in answer to your question, if an individual could go straight to the review questions and answer the questions, then he is a pretty intelligent individual that was able to pick up this material straight from the video tape and answer the questions.

WITNESS CORDARO: I haven't personally gone through the workbooks myself and taken the tests or the review exercises -- excuse me, they weren't tests.

It would be more difficult -- it would be more of a difficult task, it would take longer to attempt to do what you are suggesting than to actually read the material

and then go back and look up the answer.

more inefficient. It takes longer to, in fact, just look at the test or the exercise and try to go back and look up the answer. It is better to have a knowledge of what the material is in advance. Then you can go right to the answer and do it much more quickly.

BY MR. MILLER:

a student myself on a number of occasions, it is much

And in past experience, in trying to do that as

Q Mr. Varley, under the LILCO approach a trainee could have filled in any answer he or she saw fit to fill in, and the instructor would not know whether those answers were correct or incorrect; isn't that right?

A (Witness Varley) No, that is incorrect.

Q Are you saying that the instructors went through and reviewed each and every answer to the workbook review exercises to determine whether those answers had been filled in correctly?

A To the best of my knowledge, that is correct.

Q Keep that answer in mind, Mr. Varley. We will come back to it.

A Certainly.

Q Mr. Berger, let me go back to video tapes for a minute.

A (Witness Be er) Surely.

Q Is it your opinion that the video tape presentations used during the LILCO program realistically depict the conditions that might exist during an emergency at Shoreham?

A Well, Mr. Miller, we never -- I take that back, we did. The conditions that we were depicting were off-site events. There were occasions when we actually shot video tape on site, but I would say perhaps 95 percent of the video tape showed conditions off site.

Q Yes, but do you believe that the videos realistically depicted the kinds of conditions that would exist during an emergency at the Shoreham plant?

A To the best of our ability, we tried to make the video tapes simulations of conditions as we understood them.

Q Did the videos, Mr. Berger, to your knowledge, anywhere depict that something -- that anything might go wrong or even that an emergency task to be performed might be a difficult task?

MS. MONAGHAN: Objection. That is beyond the scope of the admitted contentions, and it goes specifically to testimony that was stricken from Suffolk County's testimony.

MR. MILLER: Judge Laurenson, there are many references in this testimony to the simulated emergency

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conditions, the use of video tapes in the classroom setting, how that adds value to the learning process.

My question goes to the use of these video tapes by LILCO and whether those video tapes realistically depicted the conditions that could exist during an emergency.

JUDGE LAURENSON: As I said before, on these challenges, when the objection is made that it is outside the scope of the contentions, you are either going to have to show what part of the testimony, what page and question and answer you are questioning or the part of the admitted contention to which this is relevant.

MR. MILLER: Yes, sir.

Are you saying that the burden is on the county, once an objection is made that something is outside the scope of the contention, to demonstrate that it is not?

JUDGE LAURENSON: Well, I think in this case where I am calling upon you to do that, yes, because my recollection is that LILCO is right that, in fact, this is the material that I mentioned on Friday that we considered and we did strike this language.

Now, I understand and I recall from yesterday that you have asked us to reconsider it, but in connection with this cross-examination, I think you are going to have to show that you are cross-examining them on testimony, on

their own testimony, or that it is relevant to the
contention that the county submitted.

objection, I will just overrule it. I am not going to call upon you to make that showing. But where they are citing our prior rulings, then I think the burden is on you or else I will just rule that the objection will be sustained.

MR. MILLER: Let me try this, Judge Laurenson.

On page 18 of the testimony there are two segments at the top, beginning with the first full paragraph, "The nature of the subject matter being presented in the LERO training program lends itself to video tape as an instructional tool. Participants have the opportunity not only to hear about each task but, in many instances, to see the task being performed at the actual emergency location."

At the bottom of the page there is a statement that "The material presented in the LERO training program"

-- again referring to the video tapes -- "are simulations of LERO tasks converted into sound, motion, and color to provide the trainee with a graphic representation of an event."

Now, in my opinion, Judge Laurenson, both of those statements go to the fact that in the opinion of these witnesses, the video tapes realistically, graphically

depict simulated emergency conditions.

2

And that is what I am trying to inquire into.

3

(Pause.)

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JUDGE LAURENSON: But the question, as I recall,

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that is on the floor right now is whether these video

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tapes provide for realistic situations, whether they

consider things that are likely to happen. And the testimony

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that you cited goes to the medium that has been chosen

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here and the reason for selecting video tapes.

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The objection is sutained.

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BY MR. MILLER:

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Could you tell me, Mr. Berger, on page 18 at the

To the best of our ability, we tried, Mr. Miller,

13

bottom, what did you mean when you said that the videos

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provide the trainee with a graphic representation of an

to shoot the video tape at the actual location, an

video tape was shot at the proposed or actual EOC.

Relocation centers, we actually brought up, with the

example being when we were showing EOC activation, the

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event?

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one of the universities and showed the center being

constructed, brought up, operated, and then disassembled.

cooperation of the Red Cross, a relocation center over at

These were not studio simulations.

25

Excuse me?

1 These were not studio simulations. A 2 We went out on location to do it. 3 Let me come back to you, Mr. Varley. I think that when we last talked you told me 4 that the review exercises used in the classes were 5 reviewed question by question by the instructors to determine whether the answers were correct answers. 7 8 Have I summarized your testimony fairly? A (Witness Varley) What I said was that we 9 required the instructors to look at the completed review 10 pages either during the conduct of the classroom training 11 12 or shortly thereafter to make sure that the answers were 13 filled in and that they were correct. Q Do you recall your deposition that was taken 14 15 last fall, Mr. Varley? A I recall that I had a deposition taken, yes. 16 17 Do you recall discussing the review exercises 18 in the workbooks at the time of your deposition? 19 We covered quite a broad area of the whole training program. That was probably covered, yes. 20 21 Q Do you recall the following scenario of questions 22 and answers: 23 "Question: Were these reviews examined? "Answer: No, they were not. 25 "Question: Were they graded at any time?

1 "Answer: Strict grading system, no. There was 2 no grading system for the pages. 3 "Question: What sort of grading system did 4 you have in mind when you said not strict? 5 "Answer: Each individual's review pages were 6 not reviewed question by question with a pass/fail criterion." 7 Do you recall that? 8 Yes. And I believe what that is saying is that they were reviewed, but they weren't reviewed with 10 the intent of passing or failing an individual. 11 Q The first thing you said at your deposition 12 is that "the reviews were not examined by the instructor." 13 I would have to look at the actual deposition. 14 Why don't you look at the deposition during the 15 break, if you would like, pages 111 to 112, and anywhere 16 else in the deposition that you would care to. 17 Is it still your testimony now that the instructors 18 reviewed the exercises in the workbooks question by question 19 to determine whether the answers were completed and whether 20 the answers were correct? 21 A That was the instruction that the instructors 22 were given. I can't say, because I didn't participate in every classroom session.

I would like for you to look at your deposition.

25 A Certainly.

24

1 Q Mr. Berger, at the bottom of page 17, 2 continuing to 18, you talk about some of the advantages 3 of the video tapes. Do you see that? 5 (Witness Berger) Yes, I do, Mr. Miller. 6 One of the advantages, it would be fair to say, 7 would be cost effectiveness, too, isn't that right? 8 As compared to what? 9 As compared to using live instructors? 10 A No. 11 0 Videos are more expensive? 12 A You betcha. 13 Is it LILCO's intent to use the same videos 14 to the extent possible during the course of the life of 15 the plant? 16 A I believe it is -- and this is speculation on 17 my part because I am not part of the project team any longer 18 -- but my speculation would be that the video tapes would be upgraded, should there be a need to do so. 20 Q And during the course of the year, it would be 21 very difficult to give me an estimate of the number of 22 retraining and initial training courses that would have to 23 be given by LILCO. Could you do that, though? 24 No. I am not in a position to be able to do that.

But it is your belief that the videos would not

7 8

be cost effective to LILCO when compared to the use of live instructors --

A Well --

Q -- during the course of perhaps a 40-year life of the plant?

A Let me explain that. If you had one instructor and you were to consider one instructor's salary, which in this particular case is impractical, but if you were to have one instructor, the cost of the video tape would be more expensive than one instructor. Based on the fact that there are requirements for a number of instructors due to the number of people to be trained, video tape is more cost effective in this particular instance and is a better teaching vehicle in our opinion than perhaps a live instructor would be.

A (Witness Daverio) If I might, Mr. Miller, when we decided, since it was LILCO decided which training program to go with, we talked to not only IMPELL but other consultants concerning the different types of training that were available, the different types of training they would propose to use.

And it is a year ago, over a year ago when we started this, but to my recollection the cost differential for the initial program between video tape and live classroom instruction wasn't very large.

END 6

They both were proposing about the same cost.

Over a 40-year life, we haven't really done an estimate of that as of now.

A (Witness Cordaro) I remember, in reviewing the concept in general, cost wasn't one of my paramount considerations in approving the approach that was taken. It seemed like a good idea. It was conceptually sound. It had a lot of merits to it which are discussed in the testimony.

#7-1-SueT

And I don't recall personally what the cost information was. However, that was not a prime concern of mine.

(Witness Berger) It was our understanding, Mr. Miller, that the intent was to produce the best possible program. And while obviously we were not throwing money helter-skelter in budgeting the programs, at the same time we were not instructed by LILCO not to do a quality product.

MR. MILLER: Judge Laurenson, this would be a good time for the mid-morning break.

JUDGE LAURENSON: All right. We will take the morning recess now.

(Whereupon, the hearing is recessed at 10:32 a.m., to reconvene at 10:53 a.m., this same day.)

now. Before we resume the questioning, during the morning recess, just to keep everyone informed about what's going on, I learned that the Appeal Board this morning reversed us on the FEMA documents and found that County had not made a showing of compelling need to have the documents. And, so the Appeal Board has ordered that none of those documents will be released for discovery.

At this point, there isn't any action that's required on our part. But I just wanted to bring this to

#7-2-SueT 1

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your attention. I understand it's a twenty-five page decision. So, I haven't seen it or heard anymore about

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it than that.

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Mr. Miller.

5 6 BY MR. MILLER: (Continuing)

Mr. Varley, during the break, did you have a 0 chance to look at the deposition pages I referred you to?

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A (Witness Varley) Yes, I did.

9

Do you have your deposition in front of you?

10

No, I don't.

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Well, it doesn't matter. I would like a yes

12

or no to this question, please.

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Isn't it true that when asked at your deposition whether the workbook review exercises were reviewed or examined, that you responded no, they were not?

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A I can't answer that question with a yes or a

16 17

no.

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19

copies of three pages from the deposition of Mr. Varley,

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the cover page indicating the date of the deposition, Page

MR. MILLER: Judge Laurenson, I am handing out

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111 from the deposition, and a copy of the signed page signed by Mr. Varley, evidencing that the deposition was

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true and correct to the best of his knowledge and belief.

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JUDGE LAURENSON: In order to lay a proper

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foundation for impeachment, if that's what you are doing

7-3-SueT

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here, you have to ask the question the same way the question is asked on the deposition and read him his answer and ask if that's true. And I think that's the way you ordinarily use a deposition for impeachment purposes.

I don't know whether you have asked that same question to establish the impeachment purposes for which you apparently intend to offer this exhibit. But, in any event, since it has been distributed, do you want it marked now or do you want to ask some preliminary questions first?

MR. MILLER: I will try it again, Judge Laurenson. I think my question was very close, but I will make it the exact question asked at the deposition.

JUDGE LAURENSON: If he agrees, then there is no need to have the exhibit put in.

MR. MILLER: I agree.

BY MR. MILLER: (Continuing)

Mr. Varley, isn't it true that at your deposition last Fall, you were asked: Were these reviews examined. And you responded: No, they were not.

Yes or no, please?

A That's correct.

MR. MILLER: Judge Laurenson, there is no need then for the exhibit to be put into the record.

BY MR. MILLER: (Continuing)

Mr. Berger, would you go please to Page 17 of

#7-4-SueT

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Do you see that?

the testimony? There is Question and Answer 7. The first sentence of the answer says: The main purpose of any training program is to meet the instructional objectives of the program.

Do you see that?

(Witness Berger) That is correct. I do. sorry.

Can you tell me, Mr. Berger, briefly what the instructional objectives of the LILCO training program are?

There is a series of instructional objectives attributed to each of the skill areas. There is not one overall objective, although in the loose sense the objective would be to have an organization that is able to respond to an emergency, a radiological emergency at the Shoreham Nuclear Power Station.

These series of objectives, Mr. Berger, you referred to, are they the objectives that are specified, for example, in the LILCO workbooks?

A Correct.

Mr. Berger, on Page 24 of the LILCO testimony, there is an answer sponsored by you which discusses the educational strategy developed by J. S. Bruner, R. F. Mager and B. F. Skinner, acknowledged instructional experts.

Yes, I do.

#7-5-Sue7

Q Let me ask you about Mr. Mager. Do you subscribe to the teachings and principles that Mr. Mager has presented in various formats with respect to the training profession?

A As I understand those principles.

Q Would you agree that Mr. Mager is widely read and followed in the training profession?

A To the best of my knowledge, yes, he is.

Q Are any of the LILCO witnesses other than Mr. Berger familiar with Mr. Mager and his works in the training field?

Mr. Babb, you are. Mr. Varley.

A (Witness Babb) I have had some opportunity to read and explore some of Mr. Mager's techniques dealing with specific instructional objectives and objectives and things of that nature. And I do tend to concur with his philosophies.

Q Mr. Varley, what about you? Would the answer be the same for you?

A (Witness Varley) Yes, it would.

Q Mr. Daverio, did you indicate you also had read Mr. Mager's works?

A (Witness Daverio) No. I was going to say no.

Q I have handed out some pages which are excerpts from the Second Edition of Mr. Mager's book entitled

Do you have that in front of you, Mr. Berger?

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(Witness Berger) Yes, I do. A

Have you read this before, this book?

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Yes, I have, although some time ago.

Do you recall, Mr. Berger, whether you generally

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subscribe to the theories of preparing instructional

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objectives set forth by Mr. Mager in this book?

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As I understand it, Mr. Mager's philosophy as

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set forth in this particular text is that in designing any

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training program that it is an accepted practice to have

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established objectives in the program, that you do not

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commence training without some overall goal.

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Wouldn't it be fair to say, Mr. Berger, that

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it's Mr. Mager's philosophy of training that such in-

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structional objectives are indeed mandated by a good

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training program?

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Well, I believe it is his premise that all training programs should have some goal to be achieved as

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a result of the training program.

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MR. MILLER: Judge Laurenson, I would like to have this marked as an exhibit. I'm not sure what our number is.

JUDGE LAURENSON: This will be Suffolk County

EP-59.

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(The document referred to is marked Suffolk County EP-59 for Identification.)

#### BY MR. MILLER: (Continuing)

Now, Mr. Berger, if you would look at what has been identified as Suffolk County EP-59, for example, the second page in from the cover page, that says, doesn't it: Before you prepare instruction, before you select instructional procedures or subject matter or material, it is important to be able to state clearly just what you intend the results of that instruction to be. A clear statement of objectives will provide a sound basis for choosing methods and materials and for selecting the means for assessing whether the instruction has been successful.

Do you see that?

Yes. I believe you read it. A

Do you have any basis to disagree with Mr. Mager's statement in this regard?

No. A

Would you look at Page 5, Mr. Berger, of the Mager book? And Mager there, I believe, sets forth a definition of an objective. And it says, doesn't it, that: An objective is a description of a performance you want learners to be able to exhibit before you consider them competent. An objective describes an intended result #7-8-SueT

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of instruction, rather than the process of instruction itself.

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Do you see that?

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A Yes, I do.

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Q Do you have any basis to disagree with Mr. Mager's statement in this regard?

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A No, I don't.

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Q And on Page 7, Mr. Berger, there is a statement

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beneath the sub-heading, "A Basic Distinction" that says:

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An objective is a statement describing an instructional

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outcome, rather than an instructional process or procedure.

12

It describes results, rather than the means of achieving

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Do you see that?

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A Yes, I do.

those results.

16

Q Now, is it your opinion that the instructional objectives as set forth in the LILCO training program, for

17

example, in the workbooks comply with Mager's teachings

18

regarding instructional objectives?

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A I believe they comply with the intent.

21

Q Why don't we look at a couple of examples of

22

these objectives, Mr. Berger, and you can perhaps explain

that answer to me. Would you look please at the objectives

23

set forth in Workbook 13?

24

A Mr. Miller, could you give us some guidance?

#7-9-SueT

Q It's Attachment 20, Volume 5 of 5. I can't help you much from there.

A We will keep looking.

Q Maybe two-thirds back through Volume 5 of 5.

It's the Module Number 13 for special evacuations.

A Okay. Hold on. We are on Module 17.

MS. MONAGHAN: Judge Laurenson, I'm going to object to the question as going to a level of detail that is immaterial under the Waterford decision and is not probative of the issues before this Board. Detailed inquiry into whether the objectives that are listed in the work-books sections just seems to me to be beyond what is probative here.

MR. MILLER: Judge Laurenson, let me respond.

I have asked Mr. Berger general questions regarding instructional objectives. He has explained his understanding and his agreement with Mr. Mager, who he relied upon in his testimony.

I am using Module 13 as an example. Frankly,
I am willing to let the witnesses pick an example of any
module they want to, and I will look at those objectives.

But my point is to ascertain from these witnesses whether the instructional objectives in LILCO's training program comply with the teachings of an acknowledged expert in the field, Mr. Mager. This is an example. It's

not a level of detail precluded by any decision, to my knowledge, rendered by an NRC body.

JUDGE LAURENSON: I think at this time we will allow a limited inquiry into this.

The objection is overruled.

BY MR. MILLER: (Continuing)

Q Do you have that?

1 (Witness Berger) We found it, Mr. Miller. 2 Now, looking at little 2 of Module 13 for special evacuations, that is entitled: Training Objectives, 3 correct? 5 A Correct. And it says: At the completion of this module, 6 7 the student should -- and it has five objections, I suppose, se't forth -- that the student should be able to do, correct? A Correct. 10 And it says, for example, the first one: Have an understanding of the methods involved in carrying out 11 special evacuation activities. 12 13 Do you see that? Yes, I do. 14 Now, in your opinion, Mr. Berger, does this 15 objective comply with Mager's teachings regarding instructional objectives? 17 Well, I am going to have to speculate, because 18 Mr. Mager is not here to answer for the context of the 19 question, but as I understand it, yes, for the training 20 program at the phase that it was in, that would, indeed, 21 qualify. 22 Now, Mr. Mager says, as we have just discussed, that an objective describes an intended result of instruction 24 rather than the process of instruction itself; and it is 25

your opinion that this complies with that? 1 Yes, sir. 2 Would you look at page 20 of what has been marked 3 as Suffolk County EP-59. That says, doesn't it, that a meaningfully stated objective is one that succeeds in 5 communicating your intent; the best statement is the one that excludes the greatest number of possible meanings other 7 than your intent. 8 Do you see that? A Yes. 10 And at the bottom of page 20, Mr. Berger, there 11 are examples set forth by Mr. Mager as to the sort of 12 words to avoid in setting forth training objectives because 13 those words are open to many interpretations, isn't that 14 right? 15 A Yes. 16 And do you see the word, 'to understand' as a 17 word open to many interpretations? 18 A Yes, I do. 19 And objective 1 in Module 13 talks in terms of 20 having an understanding, doesn't it? 21

22 A Yes, it does.

23

24

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Q Now, the second objective, Mr. Berger, says, in the Module 13, know the LERO staff positions which are involved in supporting special evacuation actions.

Do you see that?

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Yes. I do.

3

And is it your testimony that this second objective of Module 13 also complies with Mr. Mager's principles

5

regarding instructional objectives?

6

Yes, it does.

7

Do you see on page 20 of EP-59, Mr. Berger,

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another word which Mr. Mager says you should avoid because

it is open to many interpretations, those words being,

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'to know?'

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also talks in terms of the value of a good objective being to enable the student to understand and to know exactly what it is that the instructor, through his instruction, is trying to teach, isn't that correct?

I understand that, Mr. Berger, but Mr. Mager

That is correct.

I do. Mr. Miller, I would also like to state that the intent of what Mr. Mager has said in his article versus the type of training objectives that we have established at this phase in the training program is to, 'test' the individual at the completion of the entire training program.

It is not the intent of these particular objectives to perform a test at the end of this phase of the instruction.

Q Now, when you see a statement which says have an understanding, does that, to you, tell a student or trainee exactly what the instructor means to convey through his instruction?

A At this phase of the instruction it does, because at this phase of the instruction we are orienting the student to the job, or scope of work that they are going to perform, and as an orientation objective, in my opinion and understanding, this would qualify.

Q Mr. Babb, you have been following our discussion,
I take it. Would you agree with Mr. Berger's comments
regarding Mr. Mager's teachings and the instructional
objectives set forth in the workbooks of the LERO training
program?

A (Witness Babb) I am not qualified to answer the other areas, because I have not examined in any detail at all these other areas of performance. My particular area has been confined to just the training of the traffic guides. I can only discuss Mr. Mager's philosophies, but I can't apply them directly, because I am not familiar with that material.

Q Yes, sir. Let me ask you this question. An objective which states have an understanding of the methods involved in carrying out special evacuation activities. Is that an objective, in your opinion, Mr. Babb, that clearly

states what the instruction is to convey to the student in compliance with Mr. Mager's teachings?

A Well, the objective is the method by which the instructor communicates his expectations to the learner.

Now, if the instructor can satisfactorily access that the learner has acquired that material, via understanding or identifying, or utilizing any of these other action verbs to the satisfaction of the instructor, then I would say, yes, it does convey the intent of what an instructional objective is.

Q Mr. Babb, are you, therefore, disagreeing with Mr. Mager when he says an objective describes an intended result of instruction rather than the process of instruction itself?

A No. No, I am not. I think the question you asked me, Mr. Miller, was the utilization of the word, 'understand,' is that correct, as it applies to instructional objectives?

Q Yes, sir.

A And I suggested to you that if the instructor is satisfied that the learner understands or has understood the intent of the instruction, then it would be complying with the philosophy of Mr. Mager. Whether we used the word, 'understand' or some other descriptive verb.

Q You are familiar, Mr. Babb, with Mr. Mager when

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he says, and this is on page 21 of EP-59, an objective always says what a learner is expected to be able to do.

A I would concur with that.

Q Now, when you have an objective which says the student should have an understanding, does that convey what a learner is expected to be able to do?

A That would have to depend upon the intent of the instructor and what the topic is. Understand, for example, a complicated series of electronic sircuitries might be an example. Will the learner, at the conclusion of this training, understand a complicated set of circuitry.

Q Could you tell me, Mr. Babb, how it is that the instructor would determine whether the student has gained an understanding?

A The instructor would have to set up some type of a testing procedure, whatever it is. Whether it is a hands-on testing procedure whereby the learner demonstrates his knowledge or her knowledge of the topic to the instructor's satisfaction either verbally or through hands-on experience, or possibly through a written quiz.

Q Mr. Babb, would you agree with me that words such as, 'have an understanding,' 'to know,' 'to be familiar with,' are words that are, indeed, open to many different interpretations?

A Yes.

1	MR. MILLER: Judge Laurenson, I would offer
2	EP-59 into evidence at this point.
3	JUDGE LAURENSON: Is there any objection to
4	that?
5	MS. MONAGHAN: No objection.
6	MR. ZAHNLEUTER: No objection.
7	MR. PIRFO: No objection.
8	JUDGE LAURENSON: Suffolk County Exhibit EP-59
9	will be received in evidence. I notice there are a lot
10	more pages in this than the ones you referred to again.
11	MR. MILLER: Judge Laurenson, there are other
12	pages I was going to ask the witnesses about, but I think
13	we established with some pages what the point was to my
14	using this exhibit.
15	JUDGE LAURENSON: The question is if we are
16	going to have it bould in the transcript, then I wonder
17	whether we should have all these pages. If you just want
18	to have it admitted in evidence and not bound, then I think
19	we don't have any problem with the number of pages.
20	WITNESS BERGER: Mr. Miller?
21	MR. MILLER: There is no question pending, Mr.
22	Berger.
23	MR. MILLER: Judge Laurenson, I think we would
24	prefer having it bound in.
25	JUDGE LAURENSON: Then I wonder if you can
- 11	

determine if there are some of these pages that you haven't 1 asked any questions about, and I can't tell that they would 2 be relevant to anything that you have been cross examining 3 about. MR. MILLER: Could I just ask a clarification 5 question? Did we bind into the record the exhibits from last Friday that were offered by Mr. Christman? 7 MR. CHRISTMAN: Let me check. 8 JUDGE LAURENSON: I think we did. I believe that 9 we did. 10 MR. CHRISTMAN: Yes, we did. 11 MR. MILLER: Well, I don't see then why we 12 should distinguish with this exhibit. 13 JUDGE LAURENSON: I just didn't recall an exhibit 14 of this size being offered last week by LILCO. That is the 15 only question I guess that I have. 16 Well, in any event, there is no objection. This 17 will be received in evidence and bound in the transcript 18 following this page. 19 XXINDEX 20 (Above referenced document, Suffolk County Exhibit EP-59, 21 is received in evidence.) 22 (Document follows) 23

SC EP 59

# Preparing Instructional Objectives

SECOND EDITION

Robert F. Mager



FEARON PUBLISHERS, INC. Belmont, California

# Preface

Once upon a time a Sea Horse gathered up his seven pieces of eight and cantered out to find his fortune. Before he had traveled very far he met an Eel, who said,

"Psst. Hey, bud. Where 'ya goin'?"

"I'm going out to find my fortune," replied the Sea Horse, proudly.

"You're in luck," said the Eel. "For four pieces of eight you can have this speedy flipper, and then you'll be able to get there a lot faster."

"Gee, that's swell," said the Sea Horse, and paid the money and put on the flipper and slithered off at twice the speed. Soon he came upon a Sponge, who said,

"Psst. Hey, bud. Where 'ya goin'?"

"I'm going out to find my fortune," replied the Sea Horse.

"You're in luck," said the Sponge. "For a small fee I will let you have this jet-propelled scooter so that you will be able to travel a lot faster."

So the Sea Horse bought the scooter with his remaining money and went zooming thru the sea five times as fast. Soon he came upon a Shark, who said,

"Psst. Hey, bud. Where 'ya goin'?"

"I'm going to find my fortune," replied the Sea Horse.

"You're in luck. If you'll take this short cut," said the Shark, pointing to his open mouth, "you'll save yourself a lot of time."

"Gee, thanks," said the Sea Horse, and zoomed off into the interior of the Shark, and was never heard from again.

The moral of this fable is that if you're not sure where you're going, you're liable to end up someplace else.

d Instruction), 002, book a machine Before you prepare instruction, before you select instructional procedures or subject matter or material, it is important to be able to state clearly just what you intend the results of that instruction to be. A clear statement of objectives will provide a sound basis for choosing methods and materials and for selecting the means for assessing whether the instruction has been successful. This book is about how to state such objectives. It will describe and illustrate a procedure for preparing objectives that communicates your instructional intents to yourself and to others. You will be offered some guided practice along the way, as well as a chance to test your skill at the end of the book.

This book is NOT about who should select objectives, nor is it about how one goes about deciding which objectives are worth teaching. These are important questions, but they are beyond the scope of this book.

It is assumed that you are interested in preparing effective instruction, that you are interested in communicating certain skills and knowledge to your students, and in communicating them in such a way that your students will be able to demonstrate their achievement of the objectives that you or someone else has selected for them to achieve. (If you are not interested in demonstrating achievement of your objectives, you have just finished this book.)

ROBERT F. MAGER

Los Altos Hills, California May 1975

- 1 OBJECTIVES (What the b
- 2 WHY WE CAR (Importance
- 3 THE QUALITIE: (Do they co:
- 4 PERFORMANC What will t
- 5 CONDITIONS (What cond
- 6 CRITERION 71
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# Objectives

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Go on to page 1.

Instruction is effective to the degree that it succeeds in:

- changing students
- · in desired directions
- · and not in undesired directions.

If instruction doesn't change anyone, it has no effect, no power. If it changes a student in undesired, rather than in desired directions (that is, if it has unwanted side effects such as squashing motivation), it isn't called effective; instead, it is called poor, undesirable, or even harmful instruction. Instruction is successful, or effective, to the degree that it accomplishes what it sets out to accomplish.

Once you decide to teach someone something, several kinds of activity are indicated if your instruction is to be successful. For one thing, you must assure yourself that there is a need for the instruction, making certain that (1) there is a reason for the learning and (2) your students don't already know what you intend to teach. For another, you must clearly specify the outcomes or objectives you intend your instruction to accomplish. You must select and arrange learning experiences for your students in accordance with principles of learning and must evaluate student performance according to the objectives originally selected. In other words, first you decide where you want to go, then you create

and administer the means of getting there, and then you arrange to find out whether you arrived.

The steps for accomplishing this arrange themselves into these three phases—analysis, design, and implementation; and a number of procedures and techniques are available through which to complete them. The analysis phase, for example, should answer questions such as these:

Is there a problem worth solving?
Is instruction a relevant part of the solution?
If so, what should the instruction accomplish?

After all, instruction is only one of several possible solutions to problems of human performance, and not even the one most often called for. Unless a suitable analysis is performed before instruction is developed, it is quite possible to construct a magnificent course that doesn't help anybody at all. It is possible to construct a course that nobody needs, either because the course is unrelated to the problem that gave rise to it or because it "teaches" things the students already know. Techniques such as performance analysis¹ and goal analysis² can help avoid such wasteful practices.

After the analysis is completed (it may take only a few minutes, or a few months), if the analysis reveals that instruction is needed, objectives are drafted that describe the important outcomes in tended to be accomplished by that instruction. In other words, objectives are drafted that answer the question "what is worth teaching?" Instruments (tests) are then drafted by which the success of the instruction can be assessed.

Only after the preceding steps have been completed is the actual instruction drafted, tested, revised, and then put into use. And, please note, only after the analysis phase is complete or near completion are objectives drafted. This is an important point

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See Analyzing Performance Problems, R. F. Mager and Peter Pipe (Fearon Publishers, Inc., 1970).

<sup>2.</sup> See Goal Analysis, R. F. Mager (Fearon Publishers, Inc., 1972).

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and Peter Pipe (Fearon Inc., 1972). because when you read or hear that "the first thing you do is write objectives" or "objectives are written before instruction is designed," you should translate that into "after the analysis is completed, then objectives are prepared before the instruction is designed."

This book is concerned with the characteristics of a usefully stated objective, rather than with its derivation or selection. The purpose of the book is limited to helping you specify and communicate those instructional intents you or someone else has decided are worth achieving. If this book achieves its objective, you will be able to recognize the characteristics of well-stated objectives when they are present. Once you can recognize desirable characteristics, you will be able to prepare your own objectives by modifying your drafts until they are well stated.

Specifically:

Given any objective in a subject area with which you are familiar, in all instances be able to identify (label) correctly the performance, the conditions, and the criterion of acceptable performance, when any or all those characteristics are present.

To help reach this objective, I will describe some of the advantages to be gained from the careful specification of objectives, describe and illustrate the characteristics of a usefully stated objective, and provide some practice in recognizing such objectives. At the end, you will have an opportunity to see just how well our efforts have succeeded.

# Why We Care About Objectives

An objective is a description of a performance you want learners to be able to exhibit before you consider them competent. An objective describes an intended result of instruction, rather than the process of instruction itself.

Objectives are important for a number of reasons. Here are three of the main ones: First, when clearly defined objectives are lacking, there is no sound basis for the selection or designing of instructional materials, content, or methods. If you don't know where you're going, it is difficult to select a suitable means for getting there. After all, machinists and surgeons don't select tools until they know what operation they are going to perform. Neither do composers orchestrate scores until they know the effects they are trying to achieve. Similarly, builders don't select materials or specify schedules for construction until they have their blueprints (objectives) before them. Too often, however, one hears instructors arguing the relative ments of textbooks versus filmstrips or of classrooms versus laboratories without ever specifying just what they expect the method or procedure to accomplish. Instructors simply function in a fog of their own making unless they know what they want their students to accomplish as a result of their instruction.

A second important reason for stating objectives sharply has to do with finding out whether the objective has, in fact, been accomplished. Tests or examinations are the mileposts along the road of learning and are supposed to tell instructors and students, alike, whether they have been successful in achieving the course objectives. But, unless objectives are clearly and firmly fixed in the minds of both parties, tests are at best misleading; at worst, they are irrelevant, unfair, or uninformative. (How many courses have you taken in which tests had little or nothing to do with the substance of the instruction?) Test items designed to measure whether important instructional outcomes have been accomplished can be selected or created intelligently only when those instructional outcomes have been made explicit.

A third advantage of clearly defined objectives is that they provide students with the means to organize their own efforts toward accomplishment of those objectives. Experience has shown that, with clear objectives in view, students at all levels are better able to decide what activities on their part will help them get to where it is important for them to go. With clear objectives in view, it is no longer necessary to "psych out" the instructor. As you know too well, many students spend considerable time and effort in learning the peculiarities of their instructors when those instructors fail or refuse to let students in on the secret of what they are expected to learn. Unfortunately, this knowledge is often useful to those students with "school savvy." They may breeze through the instruction with no more than a bag full of tricks designed to rub the instructor the right way.

Objectives, then, are useful in providing a sound basis (1) for the selection or designing of instructional content and procedures, (2) for evaluating or assessing the success of the instruction, and (3) for organizing the students' own efforts and activities for the accomplishment of the important instructional intents. In short, if you know where you are going, you have a better chance of cetting there.

There are additional advantages, not the least important of which is that the drafting of objectives causes one to think seri-

ously and deeply about worth spending time ar are drafted that describ tence, the objectives or worth of that existing for improving it.

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portant of think seriously and deeply about what is worth teaching, about what is worth spending time and effort to accomplish. And if objectives are drafted that describe a course or curriculum already in existence, the objectives can serve as a spotlight to illuminate the worth of that existing instruction, and they can provide a basis for improving it.

#### A BASIC DISTINCTION

Before looking in detail at the characteristics of a usefully stated objective, it would be well to make sure we are thinking about the same thing. An objective is a statement describing an instructional outcome, rather than an instructional process or procedure. It describes results, rather than the means of achieving those results.

Now look at the following statement, and then answer the question that comes after it. Turn to the page whose number appears beside the response you select:

A general survey of the organizing and administration of elementary- and secondary-school libraries, with emphasis on methods of developing the library as an integral part of the school. Includes functions, organization, services, equipment, and materials.

What does the above statement represent? Does the statement look more like an objective of a course, or does it look more like a description of a course?

An objective of a course. Turn to page 11.

A description of a course. Turn to page 13.

# The Qualities of Useful Objectives

Objectives are useful tools in the design, implementation, and evaluation of instruction. They are useful in pointing to the content and procedures that will lead to successful instruction, in helping to manage the instructional process itself, and in helping to prepare the means of finding out whether the instruction has been successful. And with objectives in the hands of students we are able to eliminate the waste that comes from forcing students to guess at what the important outcomes of the instruction might be.

But what are the qualities of useful objectives? What makes one statement meaningful and another meaningless?

Simply put, a usefully stated objective is one that succeeds in communicating an instructional intent to the reader. It is useful to the extent that it conveys to others a picture of what a successful learner will be like that is identical to the picture the objective-writer had in mind. And the most useful objective is the one that allows us to make the largest number of decisions relevant to its achievement and measurement. Now, any number of combinations of words and pictures and symbols might be used to express an intent. What we are searching for is that group of words or symbols that will communicate your intent exactly as you understand it. For example, if you provide other instructors

with an objective and they then teach some students to perform in a manner which you agree is consistent with what you had in mind, then you have communicated your objective in a meaningful manner. If, on the other hand, you feel that you "had something more in mind" or that they haven't "grasped the essence" of your intent—then your statement has failed to communicate adequately, regardless of how that statement was worded.

A meaningfully stated objective, then, is one that succeeds in communicating your intent; the best statement is the one that excludes the greatest number of possible meanings other than your intent.

Unfortunately, there are many slippery words that are open to a wide range of interpretation. (If you have tried to write more than a few sentences that say what you mean, you know how exasperating those little devils can be.) It isn't that such words aren't useful in everyday conversation. After all, you wouldn't want to be skewered with a "what do you mean by that!" every time you said something like "It's a nice day" or "I really appreciate you" or "I'm fine." But if you use only such broad terms (or "fuzzies") when trying to communicate a specific instructional intent, you leave yourself open to misinterpretation.

Consider the following phrases in this light:

WORDS OPEN TO	WORDS OPEN TO
MANY INTERPRETATIO	ONS FEWER INTERPRETATIONS
to know	to write
to understand	to recite
to really understand	to identify
to appreciate	to sort
to fully appreciate	to solve
to grasp the significan	ce of to construct
to enjoy	to build
to believe	to compare
to have faith in	to contrast
to internalize	to smile

What do we mean something? Do we me to construct? Just to tellittle—because the wo you say what you mea ought to be able to Do objective that commustudent's intended per interpretation.

How can we do the an objective communi are several schemes the the format described of to work and it is the

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- 1. Performance. Ar extected to be ab
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S OPEN TO TERPRETATIONS

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solve

build

compare

) contrast

smile :

What do we mean when we say we want learners to know something? Do we mean we want them to recite, or to solve or to construct? Just to tell them we want them to "know" tells them little—because the word can mean many different things. Until you say what you mean by "knowing" in terms of what students ought to be able to DO, you have said very little at all. Thus, an objective that communicates best will be one that describes the student's intended performance clearly enough to preclude misinterpretation.

How can we do that? What characteristics might help make an objective communicate and help make it useful? Well, there are several schemes that might be used in stating objectives, but the frimat described on the following pages is one that is known work, and it is the one I have found easiest to use.

The format includes three characteristics that help make an objective communicate an intent. These characteristics answer three questions: (1) What should the learner be able to do? (2) Under what conditions do you want the learner to be able to do it? And (3) how well must it be done? The characteristics are these:

1. Performance. An objective always says what a learner is expected to be able to do.

Conditions. An objective always describes the important conditions (if any) under which the performance is to occur.

 Criterion. Wherever possible, an objective describes the criterion of acceptable performance by describing how well the learner must perform in order to be considered acceptable.

Though it is not always necessary to include the second and not always practical to include the third characteristic, the more you say about them, the better your objective will communicate. Other characteristics could be included in an objective, as well, such as a description of the students for which the objective is intended or a description of the instructional procedure by which the objective will be accomplished. But, though these are important pieces of information in the process of designing instruction,

y not? Because they difficult to read and well as clear; if you will fail to serve its objectives have been

jectives follow some ol in which teachers form printed by the ry two inches down bjective was no more . Would vou be surle to the idea?) But a particular size and e clear, that say what tents as concisely as ays that an objective d on inches wide certain words objective is to comx it! You don't work idea of "good looks"; of your instructional need to describe ALL int to accomplish. lp you to do just that. 4

# Performance

The characteristics of a useful objective are these:

- 1. Performance (what the learner is to be able to do)
- 2. Conditions (important conditions under which the performance is expected to occur)
- Criterion (the quality or level of performance that will be considered acceptable)

In this chapter we are interested in the first of these characteristics, that of performance, a term that refers to any activity engaged in by a learner. A performance may be visible, like writing or repairing, or invisible, like adding, solving, or identifying.

Note: During the early sixties we talked about behavior, rather than about performance. This turned out to be an unfortunate choice of terms. A number of people were put off by the word, thinking that objectives necessarily had to have something to do with behaviorism or with behaviorists. Not so. Objectives describe performance, or behavior, because an objective is specific rather than broad or general, and because performance, or behavior, is what we can be specific about.

A statement of an objective is useful to the extent that it specifies what learners must be able to do or perform when they demonstrate mastery of the objective. Since we cannot peer into another's mind to determine what knowledge or attitudes might reside therein, we must make guesses or inferences about such internal states. These inferences must be based on what people say and do; they must be based, in other words, on the circumstantial evidence of visible or audible human behavior. Often we can observe a desired instructional outcome directly, as, for example, when we watch someone lay a brick, play a piano, or program a computer. But when we are interested in abstract states such as knowledge or attitudes, we can only know whether we have succeeded by observing students doing something that represents the meaning of those abstractions.

Thus, the most important and indispensable characteristic of a useful objective is that it describes the kind of performance that will be accepted as evidence that the learner has mastered the objective. Whatever else a statement may do, if it doesn't state a performance, it isn't an objective.

For example, consider the following:

To develop a critical understanding of the importance of effective management.

Though this might be an important outcome to achieve, the statement doesn't tell us what a learner will be doing when demonstrating mastery of the objective. What would be your guess? Writing an essay on the importance of management? Answering multiple-choice questions on management? Drafting a budget? Preparing a production schedule? Devising a procedure for hiring competent people?

We don't know. The statement doesn't tell. More, it is unlikely that two people would agree on what the statement means, it is open to too many interpretations. There is yet another problem with the statement—"to develop" implies something the instructor will do, rather than something the student is expected to be able to do.

Now, try this stateme Given all available en uct, be able to write a and define all of the when introduced to least three major proc

Let's ask the question when demonstrating m product profile, that's describe a performance information about wha

The way to write an o then, is to write a stat and then modify it unt

What is the learner to the objective?

Let's apply this test. Which of the following performance terms?

Be able to deve

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haracteristic of rformance that s mastered the it h't state

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to achieve, the ig when demonbe your guess? ient? Answering fting a budget? edure for hiring

More, it is untatement means; et another probsomething the dent is expected Now, try this statement:

Given all available engineering data regarding a proposed product, be able to write a product profile. The profile must describe and define all of the commercial characteristics of the product when introduced to the market, including descriptions of at least three major product uses.

Let's ask the question again. What would students be doing when demonstrating mastery of this objective? Why, writing a product profile, that's what they would be doing. These words describe a performance, thereby providing everyone with useful information about what the instruction is to accomplish.

The way to write an objective which meets the first requirement, then, is to write a statement describing an instructional intent, and then modify it until it answers the question—

What is the learner DOING when demonstrating achievement of the objective?

Let's apply this test to some examples.

Which of the following statements would you say is stated in performance terms?

Be able to write a news article. page 27.

Be able to develop an appreciation of music. page 29.

You said that "be able to understand mathematics" included a performance. Not for a minute.

What would people be doing when demonstrating their understanding? Defining mathematics? Writing an essay on Einstein? Solving problems? Correcting problems? Devising problems? The statement doesn't say anything about what someone might be expected to be able to do.

While understanding is a fine word for everyday conversation, it is open to far too many interpretations to be useful in an objective.

Try not to be trapped by the fact that the above statement begins with "be able to," as those words can be followed by sheer nonsense. Consider these slippery things:

Be able to develop an increased appreciation and sensitivity. Be able to internalize a growing awareness.

What would someone be doing when internalizing a growing awareness? What would anyone be doing when developing an appreciation and sensitivity? I dunno. The statement doesn't say.

What we are looking for is the word or words that describe an intended action, whether that action be directly observable (running, writing, editing) or invisible (solving, recognizing, recalling).

Try another one. Turn to the page whose number appears beside the statement that contains a performance:

Be able to apply scientific knowledge page 39.

Be able to stain slides. page 41

You're putting me on!

How can I help you to internalize your growing awareness of infinite feeling states and consciousness levels if you keep slipping off to pages like these, just to find out what is printed on them?

As long as you're here, though, we might as well share a word or two about the topic at hand. Develop is one of those words which by itself doesn't tell you if it is describing a performance. All sorts of things might be developed—theses, neighborhoods, or triceps. But none of these is a performance; none describes anything anyone does. Develop is one of those words whose meaning depends on the words that follow it. Worse, it usually describes instructional process, and we want an objective to describe outcome.

There are other such sneakies. Acquiring an attitude is not at all the same as acquiring a wallet. The latter is a performance; the former is not.

Enough of diversion. Let's get back to work.

Turn to page 43.

You said "be able to add a c formance. Yes.

What would someone be d of the objective? Adding a columets the first requirement of

## OVERT/COVERT

But wait a minute. Somethi you tell whether people are ac perfectly still and claimed to adding still qualify as a perfo

It would to me, as I cons directly observable or directly rectly whether someone was ac or oral response, I would con all, we are looking for a pract it would be awkward to demabe allowed in objectives. As yo helping students be able to characteristics, or recall sequen these from our objectives wou be practical.

Should you be a bit boggled assured that they are old terr here because they correctly d sidering. Over refers to any k observed directly, whether that COVERT refers to performance performance that is mental, inv performance can be observed mance can be detected only by or do something visible.

We say that a performance invisible, cognitive) so long as

objectives ("stumble" is the right word) whose main intent is something of a mystery. When that happens, you would be wise to ask their authors what they had in mind.

But when writing your own objectives, I suggest that you always state the main intent—always state the main performance you feel it is important to achieve. Then, if that performance happens to be covert, add an indicator. That way the objective will more successfully fulfill its function of communicating an instructional intent. And now, get thee to a summary.

### FIRST SUMMARY

- 1. An instructional objective describes an intended outcome of instruction, rather than an instructional procedure.
- 2. An objective always states a performance, describing what the learner will be DOING when demonstrating mastery of the objective.
- 3. To prepare an objective describing an instructional intent:
  - a. Write a statement that describes the main intent or performance you expect of the student.
  - b. If the performance happens to be covert, add an indicator behavior to the objective by which the main performance can be known. Make the indicator the simplest and most direct one possible.

By the time you havior you will successfully con less ambiguous c than expecting mind when you or appreciate, yo to accomplish. I it will exhibit the written down. I written down, it it can be called ment identifies a toward developing

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# SECOND SUMMARY

- 1. An instructional objective describes an intended outcome of instruction rather than the process of instruction itself.
- 2. An objective always states a performance describing what the learner will be DOING when demonstrating achievement of the objective.
- 3. To prepare an objective:
  - a. Write a statement that describes the main intent or performance expected of the student.
  - b. If the performance happens to be covert, add an indicator behavior through which the main intent can be known.
  - c. Describe relevant or important conditions under which the performance is expected to occur. If it seems useful, add a sample test item. Add as much description as is needed to communicate the intent to others.

# Criterion

Having described what we want students to be able to do, we can increase the communication power of an objective by telling them HOW WELL we want them to be able to do it. We will accomplish this by describing the criterion of acceptable performance. A criterion is the standard by which performance is evaluated, the vardstick by which achievement of the objective is assessed.

If we can specify the acceptable performance for each objective, we will have a standard against which to test our instruction; we will have the means for determining whether our instruction is successful in achieving our instructional intent. If, for example, our best experience and wisdom tell us that we must not consider a student competent until that student can perform within a strict time limit, then we know that we will have to instruct and assist that student until the desired performance level is reached. We would know—and the student would know—the quality of the performance to work for or exceed. What we must try to do, then, is indicate in our objectives what the acceptable performance level will be, by adding words that describe the criterion of success.

Before we proceed, however, turn to the page that best describes your feeling at this moment.

Many of the things I teach are intangible and CANNOT be evaluated. page 73.

Show me how to describe a criterion of acceptable performance. page 74.

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If you cannot specify a criterion with as much clarity as you would like, this should not prevent you from trying to communicate as fully as you can with the learner and with colleagues. Certainly, you should be able to find some way to evaluate anything you think important enough to spend a significant amount of time teaching. If you cannot, perhaps you should review the alleged importance of teaching it.

#### THIRD SUMMARY

- 1. An objective is a collection of words, symbols, and/or pictures describing one of your important intents.
- An objective will communicate your intent to the degree you
  describe what the learner will be DOING when demonstrating
  achievement of the objective, the important conditions of the
  doing, and the criterion by which achievement will be judged.
- 3. To prepare a useful objective, continue to modify a draft until these questions are answered:
  - · What do I want students to be able to do?
  - What are the important conditions or constraints under which I want them to perform?
  - · How well must students perform, for me to be satisfied?
- 4. Write a separate statement for each important outcome or intent; write as many as you need to communicate your intents.
- 5. If you give your written objectives to your students, you may not have to do much else.

Why? Because often students are already able to do what you are asking them to do and will be happy to demonstrate their ability, now that they know what is wanted of them.

## FALSE PERFORMANCE

I realize this point was made earlier, but its importance makes it warrant some repetition. One of the most pervasive defects of statements that are mistakenly called objectives is that they have the appearance of objectives but contain no performances; they are not objectives at all. Here are some examples:

Have a thorough understanding of particle physics. Demonstrate a comprehension of the short-story form. Be able to relate to others in a demonstration of empathy. Be able to think critically and analytically.

B able to understand individual differences in patients.

Expressions such as these lead to statements that may describe some important goals in very broad terms. But they are not objectives, as they do not say what someone would have to do to demonstrate mastery of the intent.

When statements without performances are thought of as objectives, it leads people into a variety of confusions. They are likely to argue about which instructional procedure is suitable for accomplishing the vaguely stated intent and are frustrated when the statement offers no firm guidelines. They cannot agree on methods for assessing achievement of the intent and may complain that all objectives are useless. They are at a loss to understand why their students are at a loss to understand what they are expected to be able to do. Little wonder, as broad statements provide few clues to action.

When interpreting or drafting an objective, the first step is to look for the performance. Draw a circle around it. If there isn't a performance to draw a circle around, it isn't an objective ... yet. Fix it, or forget it.

## FALSE GIVENS

Another common error (error in the sense that it does not help in communicating an instructional intent) is the inclusion of false givens. These are words or phrases that may follow the word given in an of what the lear achievement of something abo

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#### TEACHIN

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the first step is to the first step is to the it. If there isn't a in objective ... vet.

at it does not help is the inclusion of ay follow the word given in an objective, but that describe something other than what the learner will have or be denied when demonstrating achievement of the objective. Most typically, the words describe something about the instruction itself, such as the following:

Given three days of instruction on ...

Given that the student has completed six laboratory experiments on . . .

Given that the student is in the category of gifted ...

Given adequate practice in . . .

Given a true-false test on ...

As indicated earlier, an objective is useful to the degree that it communicates an intended outcome. If you allow it to describe instructional procedure, you will restrict all concerned in using their best wisdom and experience to help accomplish that outcome. Make sure that the conditions described in your objectives tell something about the situation in which you expect the student to demonstrate competence.

#### TEACHING POINTS

Related to the false givens is the error of writing an objective to describe a teaching point, a practice exercise, or some other aspect of classroom activity. For example, consider this:

Be able to choose an art print or photo that illustrates a theme of your choice and explain how it illustrates that theme.

Why would you want a student to do such a thing? Certainly it isn't because a meaningful thing to do in the world is to go around explaining to people the theme that's illustrated by a photo you have chosen. Presumably, the reason for wanting students to engage in this activity is that it will help them learn to do something that can be considered a meaningful skill. The argument is not with the usefulness of having students practice selecting prints and explaining themes; the argument is with writing descriptions of such activities and calling them objectives. For two prac-

The student must be able to demonstrate an ability to develop self-confidence and self-respect.

Verbiage such as this may seem impressive, but it is of little use in communicating instructional intents. Nor can I offer an improved version of these statements, as I don't know what their writers were trying to convey. Fortunately, there is a simple solution

The best way I know of dejibberizing an objective is to give it to one or two students and ask them for their version of what they think it means. While their utterances may sometimes be a little hard on the ego, those utterances will usually show the way toward a cleaner, simpler statement of your intent.

And don't forget editors. A good editor can make miraculous moves toward simplicity and clarity by changing just a few words here and there, and I am continually amazed at how helpful they can be. (You have to watch them, though, for most are slaves to their style manuals and can get easily out of hand. They should periodically be smote smartly about the head and shoulders with a rolled style manual to help them remember their proper place.)

## INSTRUCTOR PERFORMANCE

Another practice that interferes with the usefulness of an objective is that of describing what the instructor is expected to do, rather than what the student is expected to be able to do:

The teacher will provide an atmosphere that will promote the development of self-esteem, confidence, and security in students. The teacher will help the student recognize natural consequences of behavior.

The instructor will assist the student in the development of ... Demonstrate to students the proper procedures for completing Form 321.

Develop in the student . . .

Phrases such as these mig tive or an administrative what results are to be exconcerned. Similarly, sta

Each student will ...

Eighty percent of the have no meaning whate dent do about an "objec must be able to demor Such statements may p but they are of little he

An instructional obavoids saying anything a wise would unnecessari their best wisdom and

When reviewing you ing about student perfe

## FALSE CRITERIA

A more insidious de students little or nothi these:

To the satisfaction of Must be able to mak Must pass a final exa

Students know they be news would be to to produce such satis judgments about whethere is no reason vabout the basis for the thought and effort. Sis all about.

ich skill. neant by ere writact state

es to de-(underanalysis in terms complishe perfor-

iew your ike a big cate your do, what well they I'll all

-8, p. 105.

· 9, p. 123.



## Sharpen Your Skill

The old adage about practice making perfect has about as much and as little truth in it as the one about experience being the best teacher. Practice will improve a skill, and experience will help one's competence—but only if there is feedback regarding the quality of the performance. If you don't find out how well you are doing while you are practicing or experiencing, your skill is not likely to improve. Therefore, while practice is important, practice with feedback is essential if the practice is to serve its purpose. Which may be the long way around the barn to tell you that this short chapter offers some guided practice in recognizing useful characteristics of objectives, and a wee bit of practice in editing a few that are in need of repair.

"Wait a minnit," I hear you saying. "How come the objective of the book wants me to be able to recognize useful characteristics and now you want me to do a repair job?" Good question. Answer: this is a practice chapter intended to help you sharpen up your discrimination skill. Asking you to repair a few will cause you to pay closer attention to what you are learning to discriminate.

So sharpen your pencil and have at it.

BY MR. MILLER: (Continuing)

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Q Mr. Berger, are you more familiar with workbooks than Mr. Varley, or would it be the other way around?

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3

A (Witness Berger) I have read the workbooks.

5

I am not, from memory, can't --

6

are on the subject of workbooks, isn't it true, Mr. Berger,

Let me ask you this question, then. Since we

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that the workbooks used by LILCO in its training program

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sometimes assume factors for which there is no basis in the

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LILCO training program?

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A Could you cite an example?

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Q If you would look -- iet's look at Module 10.

MS. MONAGHAN: Judge Laurenson, I am going to

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A I am sorry.

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Q Module 10, workbook 10, page 9 of 37.

15

object to this as being beyond the scope of the admitted

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contentions. I don't think that there is anything at

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issue in the contentions that relates to the substance

merely an example. I am going to try to make a general

point; indeed, the witnesses ask for an example and I have

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and content of the workbooks.

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supplied one.

MR. MILLER: Judge Laurenson, again, this is

MR. MILLER: Do you have that, Mr. Berger?

JUDGE LAURENSON: Objection is overruled.

1	MR. BERGER: One more time for us, Mr. Miller.
2	BY MR. MILLER: (Continuing)
3	Q It is module, or workbook 10, which deals with
4	
5	A (Witness Berger) We have got that.
6	Q Okay. It is page 9 of 37, and it is Section
7	A Could you give us the title of that module?
8	Q It is Section 1 of Module No. 10, entitled:
9	Monitoring in decontamination.
10	A We don't show a 9 of 37.
11	(Mr. Miller passes his document to
12	panel.)
13	Q Don't read my notes. There is a statement on
14	page 9 of 37, Mr. Berger, which talks about
15	A Let us find the page first.
16	Q Okay. Those workbooks can be very confusing
17	can't they, Mr. Berger.
18	A Only when they are bound like that.
15	Q Mr. Berger, do you see the statement around the
20	middle of the page that has Note besides it, and it says:
21	If after twelve attempts to wash, the meter still reads
22	50 cpm above background, contact the decontamination
23	coordinator for instructions and sending the individual to
24	a hospital where medical personnel will use more sophisticated
25	decontamination techniques.

A I see the statement.

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Q Now, this workbook is meant for monitoring decontamination personnel, isn't that right?

3

A I believe so.

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Q Now, isn't it a fact, Mr. Daverio, that the decontamination coordinator referred to in this workbook receives no additional training over and above the monitoring and decontamination personnel?

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A (Witness Daverio) I think maybe if you look at the training matrix in Procedure 5.1.1. That is correct.

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Q Now, how is it then, Mr. Daverio, that LILCO expects the decontamination coordinator to be any more knowledgeable than the personnel monitoring evacuees, for example, that would be referring a matter such as the

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for example, that would be referring a matter such as the one mentioned in Module 10 to him?

A The only thing I see that the decon coordinator would do here is to look at the procedures, call the

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ambulance, and send them to an appropriate hospital. I

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don't know that he has to be trained to do the sophisticated

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decon technique you are asking for, because I think we say

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that is done at the hospital where medical personnel can

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do it.

So, I am not sure he needs any additional training.

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Q That is your understanding of what would be

End 8 14

required of the decontamination coordinator in this instance, correct?

A Yes, it is.

Q Let me ask one other question or so on the workbooks, Mr. Berger. Isn't it true that the workbooks and the videos, for that matter, -- let's talk about the classroom training in general -- ignore many important aspects of emergency tasks that need to be performed under the LILCO Plan.

For example, let's talk about the security workbook -- security module. Anywhere in that workbook, or anywhere in the video tape, are LILCO personnel told how to maintain order? For example, at relocation centers?

MS. MONAGHAN: Objection. I think that is beyond the scope of the admitted contentions again.

There is nothing in the county's contentions that have been admitted that goes into the specifics of the content of the workbooks.

As a matter of fact, I think that similar testimony was stricken -- similar testimony filed by Suffolk County was stricken.

MR. MILLER: Judge Laurenson, the entire thus far 17 pages of LILCO's testimony that we have talked about have dealt with classroom training and how this training provides information to LERO trainees. Workbooks and videos constitute the classroom training.

JUDGE LAURENSON: We have previously indicated that we don't expect to get into the specific workbooks, video tapes, et cetera, of any particular aspect of the training because that is the level of detail that these licensing hearings are not intended to go into.

MR. MILLER: Yes, sir. I am trying to keep
my questions broad in that context. Although I have gone
to a couple of specific examples in the last few minutes,
I think that my questions have drawn these witnesses to
the concepts of the training program and how those concepts
are applied.

And that is how I will endeavor to continue.

But sometimes I need, in conducting cross-examination, to talk about specific examples. That is all I am trying to do her..

JUDGE LAURENSON: You are going into an area here involving the training of security people and how to control crowds? Is that the general area you are inquiring into here?

MR. MILLER: I actually had three questions I wanted to ask about training, and my example was going to be training of security personnel.

JUDGE LAURENSON: I guess I have to go back to the original statement that we made, and that is, what part of the testimony are you cross-examining or where does it relate to the contention?

I don't recall anything being admitted here about the security training.

MR. MILLER: Judge Laurenson, there are contentions that address the classroom training sessions in general and how they do not provide trainees with the knowledge in how to perform their jobs.

I am taking an example of security personnel. That is one broad group of LERO trainees that would be expected to perform during an emergency at Shoreham.

I can ask the question without going to the workbook, if that makes a difference, but I think I should

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be entitled to ask general questions regarding the training being provided to different aspects of the LILCO program.

JUDGE LAURENSON: But you are into a very specific area. You are not asking general questions. You are asking i. a particular workbook if a certain matter is covered or not.

MR. MILLER: I will take it out of the context of the workbooks.

BY MR. MILLER:

Q Let me ask you this question, Mr. Berger, or Mr. Varley or Mr. Daverio, anyone on the panel, to your knowledge, are security personnel instructed, trained in how to maintain order, for example, at relocation centers?

A (Witness Varley) It is not the intent of our training program to provide that type of training since we do not anticipate that our security people are in a position to do that.

And, in fact, I believe some of the training material may even point out that we intend to rely on the Suffolk County police to fulfill their functions of doing those type of duties at relocation centers.

I believe Dr. Mileti may want to add to that.

A (Witness Mileti) I would like to supplement that answer.

Q If your supplement goes to whether the information

is provided in the training materials, supplement, but I don't want reasons as to why you don't do it.

Well, the reasons why we do or don't do it has to do --

That is not my question. That can come up in redirect.

I am going to ask another question. I would like a yes or no to this question, Mr. Varley.

Anywhere in the training materials, are security personnel advised as to the extent of their authority, including the use of force?

(Witness Varley) Again, I believe that goes back to my original answer.

A yes or a no, please.

A No.

Anywhere in the training materials, Mr. Varley, Q are security personnel told what to do when individuals, for example, evacuees, may refuse to comply with an instruction given by such security personnel? Yes or no.

A No.

I guess I would like to clarify that statement.

A no was your answer. If you don't mean no, 0 then tell me that.

A I don't mean no.

Q Are you saying the answer is yes?

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A The answer would be yes.

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security personnel are specifically instructed as to what

And your testimony now, Mr. Varley, is that

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they should do when individuals, for example, evacuees,

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refuse to comply with instructions given to them, you are saying yes, that that information is conveyed, specifically

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conveyed to security personnel during the training?

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A To the best of my knowledge, the answer would be

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yes.

the lunch break.

video tapes?

O Could you tell me where that would be?

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A I would have to research the video tape script and the workbook module, or also the procedures as well.

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Q Maybe you could do that over the break, over

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A If I have time. I also have to eat.

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Q Mr. BErger, on page 18 of the testimony, there is

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a statement that says, "The nature of the subject matter being presented in the LERO training program lends itself

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to video tape as an instructional tool."

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Do you see that?

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A (Witness Berger) Yes, I do.

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Q Would you agree with me, Mr. Berger, that the

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subject matter of the material to be taught must also be

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considered when selecting a training medium such as

1 That is one of the considerations, yes. 2 Could you tell me, Mr. Berger, what you 3 perceive the nature of the subject matter presented in the 4 LERO training program to be? 5 Skills training. Skills training? 7 Yes. Such as directing traffic? Such as traffic coordination or traffic guiding, 10 as I would understand it. 11 That is not done by video tape, is it? 12 No. It is introduced by video tape. Mr. Babb 13 continues with -- Dr. Babb continues with other instruction. 14 Now, Mr. Berger, you state later in this paragraph, 15 "Participants have the opportunity not only to hear about 16 each task but in many instances to see the task being 17 performed at the actual emergency location." 18 Do you see that? 19 (Pause.) Are we are page 18? 21 On page 18 in the same paragraph that we 22 were in before. 23 I see it, yes. 24 Would you agree with me, Mr. Berger, that there are 25 disadvantages to showing trainees incorrect images in the

use of video tape presentations?

MS. MONAGHAN: Objection. It is beyond the scope of the contention. It was part of the Suffolk County testimony that was stricken.

MR. MILLER: It relates to the very sentence

I am talking about, Judge Laurenson. The statement in

the testimony talks about "Participants have the opportunity

to see the task being performed."

I am asking the witness, are there disadvantages to presenting incorrect images through the medium of video tape to trainees.

JUDGE LAURENSON: The objection is sustained. It is beyond the scope of the testimony and the contention.

BY MR. MILLER:

Q Mr. Berger, when you state in your testimony "to see the task being performed," what do you mean?

A Mr. Miller, to the best of our ability in the video tape we attempted to simulate a skill or task being performed.

Q And in simulating a skill or task, I assume that your goal was to accurately simulate such skills or tasks, correct?

A To the best of our ability.

Q Now, if such goals or tasks were not accurately simulated, would that, in your opinion, be cause for concern?

A It may.

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Now, during video tape presentations to LERO workers, the video tapes depicted the use of handheld or

portable radios, didn't they?

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through LILCO's witnesses, and that is not what has been

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stated in the LILCO testimony. He has gone beyond the

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scope of the LILCO testimony and beyond the scope of the

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MS. MONAGHAN: Objection. It is the same testimony that Suffolk County is trying to reintroduce contentions.

MR. MILLER: Judge Laurenson, I think based on the answers I have received to my questions, it is a matter directly raised in the LILCO testimony.

JUDGE LAURENSON: The question is a handheld or mobile radios --

MR. MILLER: Yes, sir. We have established, I think, that the goal is to depict accurate simulated conditions, that it could cause concerns if the conditions simulated in the video tapes are not accurate. And my question now is, did LILCO, in its video tapes, depict workers using handheld or portable radios.

It would be an example, again, an example of a condition that may not have been accurately depicted in the video tapes.

(Pause.)

JUDGE LAURENSON: This is the one area that I found last night, in going through all of the LILCO testimony that was cited by Mr. Miller yesterday, where in fact the LILCO testimony does go into great detail concerning this matter, on pages 59 and 60, with regard to the specific training concerning mobile radio units.

And I think for this exception, to the extent that this testimony has been received in evidence, that the county is entitled to cross-examine on it even though I do believe that it is in excessive detail. And that goes for the LILCO testimony as well as the cross-examination.

The objection is overruled in this one area.

BY MR. MILLER:

Q Do you recall the question, Mr. Berger?

A I believe I recall the question.

Mr. Miller, I didn't produce that particular video tape. I am going to defer that to Mr. Varley.

Q Mr. Varley, let me just ask you, give me a yes or a no, isn't it true that the video tapes depicted the use of handheld or portable radios?

A (Witness Varley) Yes, that is correct.

Q And isn't it true, Mr. Varley, yes or no, please, that LILCO does not intend to use portable or handheld radios in responding to an emergency at the Shoreham plant?

A Not at the present time, no.

1 Q Mr. Berger, have you reviewed all the video tapes that have been used in the LILCO training program? 2 3 (Witness Berger) No. Let me ask you specifically about the video tape 5 -- I think it might be entitled Traffic Engineering, the 6 traffic engineering video tape. That tape, I believe, was not produced -- that 8 tape was not produced by LILCO. 9 0 That was --10 That was by IMPELL. 11 Was that the tape that was used by Mr. Krieger 12 in his training of traffic guides? 13 I don't know that for a fact. I will have to 14 defer that. 15 Do you know, Mr. Varley? 16 (Witness Varley) I believe that was the video 17 tape that Mr. Krieger used, yes. 18 Have you reviewed that tape, Mr. Berger? 19 Have you ever seen it? 20 (Witness Berger) No, I have not. 21 Mr. Berger, is it fair to say that the content, 22 overall content of the video tapes depicted good weather, 23 normal conditions? 24 MS. MONAGHAN: Objection as going to the content 25

of video tapes again and beyond the scope of the contentions

and totally irrelevant to any of the contentions.

MR. MILLER: It is not irrelevant to the LILCO testimony.

JUDGE LAURENSON: At what place in the LILCO testimony?

MR. MILLER: Well, Judge Laurenson, I think on a continual basis from page 17, where the witnesses are asked, Why did LILCO choose the use of video tapes, and you can go through for at least to page 21. The other question included there is, Have educators found the video tape medium to be an effective instructional method.

But primarily I am looking at page 18. There is a long discussion here of video tapes and why they are valuable and why LILCO used them.

MS. MONAGHAN: Judge Laurenson, it seems to me to be apples and oranges, if you are talking about why a particular instructional method was chosen as being something that would be a good instructional tool and what the contents of that instructional method is -- particularly when the questions get to the level of, was good weather depicted in the video tapes.

Whither or not good, bad, or indifferent weather was depicted in the video tapes has no bearing on whether or not they are a valid instructional tool to be using.

And that is what the testimony that Mr. Miller has cited us

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END 9

to, what the LILCO testimony refers to and what it deals with, not the content of the video tapes.

MR. MILLER: Judge Laurenson, we have had a discussion with Mr. Berger. Mr. Berger has said that it was the intent and the goal to depict realistic conditions. The testimony itself states on page 18 that they, for example, shot video tapes at actual emergency locations where possible.

I am trying to keep my questions broad and not focus on specific workbooks or video tapes because I have the impression that that is not what the Board wants to hear. But I think I am entitled to ask at least the broad questions regarding the value of video tapes, the value of workbooks in the context of the LILCO training program.

JUDGE LAURENSON: Let me just confer with the other Board members, for a minute.

(Board conferring.)

#10-1-SueT1

JUDGE LAURENSON: Since it appears that this is a matter that is going to recur throughout this area of testimony, the Board has discussed the limit, parameters, surrounding the cross-examination of this testimony. And we have listened to the County's argument about how it intends to prove its contention, and its argument with regard to the relevance to the testimony offered.

And after discussing it and considering it, the Board is going to adhere to its prior determintion; that is, the test that we are going to apply here is that to judge the propriety of a question on cross-examination in the face of a challenge that it is beyond the scope of a contention, we will require a showing that the question is directly related to the LILCO testimony that has been received in evidence or that it is directly relevant to one of the many training contentions.

Considering the specific question that we have before us now with regard to the weather depicted on the video tapes, the objection is sustained.

BY MR. MILLER: (Continuing)

Q Mr. Berger, with respect to the testimony on video tapes, looking at Pages 17 through 20, the entire discussion on video tapes set forth in those pages, was it your intent to present testimony regarding the value of video tapes as a training medium, video tapes in general as

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a training medium? Was that part of your intent?

A (Witness Berger) Yes.

Q Yes?

A Yes.

I take it, Mr. Berger, that it was not your intent in this testimony to present opinions, specific opinions, regarding the adequacy of the particular video tapes used in the LILCO training program; is that right?

A Mr. Miller, could you give me a better definition of what you are asking?

Q A better definition?

A Of what you are asking.

Q What I'm asking is, I take it -- let me just repeat my question. I take it that it's your testimony then that it is not your intent to have presented testimony regarding the particular adequacy of the particular video tapes used in the LILCO training program?

I don't think I can make it any clearer.

A The intent of these pages, as I understand it, or as I wrote it --

JUDGE LAURENSON: Perhaps you could keep your voice up, Mr. Berger, or move the microphone closer.

WITNESS BERGER: The intent as I wrote it was to,
I think, essentially do two things, Mr. Miller. One, to
first of all, outline the value of utilizing video tape as

#10-3-SueT 1

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an instructional medium, irregardless of the training program. And, secondly, to outline the value as an instructional medium of the video tape as it applies to the LERO training program.

BY MR. MILLER: (Continuing)

Q Do you anywhere, Mr. Berger, in this one hundred and twelve pages of testimony address the particular value or adequacy of the particular video tapes used in the LILCO training program?

A I would have to go back and read all the pages of testimony in order to be able to respond to that.

Q Let me ask you another question, Mr. Berger.

Is it anywhere the intent of your testimony to comment about the adequacy of particular video tapes used in the LILCO training program?

A I would have to repeat the same answer. I would have to go back and read all of the testimony to see if I did comment on the adequacy of one or all of the video tapes.

- Q You don't recall any right now, though?
- A Not right off the top of my head, no.
- Q Mr. Berger, on Page 19, at the bottom of that page and continuing to Page 20, there is a statement regarding an additional benefit in your opinion from video tapes is that the same material will be used for training

#10-4-SueT 1

new personnel being added to LERO and for conducting the annual retraining program.

Do you see that?

- A Yes, I do.
- Q Does this mean, Mr. Berger, that LILCO will not update or revise its video tapes?

A No. I don't think that's what the statement states. It says video taped presentations.

It's my understanding that LILCO will, when required to do so, find it necessary to do so, to update the video tapes or workbooks.

- Q I was looking at the word "same material."
- A Same module titles.
- Q But you would understand LILCO would be revising video tapes from time to time?
- A Based on their perception of the necessity to do so.
  - Q Do you agree with that, Mr. Daverio?
  - A (Witness Daverio) Absolutel.
- Now, on Page 20 of the testimony, gentlemen, there is a statement, the first full paragraph: While the video tapes and workbooks provide the primary instructional method for the LERO training program, a live instructor is present at each session to answer question and assist in the completion of the associated written

#10-5-SueT 1

workbook material.

A (Witness Berger) Yes, I do.

Q Is it your understanding, Mr. Berger, that the classroom instructors in the LILCO training program are

qualified to answer all questions which might be presented

Do you see that? Mr. Berger, do you see that?

to them by the trainees?

Varley, if you will recall, counsel, that instructors were oriented to the subject material prior to going to the class and were instructed if they were to find a section of the material that they were not able to respond to, that they were given a telephone number to call.

Q So I gather, Mr. Berger, from that comment that instructors indeed may not always have been qualified, completely qualified, to instruct on a given subject area?

A I don't believe that's my perception. But I'm willing to defer to Mr. Varley.

(Witness Varley) Like I said earlier this morning, that each instructor was prepared and was knowledge-able for the particular subject matter that he was in the classroom to provide to the students on that day. And that in addition, should questions arise beyond the parameters of the modules being presented that day, he had a telephone number and a contact to individuals who could answer questions

#10-6-SueT 1

beyond the scope of the particular training session for that day.

Q Mr. Varley, do you think that the classroom instructors in the LILCO training program serve any function other than as a projectionist for the video tapes?

A Yes, I do.

Q Would you agree with ma, Mr. Berger, that whether video tapes provide an effective instructional method depends upon such factors as quality of preparation, whether they are interesting, the length of the presentation, for example?

A (Witness Berger) I would have to speculate on that.

Q With respect to video tapes, you have to speculate?

A Well, you are taking -- you are asking a question out of context. If you would cite a specific video tape I will try and answer the question.

about video tapes as an instructional method, and wouldn't you agree with me that if video tapes are to be effective as an instruction method they need to take into account such factors as the quality of the preparation of the video tape, the length of the video tape, whether the video tape is interesting?

#10-7-SueT 1

A There are established production procedures that are followed, yes.

Q Would those three be the sort of factors that you would look at?

A Some of the factors, yes.

Q Would you agree with me, Mr. Varley, that at least in LILCO's and IMPELL's opinion the classroom instructors play an important role in instructing the LERO trainees?

A (Witness Varley) My definition of important would be to insure that the class was conducted properly, that the people were there, that they understood the material. Yes, they play an important role.

Q And your definition of important would be to insure that the classes were attended, and what else did you say?

A To make sure that the students were there, that the class was conducted in the order that it was to be conducted in, that their questions were answered about the material that they observed, those types of things are important.

Q And those were the types of things that the instructors were expected to do?

A That's correct.

Q Were instructors in any way expected to motivate

#10-8-SueT 1

the classroom trainees, Mr. Varley?

MS. MONAGHAN: Objection. I think that's beyond the scope of the contentions and the testimony submitted by LILCO.

JUDGE LAURENSON: Perhaps I don't understand what you mean by motivate the trainees, Mr. Miller. I'm not sure what you are driving at here so I can rule on the objection.

MR. MILLER: Well, I guess I'm trying to get here, Judge Laurenson, when I use the term "motivate" whether the instructors' job, in part or at least, included providing an incentive for the trainees to learn.

JUDGE LAURENSON: As modified with that explanation, the objection is overruled.

WITNESS VARLEY: Could you ask the question one more time, Mr. Miller?

BY MR. MILLER: (Continuing)

Q I'm just wondering, Mr. Varley, if part of the job of the LILCO classroom instructors was to motivate, insure, provide incentive to, the trainees in the classroom?

A In my opinion, the motivation and incentive was there by virtue of the fact that these people were volunteers; they did not have to attend these sessions. In that respect, I don't think that the instructors were required to do motivation. And I don't believe that was the intent of the

#10-9-SueT

instructor.

Q So that was not part of the instructors' job; is that what you are saying, Mr. Varley?

A It wasn't required of the instructor, no.

(Witness Daverio) I think as a specific, Mr. Miller, it wasn't. But I think what you have to look at is the overall classroom setting.

The motivation was, he was a volunteer who showed up. We produced what we think was an excellent training medium, the video tape, which was well produced in our opinion. And the instructor was there to make sure that the class ran properly, which is a motivation.

You don't want someone to be there, get bored because the class didn't run properly. And that's what the instructors' job was. So, in some senses he did have a motivation, some motivation by the way he presented the class and the way the class flowed.

Q Mr. Berger, we have I think yesterday discussed this point. I believe we agreed, didn't we, that during the -- let me ask this of Mr. Varley. I'm sorry.

Mr. Varley, during the LERO drills, not all participants are observed by instructors or controllers or observers, and that's one of the reasons that LILCO and IMPELL have used these drill participant forms; is that correct?

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A (Witness Varley) I think as we stated yesterday, we said that we disagreed with the fact that the participants were not observed during the entire exercise. All participants, in fact, were observed during the vast majority of the time that they were participating in a drill or an exercise.

Q All participants were observed during the vast majority of the time they participated in drills or exercises?

A That's correct.

Q Do you have any way, Mr. Varley, to document that statement you just made?

A I would have to understand what your definition of documentation is.

Q Well, you've told me today that you haven't retained all of your records, and so do you have any other way to document your statement?

A Yeah. We have drill attendant sheets that indicate that everyone participated in the drills.

Q Drill attendant sheets may show that someone participated but how do they show someone was observed or evaluated?

A I don't quite understand. Are you asking, did we in fact document and retain observation of everything that each participant did during the course of every drill?

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Q Well, that's what I'm asking.

A No, we don't have that documentation.

(Witness Daverio) I think, Mr. Miller, what Mr. Varley says is true. But you have to understand the drill. The good part of the time, even the field workers that we discussed yesterday, bus drivers and traffic guides, are in a staging area going through being briefed, picking up dosimeters, and that part of their exercise, of course, they are being completely observed.

As we also mentioned yesterday, we have an observer at each traffic control point -- transfer point, sorry. When they got there we would again observe them.

So what Mr. Varley was alluding to was the overall drill process, not the specific parts you addressed yesterday.

O Thank you for that clarification, Mr. Daverio.

Mr. Daverio, isn't it true that in observing the drill

participants, for example, at the staging area that the

observers are looking at the participants as a whole, for

example, looking at the security personnel or looking at

the traffic guides, or looking at the bus drivers.

Isn't that a fair statement?

A In some categories, they might be. Not all. I think in some categories you would look at them individually. An example would be, as they get their dosimeters they

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individually get the dosimeters. They don't do it as a group, though there might be thirty in a room getting it. When they are briefed, you know they are in a room and being briefed as a group.

So it varies, Mr. Miller, by function.

Q Mr. Varley, on Page 21 there is some drills that are mentioned and they refer to Attachments 1 through 4.

Let me ask a general question first. Were the drill scenarios conducted in the LILCO training program, conducted as written by IMPELL?

A (Witness Varley) If I understand your question correctly, did we in fact follow the drill scenario during the course of conducting the drill.

To the extent that the process that was going on was in keeping with the scenario, yes, that's true.

Q Let's make sure we understand one another. I'm asking if the LILCO drills were actually conducted in compliance with the drill scenarios prepared by IMPELL?

A To the best of my knowledge they were, yes.

Q Can you think of any exceptions where the drills did not follow the drill scenarios prepared by IMPELL?

A (Witness Daverio) Mr. Miller, I can think of an example where we might deviate, and I was involved.

That's how I can do it. We were at the EOC and we discovered at one of the drills, early drills, that we had miscalculated

#10-13-SueT1

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of the controllers aside and we sat down and we made up some additional messages.

But I think the concept of the drill was held

how many messages would keep a certain group busy through

But I think the concept of the drill was held there. It was, we just wanted to make everyone busy throughout the whole drill.

Q Would you look at -- you cite on Page 21, Mr.

Daverio, Attachments 1 through 4, which are some of these
drill scenarios prepared by IMPELL and using the LILCO
training program, correct?

A That's correct.

Q Would you look at Attachment 2? This is the traffic guidance drill, right?

A That's correct.

Now, it has got objectives and guidelines on Page I of 34. I take it these are just some excerpt pages from that drill scenario; is that right? Do you know?

A I don't understand your question.

Q Well, I'm looking at Page 1 of 34, but the attachment doesn't include all thirty-four pages. You just selected some pages from that scenario, I take it; is that right?

A That's correct.

#10-14-SueT1

end #10 Joe flows

Now, of the pages that you have put in Attachment 2, the Page 1 of 34, objectives and guidelines, and you see objective and guideline 3. For example, 3.B, evacuation route spotters to perform route observations.

A I see that.

Q Is it your testimony, Mr. Daverio, that route spotters actually went out during drills to perform route observations?

A If we might confer for a second.

(The panel of witnesses are conferring.)

(Witness Daverio) My interpretation of those words is they observed the route. They didn't look -- there was an evacuation going on. They drove the route.

Q So they observed the route. Let's look at 3.C. Road crews to respond to disabled vehicles and perform their duties.

Now, did road crews do that during this drill, Mr. Daverio?

A No, they did not.

Q The next page, Mr. Daverio, page 2 of 34, it starts out saying: This drill encompasses the mobilization, deployment, and coordination of the stated participants.

Do you see that?

A That is correct.

Q I gather from the testimony we have heard this morning that the participants really were not mobilized in an unannounced manner, were they?

A They were mobilized to the extent of the areas that they were doing in this limit that wasn't from home and -- but through the staging area. That is part of the mobilization.

Q The mobilization and the announcement of the drill was made beforehand, right?

A They were told what time to appear. They didn't know what was going to happen once they got there.

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Q Now, on page 6 of 34, Mr. Daverio, this drill,

Attachment 2, it says, and I am looking at the middle of

the page: Each field member will complete part 1 of the

required dosimetry forms, and retain a copy of their daily

dose record card and permanent dose record form.

All participants shall don their dosimetry.

Do you see that.

A Yes.

MS. MONAGHAN: Objection.

MR. MILLER: Do you object to the fact whether he has seen it or not.

MS. MONAGHAN: No. I am sorry, Mr. Miller, he can answer that question.

BY MR. MILLER: (Continuing)

Q Do you see it, Mr. Daverio?

A Yes, I see it.

Q Let me as you, Mr. Daverio, isn't it true that during drills, participants sometimes were not given their dosimetry equipment because it was not available?

MS. MONAGHAN. Objection. This detailed inquiry into the contacts of what happened at every single drill -- it appears to be a detailed inquiry into what happened at this drill, and possibly in other drills -- doesn't seem to me to be released to the scope of the Contentions or anything that is listed in the LILCO testimony.

JUDGE LAURENSON: Well, he is just beginning at this point, I think, to the extent that they may be able to establish the unavailability of equipment, or whatever may be relevant.

So, we will allow this inquiry. Objection is overruled.

WITNESS DAVERIO: Having been at this drill, I know dosimetry was handed out at this particular drill, and it was always our intent in all the drills to hand out the dosimetry.

There may have been an isolated case where we didn't, but I am not aware of one.

BY MR. MILLER: (Continuing)

Q You are aware of no case where dosimetry equipment was not available to hand out to participants?

A Like I mentioned there may have been, but I am not aware of one.

Q Are you aware of any, Mr. Varley?

A (Witness Varley) No, I am not.

Q When you state -- when it is stated at the bottom of page 6 of 34 of Attachment 2, Mr. Daverio, the route alert drivers drove to the starting point of alert route and note the arrival time. Then drive for 45 minutes, note the finish time and estimate coverage of zone.

Do you see that?

(Witness Daverio) Yes, I do. 1 Q During an emergency, the route alert drivers 2 would be instructed to drive at approximately seven miles 3 per hour, isn't that right? I think it is five. But it is close. 5 During this drill, Mr. Daverio, do you know --8 did they drive it approximately five miles per hour? 7 MS. MONAGHAN: Objection. Irrelevant. 8 JUDGE LAURENSON: Sustained. 9 BY MR. MILLER: (Continuing) 10 Would you look at Attachment 3, Mr. Daverio. 11 There is a statement at the bottom of page -- well, let me 12 state, this is the transportation coordination drill, 13 prepared by IMPELL and used for, among others, bus drivers, 14 isn't that right? 15 (Witness Daverio) That is correct. 16 Now, at the bottom of page 2 of 31, it says bus 17 routes will be driven in entirety or until two hours has 18 elapsed from the time the participant leaves the staging 19 area, do you see that? 20 That is correct. 21 Why is there this two hour time limit? Do you 0 know? 23 Yeah. It was a four hour drill. You have a 24 time limit on the overall drill. At two hours you had to 25

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bring them back, so -- within the time scenario -- so that we could process the dosimetry back, and any radios from the transfer point coordinators. It was part of the drill scenario.

Q And, as we talked about yesterday, Mr. Daverio, as indicated on page 2 of 31, the bus drivers in these drills were driving their cars, correct?

MS. MONAGHAN: Objection. Asked and answered.

JUDGE LAURENSON: Sustained.

BY MR. MILLER: (Continuing)

Q Do you know, Mr. Daverio, in this particular drill, Attachment 3, did the participants go from the staging areas to the bus companies then to the transfer points and then drive the routes?

MS. MONAGHAN: Objection. Irrelevant.

MR. MILLER: It is in the drill scenario, Judge Laurenson.

JUDGE LAURENSON: Overruled.

WITNESS DAVERIO: I think Mr. Varley may have more details. It is my understanding some did and some didn't, but I am not exactly sure.

BY MR. MILLER: (Continuing)

- Q Mr. Varley, is there anything you can add to that?
- A (Witness Varley) Yes. The way we conducted these particular transporation drills, and again keep in mind these were the first drills run for bus drivers, what we

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experience in running bus routes, ensure that they also had some experience in going to bus companies, and gain experience so that they had an understanding of not only was it their requirement that they would have to run a bus route from a transfer point, that before they got there they would have to also go to bus companies.

What we have done is set up drills scenarios in such a manner that we take a certain percentage of bus drivers and have them run the routes from staging areas to bus companies, and then back to the staging area to verify that our information and directions on how they get to bus companies is correct, and to give them that experience.

And then other bus drivers to run from the staging areas to the transfer points, and from the transfer points out on the bus routes, and then back in.

And as we run more of these drills, different bus drivers perform the two different functions, and in fact, in future drills or in the more recent drills, bus drivers go from staging area to bus company, to transfer point.

Which is the correct process that they go through in a real emergency.

Q Are you saying that this has been done to date from the staging area to the bus company to the transfer

point, to running the route, or is that something you intend 1 to do in the future? 2 No; that is something we have done in the more 3 recent exercises. When were those exercises conducted? 5 In February. When it is stated at the bottom of page 21, Mr. Varley, unlike drills, during an exercise, the controllers 8 and observers are not allowed to coach or correct the drill participants in their actions. 10 Do you see that? 11 Yes, I do. 12 If you would refresh my memory, Mr. Varley, did 13 you tell me yesterday that the controllers and observers of 14 exercises could also include LILCO personnel? 15 That is correct. 16 Do you know, Mr. Varley, if during drills and 17 exercises -- let me back up. Let me keep the distinction. 18 During exercises, where there should not be the prompting, 19 correct; do you know -- would you say, 'yes?' 20 A Yes. 21 Do you know, Mr. Varley, if there have been 22 instances where prompting of participants has been done by 23 the controllers and/or observers of those exercises: 24

MS. MONAGHAN: Objection. I don't see the

1 relevance of this to the admitted contentions. 2 MR. MILLER: It is relevant to the testimony. 3 JUDGE LAURENSON: Overruled. WITNESS VARLEY: Yes. 5 BY MR. MILLER: (Continuing) 6 Would you look at page 22, please. You state, Mr. -- let me ask you this, Mr. Berger. It 7 says, at the top of the page: It is used -- referring to 8 an exercise -- as the final evaluation tool to determine the effectiveness of the training program, and to demonstrate 10 11 the ability of the emergency organization to carry out its responsibilities. Do you see that? 12 (Witness Berger) Yes, I do. 13 14 Is it your testimony, then, Mr. Berger, that the LERO exercises test the LERO organization? 15 A No. The exercise referred to, Mr. Miller, is the 16 17 FEMA-graded exercise. In this sense you are referring to the FEMA-18 graded exercise? 19 Yes, I am. 20 I would just like to make sure that you are sure 21 about that, Mr. Berger, because the next sentence goes on 22 23 and starts talking about the FEMA-graded exercise, and I thought that this --24

A No, as I wrote it, my reference is as it applies

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to that first sentence, and exercise is a culmination of the training program. That is, indeed, referring to the FEMA-graded exercise, along with the next sentence, and that actually mentioned the FEMA-graded exercise in the third sentence.

Q So, Mr. Berger, is it fair to say then that the discussion set forth in Answer 9, which covers pages 21 and 22, where you use the term, 'exercise,' you are referring to the FEMA annual exercise?

A No, that is not correct.

Q What about the paragraph -- last paragraph, starting on page 21. Is this entire paragraph -- continuing over to page 22 -- to the end of the answer --

A The exercises that are referred to here are the exercises that Mr. Varley referred to. LERO, as I understand it, as part of the training program, does conduct drills and exercises to prepare for the eventuality of the FEMA-graded exercise.

The exercise referred to on the top of page 22 is in reference, specifically, to the FEMA-graded exercise.

Q Let me ask you about the LERO exercises. Those exercises do not test individual participants, do they?

A Since I have not been a participant in the exercises, I am going to defer to Mr. Varley.

Q Mr. Varley? Let's keep the distinction between

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exercises.

Here, I am talking about the LERO exercises, and isn't it true that those exercises do not result in testing of the individual participants?

A (Witness Varley) I would have to say, I guess, that it varies by position in what your definition of 'test' would be. I believe that testing the individuals in the format of running an exercise, could be construed that if an individual participates, that if he carries out his functions and if the overall goals of the particular responsibility and function of an aspect of LERO is accomplished, then that area has been deemed satisfactory and, in fact, the group to perform that 'passed' the test.

Would you agree with me, Mr. Varley, that it is certainly possible that an organization's performance such as LERO's could be deemed satisfactory, and yet certain individuals involved in -- for example, an exercise, -- would not have performed as aptly as, perhaps, they should have?

A Yes, I could agree with that.

Q Would you agree with me, Mr. Varley, that one of the purposes of the LERO exercises is to determine additional training needs?

A Yes.

Q And, I gather, Mr. Varley, from your earlier

comment, that you would agree with me, also, that the exercises -- LERO exercises -- the focus of such exercises is really on the performance of the LERO organization, and not on the individual participants, is that correct?

A I don't think there would be a LERO organization if it weren't made up of all of the participants, so, I think that is kind of splitting a hair to say that we are testing the organization but not the participants.

Q The focus of the exercises, though, Mr. Varley, isn't it fair to say that that focus is on the performance of the organization and not on the performance of the individuals performing in that exercise?

MS. MONAGHAN: I believe that that question has been asked and answered.

MR. MILLER: I don't believe I got an answer, Judge Laurenson.

JUDGE LAURENSON: I think he gave you the answer.

I don't know if it loes any good to ask the same question

again. The objection is sustained.

BY MR. MILLER: (Continuing)

Q Mr. Varley, are individuals in the LERO exercises graded in any way by observers or controllers -- individuals?

- A They are critiqued, yes.
- Q The critiques, Mr. Varley, go to portions of

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the LERO organization, such as security personnel or decontamination personnel, isn't that correct?

Do you have individual critiques for individual participants?

A Let me give you an example. The emergency worker decon facility, which is located in the Brentwood EOC. At the completion of a drill or an exercise, there is a critique held for that group of individuals to discuss the performance of that facility.

With that group of individuals there, you point out high spots and the low spots of their performance as a group, and if there were particular problems with an individual in that group, in the facility, those are pointed out at the critique.

So, I guess my response would be that you, in fact, are critiquing the individual, but you are also critiquing the response as a whole.

Q The critiquing of the individual, Mr. Varley, depends upon any problems actually being observed by the observer or controller of the exercise though, isn't that right?

A No. Because you can have a problem manifest itself while the observer is away but because that problem has arisen in the program, it can be obvious that the problem was caused by an individual not doing a particular function.

Q Well, if you have a group of decontamination personnel that are in charge of conducting a simulated decontamination center, and the observer is not present, and when the observer comes back a problem is noticed, how does the observer know which of the personnel simulating the role of the decontamination personnel would have been the cause for the problem?

- Well, let's take an example.

  If an individual --
- Q Could you answer my question?

A I am trying to answer your question. Within the emergency worker decon facility, if an individual did not put on his proper protective clothing after going through the decontamination process, it is readily apparent that the individual that was responsible for insuring that that participant did not have on his decontamination clothing didn't fulfill that function.

Whether the observer was in the room at the time that individual put on that clothing or didn't put on that clothing was not that critical because it becomes apparent, when the individual walks out of the room, that the participant didn't require the individual to don that clothing.

Q What if the observer comes back, Mr. Varley, and notices that two individuals who were, under the exercise scenario, supposedly contaminated had been permitted to cross over into a clear area.

Now, how would that observer or controller know which individual or individuals assigned the job of preventing that from happening would be responsible for that?

A What you do in the general critique, when you are talking about the facility operation as a whole, you point out the fact that there were contaminated individuals in an area that was supposedly clean.

- O But that --
- A (Witness Daverio) But also, Mr. Miller --
- Q Excuse me, Mr. Daverio.
- A I'm going to answer your question directly and your scenario.

If there were any sorted two people, the obvious thing would be go ask them who monitored you.

1 Q Yes, but do you know if that is always done, 2 Mr. Daverio? 3 I can't say it is always done. 4 And back to you, Mr. Varley, under my example, 5 your critique would be a critique of the personnel 6 performing a job function -- that is, the function of 7 decontamination personnel -- it is not a critique of the individuals comprising that function, though, is it? A (Witness Varley) I believe it is, yes. 10 Mr. Daverio, let me ask you, in the middle of 11 that or so of that first paragraph on page 22, there is 12 mention of the annual graded exercise, the FEMA exercise. 13 Can you tell me, does LILCO have any time table 14 at the present time for when that exercise will be conducted? 15 MS. MONAGHAN: Objection, not relevant. 16 JUDGE LAURENSON: Overruled. 17 WITNESS DAVERIO: I don't know. Dr. Cordaro 18 might want to add something. 19 WITNESS CORDARO: As soon as FEMA is prepared 20 to carry out their exercise, we will be ready. 21 BY MR. MILLER: 22 Do you have any idea, Dr. Cordaro, when that 23 will be? 24 It really depends on FEMA and the NRC. I can't say. 25 I was provided by counsel, Dr. Cordaro, I think a

memorandum that was sent to you that talked in terms of

LILCO's hoping that the FEMA exercise could be held as

soon as late this summer.

Do you have any reason to believe that the FEMA graded exercise will indeed be held this summer, late this summer?

A I seriously doubt that it would. That information was based on the situation which existed on or about May 1 which was somewhat different than it is now.

So as a result of the latest developments,

I would sericusly question whether it would be held by
late this summer.

Q The statement at the end of the answer 9 on page 22, Dr. Cordaro, is talking about here state and local authorities will be invited to observe the exercise and that these governmental authorities attend the annual exercise to observe and verify the capabilities of LERO.

Do you see that?

(Pause.)

A Yes.

Q Do you have any agreements, Dr. Cordaro, with any state or local authorities that indicate they will attend an annual FEMA exercise?

MS. MONAGHAN: Objection. It is beyond the scope

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of the contentions again.

MR. MILLER: It is relevant to the testimony.

JUDGE LAURENSON: Overruled.

WITNESS CORDARO: We have no written agreements that that will be the case as of this point in time.

BY MR. MILLER:

Do you have any understanding from any state or local authority, Dr. Cordaro, that they would indeed attend a FEMA exercise?

A It is an assumption on our part that there is a good possibility that they would attend.

And what is the basis for that assumption?

Well, the past contacts we have had with state officials throughout the history and course of our emergency planning, if nothing else, there is something to be learned from each exercise which takes place. Even if there wasn't a formal approval or endorsement of the exercise by the agency involved, I believe there is something to be learned by witnessing the exercise.

And knowing the people that are involved on the state level especially, I am sure they would be interested in what they could learn from observing our exercise.

Q Is it fair to say, Dr. Cordaro, that what you just stated is an assumption on your part and that actually you are hopeful that state and local authorities

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will attend such a FEMA exercise?

A As I said earlier, we don't have any formal written agreements. It is an assumption on our part.

I think it is a pretty good assumption, however.

MR. MILLER: Judge Laurenson, this would be a good time for the lunch break, I think.

JUDGE LAURENSON: All right. We will take our luncheon recess.

(Whereupon, at 12:30 p.m., the hearing was recessed, to reconvene at 1:45 p.m., this same day.)

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## AFTERNOON SESSION

(1:50 p.m.)

JUDGE LAURENSON: The hearing is now resumed.

Before we left for lunch but after we went off the record there was discussion that Dr. Cordaro was not going to be here this afternoon because of another commitment for this time, and this was discussed yesterday.

We are aware of the county's position on this, but as we indicated yesterday, we will permit Dr. Cordaro to leave when he has to. But I think that from now on we should have this noted on the record, in case there is any new material that people want to raise, it should be done while the witness is still here.

Mr. Miller?

BY MR. MILLER:

Q Gentlemen, if you would look, please, at answer 10 an pages 22 and 23.

Mr. Daverio and Mr. Varley, let me just ask you, you are the sponsors of this answer, is answer 10 your judgment as to the adequacy of the LERO training program?

- A (Witness Varley) Yes, it is.
- A (Witness Daverio) Yes, it is.
- Q Dr. Mileti, starting at the bottom of page 23, you supplement answer 10 and in doing so refer to the four

1 nuclear power plants which, as you say, you have 2 encountered. 3 Do you see that? A (Witness Mileti) Yes, I do. 5 If I recall correctly, Dr. Mileti, these plants were D'ablo, Wolf Creek, TMI, and Waterford; is that right? 7 Yes. Those are the ones I listed yesterday. 8 Could you tell me, Dr. Mileti, what do you 9 mean when you say that you have encountered the training 10 programs at these plants? 11 I have encountered them in different ways. For 12 each plant my review or exposure to the plan, its implementing 13 procedures, and accompanying training plans were different. 14 And I explored them in different levels and 15 depths. 16 Could you tell me, Dr. Mileti, at the other four 17 plants that you have encountered, were police personnel 18 expected to direct traffic? 19 A At all those other four plants, the off-site 20 counties were participating. However, now I believe that 21 Coffey Councy, around the Three Mile Island reactor, has 22 refused to participate. 23 JUDGE LAURENSON: Coffey County is in Kansas. WITNESS MILETI: I am sorry. Dauphin County. 25 Coffey County is in Kansas. That is correct. Thank you.

BY AR. MILLER:

Q Back to my question, at the other plants, . Dr. Mileti, were police expected to direct traffic?

A Yes, they were.

Q And at the other four plants you have encountered were local or state governmental authorities expected to be command and control personnel?

A Yes, they were.

Q Have you had any experience, Dr. Mileti, at any of these other four plants, where utility workers were to perform off-site emergency functions in the event of a radiological emergency?

A Well, it means what you mean by my experience.

Q With these four plants.

A No. The off-site response was going to be run by local county governments.

Q Is it fair to say then, Dr. Mileti, that your experience with these four plants has been restricted to sites where the emergency response personnel knew how to perform their emergency response jobs before training was provided to them with respect to the utility's emergency response plan?

A No, I don't think that would be a fair thing to say at all.

Q Do you think police knew how to direct traffic

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before they were trained with respect to any of these other four plants?

A For that particular function, my answer would be yes.

Q Is it fair, Dr. Mileti, to say that the training programs at these four other nuclear plants did not have to be as comprehensive since they were structured for professional emergency response workers?

A My answer to that would be yes and no. I think that would be the case in reference to the police doing police work during an emergency. I am not sure that would be the case in terms of other functions where routine off-site emergency preparedness and response organizations were going to be doing something in a radiological emergency that they required training on because they had never received training in terms of a radiological emergency before.

For example, the ability to use dosimeters, if that had never been part of a local county or city's emergency planning.

Q Other than the use of dosimeters, Dr. Mileti, could you tell me the particular tasks or skills which for which in your view it was necessary to provide training to the emergency response workers at these other four plants before they would have the ability to perform those tasks?

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A That is an incredibly broad question, and let .
me tell you about what comes to mind.

For example, I think that the importance of emergency public information and the training that would have to surround that about how, for example, an example EBS message might be changed to suit the idiosyncrasies of a particular emergency. I think that is something that training needed to occur on at plants where or in communities that perhaps locals didn't have quite enough information on it beforehand.

There are others. None come to mind right now.

Q Other than public information aspects and dosimetry, none other come to mind right now?

A Not right now, but I am sure there must be some. If I had a list of emergency functions in front of me, some would occur to me, I am sure.

Q Mr. Berger, on page 24 you also supplement answer 10 to the LILCO testimony.

Could you tell me, Mr. Berger, with respect to nuclear power plants and your exposure to the training programs for those plants, have you ever seen a radiological emergency response training program at which the trainees did not regularly use the skills for which they were being trained?

A (Witness Berger) Well, as in the case of Dr. Mileti,

yes, and no. No as it applies to those skills that they
would perform on a daily basis. As it applies to responding
to a radiological emergency, there are factors that
obviously would not be performed on a daily basis by
response organizations such as police or fire or civil
defense.

Q Would your examples include dosimetry?

A Yes, dosimetry, decontamination, radiological broadcast messages -- emergency broadcast messages, rather.

Q Can you think of any examples other than those three?

A Not right at the moment.

Q Mr. Berger, on page 24 you reference, around the third line, you state, "The LERO program integrates all the educational design strategies required for an effective instructional process."

Do you see that?

A Yes, I do.

Q Are you referring there, Mr. Berger, to the design strategies that are set forth on page 13 of the testimony?

A I am referring to the design strategies that are set forth in the line that follows that which is the three-phase process of classroom activities, drills, and exercises.

Q And those strategies roughly correspond, I take it, to the three that are set forth on page 13?

A Give me a moment and I will take a look at page 13.

(Pause.)

Q This is where we talked this morning about presentation of the information, application of the information by the learner and critique.

A Yes.

Q Is is your testimony, Mr. Berger, that each

LERO member has had an opportunity for meaningful participation in LILCO's drills and exercises?

A (Witness Berger) Would you define meaningful participation.

Q I'm looking at your words at the bottom of the first paragraph where you say that: To participate in the learning strategy in a meaningful and productive manner.

How did you use the word "meaningful?"

A Each worker would have an opportunity to exhibit skills acquired through classroom activities, drills and exercises.

Ω Now, back to my question. Is it your testimony that each LERO member has had an opportunity to have meaningful participatio in the LILCO drills and exercises?

A I have not observed every participant in the drills and exercise program, so I'm not qualified to comment on the question.

It's the intent of the program, but I have no present knowledge of each person's performance.

Q When you discuss, Mr. Berger, in the next paragraph the acquisition of cognitive, motor and attitude skills, could you tell me in particular what motor skills you are talking about?

A Ability to drive a bus, motion with one's hands,

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walk, talk, write.

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Well, in the context of the LILCO training program, are there particular motor skills which in your view are provided to LERO members?

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Driving of a bus.

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Anything else?

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There are probably quite a few. I would have to review the content of the modules to give you a complete list.

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And, Mr. Berger, I gather from the testimony you have presented thus far that in your opinion it's during the classroom training sessions that cognitive

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skills are presented to the LERO trainees?

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A portion. Cognitive skills could also be acquired during the drills and exercise portion of the program. It is an integrated process again, building block approach, and cognitive skills could be acquired at any

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one phase.

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And that process, Mr. Berger, would include, would it not, incentive to learn and a way for the

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classroom instructors and the drill observers and instructors

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to evaluate whether there has been learning by the LERO

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A I got lost in the question.

members; is that correct?

Let me break it down. The process that you are

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talking about, that would include necessarily an incentive to learn by the LERO members, wouldn't it?

A There is an assumption of incentive by the fact that the LERO workers are indeed attending portions of the training program.

Q Are you saying, Mr. Berger, that attendance in and of itself demonstrates an incentive to learn?

A Attendance in this particular case is a behavior that we attribute to a desire to learn. Yes, it's one of the criteria.

Q You make that assumption, right?

A Yes, I do.

Q If attendance would be compelled, would you still make that assumption?

A Well, even though it's compelled, individuals are free to make a choice. And just because I tell someone to do something doesn't necessarily guarantee that they are going to do it.

Q In going back, Mr. Berger, to the process we were talking about, would that process include insuring a way to determine whether instruction has been effective?

A We would like some proof that instruction has been effective.

Q And how would you look for this proof?

A Oh, as an example, in the classroom activities,

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the completion of the self-check exercises, performance of the skill during the course of the drills.

Q In your view, Mr. Berger, completion of review exercises without regard to accuracy of the answers given would indicate that instruction had been effective?

That's not -- no, that's not correct. I believe there is regard for the accuracy of the answers.

Q What you are saying then is that to make that determination you would want to make a determination regarding the accuracy of the answers given in those exercises?

A twould want to determine that the self-check exercises had been complete and to the best of my ability as an instructor that everyone understood the intent as well as the answer to the question.

Q Mr. Berger, going over to Page 25, the first paragraph again discusses motor skills. And you give examples of operation of radios and reading dosimeters.

Do you see that?

A Yes, I do.

Q Do you believe, Mr. Beroor, that every LERO participant in the drills and energy has the opportunity to operate radios and read their dosimeters?

A I do not believe it's required by every participant in the LERO organization to be able to operate a radio or read a dosimeter.

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Q With respect to those LERO members for which it would be required, do you believe that every participant has that opportunity?

A It is my belief, to the best of my knowledge, that participants do have the opportunity to practice the operation of radios and read dosimeters.

Q All participants?

A I didn't say that. I said those participants whose job function requires the operation of the radio or the sading of a dosimeter.

There are people, Mr. Miller, who are not required due to their location, that are not required to wear dosimetry and therefore would not be taught how perhaps to read a dosimeter.

Q Yes, sir. I understand that. I was trying to make sure that we were understanding one another with respect to those personnel whose LERO job function would include the use of a radio or reading a dosimeter.

And it's your testimony that with respect to those personnel all participants have an opportunity to practice using this equipment during the drills and exercises?

A To the best of my knowledge, there is an opportunity to operate radios and read dosimeters amongst those personnel. I have, once again, have not observed the

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drills or exercises and therefore what my answer is is speculative. It was the intent to allow them that opportunity.

Q Would you agree with me, Mr. Berger, that moral or attitude behavior is an incentive for personnel to learn and respond in emergencies?

A In emergencies?

Q Yes.

A I would like to defer that to Dr. Mileti who might be better qualified to respond to that in the context of emergencies.

Q Well, I want to ask you, Mr. Berger, because I'm looking at your answer to Question 10 where you talk about the attitude skills.

A In the context of that answer, it was attitudes as it applies to the effective domain of acquiring learning in the classroom, not -- you added something in the context of emergencies. I don't see that that's stated.

Q Do you believe attitude is a skill?

A It's -- I don't know that it's a skill. I believe it's a way of feeling.

Q Do you have any knowledge, Mr. Berger, with respect to the recent layoffs that have occurred at LILCO?

A Only what I've read in Newsday.

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Would you expect that these recent layoffs have 0 impacted in any way on the attitudes of the LERO members.

I have no basis for that answer.

When you say, Mr. Berger, in the first sentence of that second paragraph on Page 25, point of proficiency. would you define what you mean by that?

Yes, I can. It is my belief, and also based on professional experience, that as an individual continues to become more proficient in exhibiting a skill or practicing a skill, that their attitude towards that skill and that job increases. They become more competent in their attitude toward performing the skill.

Does point of proficiency mean without mistake?

I don't know that necessarily in my context it would mean without mistake. But that indeed they can be called upon to perform the skill and are able to do so.

In the next paragraph, Mr. Berger, you talk about expected behavior, as you say, often called the terminal performance behavior.

Do you see that?

Yes, I do. A

Could you define for me expected behavior?

Yes, I can. It would be expected that the individuals without coaching or counsel would be able to perform the skill on their own, or would have recall of the #13-8-SueT 1

skill.

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Q To what level, Mr. Berger?

A To some level of proficiency.

Q What level of proficiency would that be, though?

A A general context of acceptable level of proficiency, an example being I guess the ability to drive a bus through a series of streets.

Q How is what is acceptable determined?

A Pardon?

Q How does one determine what is acceptable?

A Through observation in this particular case.

Q Do there have to be standards beforehand to make that particular determination?

A I think you would perhaps establish a standard to insure acceptable.

Q Mr. Berger, with respect to expected behavior, is expected behavior under your definition set forth in the LILCO training program?

A Expected behavior is, in my understanding, as it applies to the LILCO training program the ability to perform the specific skill or job function called for, if you will, in the title of the individual. A bus driver, as an example, being able to drive a bus.

Q And with respect to the LILCO program, to what

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level is this expected behavior to be demonstrated?

A The individual, I will state again, is expected to perform the behavior without coaching or counselling from an outside individual or agency.

Q Yes, sir. But to what level must such behavior be demonstrated under the LILCO program?

A To the point of adequacy.

Q And where is adequacy defined in the LILCO program?

A It's defined from the standpoint, once again, of the skill that's going to be performed. Can indeed the individual drive the bus when asked to do so. Can an individual operate a radio when asked to do so. It's observed behavior as part of the exercise program or drill program.

Q To your knowledge, Mr. Berger, are there such standards set forth in the LILCO training program with regard to this expected behavior you are discussing?

MS. MONAGHAN: I think that question has been asked and answered.

MR. MILLER: It hasn't been asked or answered, Judge Laurenson. We were talking in general terms before. Now we are talking about specifically with respect to the LILCO program.

JUDGE LAURENSON: Overruled.

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BY MR. MILLER: (Continuing)

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0 You have to answer, Mr. Berger.

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I'm sorry. The expected level of performance is that indeed the task is performed when an individual is called upon to do so.

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I feel like we are going in circles.

I do, too. I have tried to be responsive to your question. I will go back again.

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When called upon to do so, can an individual operate the radio. Can an individual drive the bus route. Can an individual go out and do his road spotting duty.

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Can the person do it. That's what we are --

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this to a head. Are there any standards set forth in

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writing under the LILCO program with respect to this level

Q Let me ask this, Mr. Berger. Maybe we can bring

There are some standards stated in the workbook.

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of expected behavior that we have been discussing?

would have to defer to Mr. Varley on that.

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I'm not totally familiar with whether or not there are

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standards under the scenarios, the drill scenarios. I

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The standards in the workbook you are referring

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to, are those the objectives that we discussed earlier?

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You referred to one set of objectives. There are many sets of objectives in the workbooks. We have

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others that are stated for the modules.

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More definitive objectives.

A That's one place I would expect them to be found. There may be others. I don't know.

Q Do you know if they are indeed in the workbooks and the drill scenarios?

A I know that there are, at least in my opinion, standards in the workbooks. I would have to defer to Mr. Varley as to whether or not they are in the scenarios.

Q Does someone want to add to that?

A (Witness Daverio) I think what Mr. Berger has been alluding to I think, without getting directly to it, is there is a level of performance that we expect. And the level of performance is the ability to perform the OPIP as described in the prescribed manner. And that's what the observers are there to do, can they do at the end of our training or during a drill the job function required under the procedures that implement the plan.

(Witness Varley) To give something of an illustrative example, let's take the transfer point coordinator. When he performs his function as transfer point coordinator in the field, his procedure dictates that

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he dispatch buses at intervals to maintain the bus route cycling. He is evaluated on his ability to coordinate a group of buses that are waiting at a transfer point to conduct those activities to dispatch buses into the field at the appropriate time.

That, to me, would seem to be the type of thing that you are asking, is there a standard that we evaluate the individual against, his ability to be able to carry out the procedure as called for.

Q Mr. Varley, what I'm trying to ascertain is by what standard, under your example, would the bus coordinator be judged?

A The standard would be if the observer is there and the transfer point coordinator cannot, in fact, meet the bus schedules in this particular instance, then he has not demonstrated the proficiency that is acceptable for his particular position.

Q So, under your standard the person being evaluated would have to, number one, be observed; correct?

A For that particular position that we are talking about, yes.

Q And I take it, Mr. Varley, that under your standard, the standard is one of the judgment of the observer or instructor; is that correct?

A I don't -- in this particular example, I'm

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not sure that the judgment applies. If you have a time schedule, the individual either meets that time schedule or he doesn't. It depends upon the particular job function that you are talking about. Under certain skills such as command and control skills in which -- yes, you would have to have a certain amount of judgment to evaluate things that aren't concrete such as time tables. Yes, that's obvious.

Q Well, Mr. Varley, let's stay with your example for a minute with respect to the buses. Your example is, the criteria would be, do the buses arrive and are they dispatched within the amount of time specified in the LTLCO procedure; is that correct?

A For the transfer point coordinator, that's correct.

Q Now, let's assume, because 1 don't know what the time would be, that it has to be within fifteen minutes --

A Between dispatching of buses.

Q Okay. If a bus is dispatched at sixteen minutes, does that mean that the bus transfer point coordinator would be judged inadequate by the observer?

A It would be noted that the individual could not maintain the appropriate bus route as defined in the procedure.

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Q And would that be considered inadequate performance by the drill observer?

A If it was due solely to the fact that it was his inability to get that bus out, yes. If there were mitigating circumstances, such as there was not another bus there, then obviously he couldn't have dispatched that bus. But if it was due solely to his inability to dispatch the buses as necessary, then that would be true.

And, therefore, Mr. Varley, under the example of using -- there is indeed some judgment to be exercised by the observer, isn't there?

The observer at least has to determine whether it is the bus transfer point coordinator who should be held accountable for a bus being dispatched in an untimely fashion, correct?

A Yes. I agree heartily with that.

On page 25 of the testimony, there is again mention of the FEMA-graded exercise, and the fact that is under the LILCO program considered the final test.

Do you see that, Mr. Daverio?

A (Witness Daverio) I see it.

Q I guess I should direct this to Mr. Berger, it is his answer. Mr. Berger, is it your understanding that during a FEMA-graded exercise, all participants in the exercise are observed?

A (Witness Berger) It is my understanding that there are observers present at the FEMA-graded exercise.

I don't know, Mr. Miller, that we could say say that every individual who participates in the exercise is observed as at individual.

Once again, speculative again on my part, I believe FEMA is looking for overall performance of the organization -- the response organization, which is made up collectively of individuals.

A (Witness Daverio) Since you started with me,

I might add that FEMA --

MR. MILLER: Mr. Daverio, excuse me. You are not on this answer, so I am not sure you can supplement it.

BY MR. MILLER: (Continuing)

On page 26 of the testimony -
JUDGE LAURENSON: I am not sure that that is the

rule, Mr. Miller, because as I recall, the County does not identify the people who are sponsoring most of their answers, and we have allowed your panelists to intervene and to add comments if they were relevant to a question.

You have the right to, of course, direct it to the person who is sponsoring the answer, but I just don't remember that that was the rule that we applied, that no one else can add to an answer.

MR. MILLER: I was under the impression, Judge
Laurenson, that if a particular witness was the only witness
on the panel that sponsored an answer, that that witness
is the sponsor, and that witness -- you can limit your
question to that witness.

Now, it is true the County has not taken LILCO's approach of designating particular witnesses for particular answers, but it seems to me that is LILCO's choice.

You know, it has been that way all along. LILCO, obviously, could have changed its strategy and not designated witnesses. If there is a strategy involved in that, I think LILCO has made its choice in that regard. But in this context, Mr. Berger is the sole sponsor of the answer.

JUDGE LAURENSON: I understand that. I am not disputing that at all. I just didn't remember that we had not allowed anyone else to add to an answer or to supplement it if they had relevant information. But maybe someone else

can correct me.

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yours.

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MR. CHRISTMAN: My recollection is similar to I think the point here is that one of the witnesses has something responsive and relevant to add, and he ought to be allowed to add it.

My impression -- and I can't prove it -- but my impression is that we have been -- you have been fairly liberal in letting others supplement the answers.

JUDGE LAURENSON: Let me ask. Is this going to create a problem? Is this worth spending a lot of time talking about, or --

MR. MILLER: It is not worth disputes.

JUDGE LAURENSON: We should determine what the rules are going to be so we all know what it is, and not to have to rule on them ad hoc as they come up.

MR. MILLER: It would be my opinion that it is a matter that should be come back to on redirect by LILCO, but I am not going to fight about this. If you think that Mr. Daverio should supplement, that is fine.

JUDGE LAURENSON: What is LILCO's position on Do you want your witnesses who are not sponsoring an answer to be able to supplement an answer concerning a question of another witness?

MS. MONAGHAN: Judge Laurenson, certainly the questioning with respect to a particular answer sponsored

by a particular witness may go a little bit beyond specifically what is stated on the page of the written testimony, and to that extent it seems to me that where another witness on the panel has relevant evidence that would supplement the answer that was given, I think we should permit that to come in.

MR. ZAHNLEUTER: Judge Laurenson, what is our rule for a witness who sponsors an answer? In other words, may I ask a question of a witness who is not a sponsor of the answer?

Because, then it seems like we are establishing a double standard where I am prohibited from asking a panel member a question, because someone else sponsored the answer and yet, that other panel member may respond and supplement something else.

JUDGE LAURENSON: I don't know that we have ever precluded anyone from asking a question. I think it has been pointed out sometimes that, perhaps, the wrong witness might have been asked a question, but I don't think anyone has been precluded from answering a question about -- outside an area that they had sponsored the answer on.

MR. ZAHNLEUTER: Then my suggestion is that, if it has not been dealt with before, that if we are going to deal with this problem now, we should also deal with that other factor of asking a witness who is not a written sponsor.

JUDGE LAURENSON: Well, the only problem with that is that you then may be asking witnesses - many witnesses on a panel - about matters which they have no information on, and we are going to spend a lot of time.

For instance, if we have seven witnesses on the panel, and only one of them has information on it, to have to ask all seven whether they know anything about it or not might not be very productive.

This is not the case here. The case we have here is that apparently a witness who was not a sponsor of an answer wants to add something that the witness believes is relevant. My belief is that probably sooner or later it is going to get in evidence anyway, on redirect if someone feels it is worth putting in.

But if it is a major procedural matter here, I think we ought to air it now and decide it and not come back to it again.

MR. PIRFO: Judge Laurenson, just for the purpose of taking a position on it, I would think that redirect would be the time that it should come in. That is the Staff's position.

## (Board confers)

JUDGE LAURENSON: We have considered this request, and the rule will be that any non-sponsoring witness may add relevant testimony to supplement an answer, as long

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as it does meet all of our other tests concerning relevancy to the question asked.

So, -- now, if anybody can remember what the question or the answer was, Mr. Daverio can respond.

WITNESS DAVERIO: If I might. Part of why I did have some information to add is we talked about the FEMA-graded exercises in many places in our testimony.

I do sponsor the other part, where we talk about FEMA-graded exercise. It is my understanding of the FEMA-graded exercise to supplement what Dr. Berger has said, is that everywhere in the country that is the their method of operation.

They do sampling techniques of what to review and what to observe in a drill, and based on that they make findings as to the adequacy of the overall program. I don't think that is any different anywhere else in this country.

Q Mr. Daverio, then I gather you agree with Mr. Berger's answer that not all participants in a FEMA-graded exercise are actually observed during that exercise?

A (Witness Daverio) I think he stated it, and I think I stated that yesterday.

Q Mr. Daverio, on page 26, there is discussion. It says personnel from the U. S. Coast Guard, ambulance companies, and the helicopter company have, or will, receive classroom training.

Do you see that?

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A Yes, I do.

Will the personnel at these organizations receive just the classroom training offered by LILCO?

I think as we stated this morning, people who we do not have under contract, we can't demand that they participate. That would be the U. S. Coast Guard.

I think within our contracts with ambulance companies and helicopters, we could have them participate in drills. I think on the Coast Guard, it is my understanding that they do participate in other drills and they participate as to communication links.

I was not looking at the requirement aspect as much as the particular aspect of the training offered. This statement says that the classroom training will be received by these organizations.

So, I guess what I am asking is: Will these organizations participate in drills or exercises, and have they to date?

As I just stated, it is my opinion that the ambulance company, helicopters will participate in drills. They have not to date. The U. S. Coast Guard, it is my understanding from our letter of agreement and discussions with them, that they would participate in the communication link test during the exercises.

Q Is that the only aspect of the drill that the Coast Guard would participate in?

A That is my understanding.

Q Does LILCO, Mr. Daverio, make an attempt to evaluate in any way the effectiveness of the training offered to these non-LILCO organizations?

A With ambulance companies and helicopter companies, if they were participating in our drill, they would be observed as any other LERO participant would be observed.

Q If such organizations do not participate in the drills, and as you said they have not to date, does LILCO have any way of evaluating the effectiveness of the training offered to the personnel of these non-LILCO organizations?

A It is my understanding in our contracts they -- there is a provision for them to participate in the drills.

They have not been trained yet, and that is why they have not participated in any drills as of yet.

Q Is it fair to say, Mr. Daverio, that any evaluation that might be attempted by LILCO regarding these non-LILCO personnel, would be evaluation stemming from participation in the drills or exercises?

A We would also have the review module. I believe
-- I would have to check with Mr. Varley -- that they are
going to get the lesson plan and workbook, so we have a check

at least as to their -- as we explained what a review module is used for -- review exercise, sorry.

Q At this point, has the classroom training been given to these non-LILCO organizations -- I know the Coast Guard has received training. Mr. Varley has said that.

A We have completely trained the Coast Guard at New Haven and at Eatons Neck. We have begun training with the ambulance companies. We have not set a schedule, as to my knowledge, with the helicopter company yet.

I am sorry. One ambulance company has begun training.

Q Is it fair to say, Mr. Daverio, that at this point LILCO has no way to judge how effective any training that has been provided to these organizations has been?

A I think to the Coast Guard -- just let me confer for a second what they actually did get.

## (Panel confers)

As to the Coast Guard, the only thing we have is the review exercises they did as part of our training program. I am not exactly sure. I think we may have trained some ambulance drivers, and we may have review exercises for them also, but they haven't been in any drills yet where we have observed them.

Q Mr. Varley, as instructor for the Coast Guard training, is it your testimony that you reviewed the

review exercises completed by Coast Guard members to determine; 1 one, that the exercises had been completed, and; two, that 2 the responses given were accurate? 3 (Witness Varley) That's correct. And it is your judgment, I take it, Mr. Varley, 5 that based upon your review the Coast Guard training 6 received with respect to the classroom training was adequate? 7 Yes, I do. Now, Mr. Daverio, with respect to the American 9 Red Cross and the DOE RAP teams, you state that they will 10 be invited to participate in drills. 11 Do you see that? 12 (Witness Daverio) I see it. 13 Does LILCO have any written commitment of any 14 kind by either organization that they will, indeed, engage 15 and participate in the LERO drills or exercises? 16 A We only have a verbal commitment. 17 0 Verbal commitment from both organizations? 18 Yes. A 19 To date, have they participated in any drills 20 or exercises? 21 Representatives of the Department of Energy 22 at Brookhaven National Lab have been our our table tops, 23 and they have observed at our drills. I am not sure they 24 participated at the drills. But at the table tops, I know 25

they did participate and give suggestions in discussions with us.

Red Cross at a drill. The Suffolk County Chapter of the Red Cross, while they have not participated in a drill, I think as Mr. Berger stated yesterday or this morning, they were the people who were the talent in the relocation center module, video tape, and worked with Dr. Berger and his staff in producing that tape and making it accurate.

Q And with respect to hospitals, schools, nursing homes, et cetera, you say that training will be offered to these organizations, right?

A That's correct.

Q In your opinion, Mr. Daverio, should such organizations receive the LERO training?

A I think we addressed that later in our testimony, and as explained in our plan, we do have an outline of what we would offer to them.

Q Yes. But my question was: Should they receive such training? Would it be desirable?

A I think it would be desirable.

Q Is it necessary?

A It would be my opinion certain aspects -- certain individuals, it might be necessary to have them get an understanding of the program.

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A (Witness Mileti) I would like to supplement that answer, please, and that is to say that I think it is important for people to know what it is they need to know, and the Red Cross doesn't need to relearn how to operate relocation centers.

They already know how to do that. So, on some fronts, it is necessary to tell people certain things, and on other fronts it isn't, and one needs to look at what organization it is, and make that judgment.

Q Please look at page 27, gentlemen, on Contention 39.A. There is a statement, Answer 12, Mr. Daverio, that says LILCO employees are not required to participate in LERO.

Do you see that?

A (Witness Daverio) Yes, I do.

Q It is true, isn't it, that LILCO employees are specifically asked to participate in LERO?

A They are asked as to whether they would volunteer or not.

Q And once they are asked to volunteer, Mr. Daverio, then it is up to the LILCO employee to turn down the request, if you will, isn't that correct?

1	A After they volunteer?
2	Q No. When they are asked to volunteer
3	A Correct.
4	Q It is up to the individual asked then to decline
5	the offer by LILCO; isn't that correct?
6	A Accept of decline, yes.
7	Q And in your opinion, Mr. Daverio, does such
8	a process constitute a voluntary process?
9	MS. MONAGHAN: Objection. That is beyond the
10	scope of the testimony and the contentions.
11	MR. MILLER: Judge Laurenson, it says, "LILCO
12	employees are not required to participate in LERO."
13	JUDGE LAURENSON: Overruled.
14	WITNESS DAVERIO: In my opinion it is.
15	BY MR. MILLER:
16	Q It would be fair to say, wouldn't it, Mr. Daverio,
17	that the LILCO employee must take some action to stay out
18	of the LERO organization?
19	A He either had to sign the voluntary agreement
20	to join, or he didn't sign. He had to take an action to
21	join.
22	Q Not all LILCO employees are asked to join LERO,
23	though, are they?
24	A That is correct. There is a reason for that.
25	Q I think we are going to come to that, Mr. Daverio.

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1 In answer 13, you state that "LILCO will insure 2 adequate number of trained personnel are available by 3 training new personnel for the LERO organization to fill 4 those positions affected by attrition." 5 Do you see that? 6 Yes. I do. 7 Will these new personnel be trained before they 8 are assigned their LERO jobs?

A They will be assigned their LERO jobs, they would have to go through the training program and drill program as outlined in chapter 5 of the plan prior to being on what you might call a duty roster or a call out list.

Q So they first get assigned their LERO job and then they are trained for that job, correct?

A Since we train to different levels for the jobs, you would have to assign them so you know what to train them in.

Q And you go on to say that "LILCO maintains enough reserve trained personnel in the LERO organization that attrition will not be a problem."

Do you see that?

A Yes, I do.

Q Could you tell me, Mr. Daverio, the number of trained reserve personnel in LERO?

A Yes. It is on the next page of the testimony.

If you look, we talk -- well, maybe not. Yes, it is
on the next page, question 17. There are certain jobs
that we have designated as 24 hour operation. For each
of those jobs we designate three people; two for a 12-hour
shirt, one is an alternate.

And for any job we determine as a one-shift person, as we state in the testimony, we have 150 percent margin -- a 50 percent margin or 150 percent staffing level, except in the administrative area where we maintain right now 140 percent.

I think it is all contained on page 28 and,
I believe, 29 of our testimony.

Q With respect to people resigning from LERO, Mr. Daverio, has that happened?

A Yes, it has.

Q Could you tell me, does LILCO track resignations from LERO?

A I don't know what you mean by track?

Q Do they keep track of, do they follow, do they know if personnl have resigned from LERO?

A If we didn't know, we wouldn't know how to replace them. So, of course, we track it to that extent.

Q Tell me what is involved, Mr. Daverio, if an individual decides to leave LERO?

Does he just leave?

A Basically all he has to do is give notice that he does not want to participate in LERO anymore to the people involved in LERIO or the people involved in assigning people. And based on that, he would be removed.

Q Could you give me the numbers, Mr. Daverio, of LERO members who have resigned since the inception of LERO?

- A No. I don't have that number with me.
- Q Do you have any idea at all?
- A I haven't personally looked at that data for quite awhile, so I would be purely speculating.

It is available, but I don't have it.

- Q If we were talking in terms of a percentage, Mr. Daverio, do you think we would be talking 10 percent of LERO?
  - A I would say significantly less.

MR. MILLER: Judge Laurenson, I think this is a very sensitive point, and I would request perhaps counsel for LILCO to ascertain the number of resignations from LERO or percentage, and to provide that information to the county, hopefully by the morning, if that is possible, if it is a matter of a phone call, which maybe it is.

MS. MONAGHAN: I would have to find out how difficult it would be to obtain that information. I am going

to object initially to even attempting to obtain that information on the ground that I don't really see how it is relevant to the issues.

MR. MILLER: I think it is fairly relevant to the issues. I think it is very relevant to the issues. We are talking about attrition, number one. We are talking about attrition within LILCO. And obviously we are talking about attrition within LERO. And if people have resigned from LERO, I can't imagine how it could be any more relevant to the subject matter at hand.

JUDGE LAURENSON: Before we ask that this be produced, let me ask, do you have other data that you are going to want to inquire into concerning the number of people who have otherwise left the LERO organization, aside from resignations?

MR. MILLER: Judge Laurenson, not at this time.

In the course of answers, others might come to mind.

Frankly, this is the first time I have heard that people have resigned from LERO. So in the course of conducting my cross-examination, I have learned some new information, and I think it would be relevant to the record of the proceeding if we knew what that number was.

JUDGE LAURENSON: I think it is relevant to the attrition question which is contention 39. So the objection is overruled.

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MS. MONAGHAN: Judge Laurenson, it seems to me that Mr. Miller is sort of late in his discovery request concerning the number of people who have resigned from LERO. I think everyone here has to understand that there are a number of ways that one can look at the numbers of people who at one time may have been part of LERO and who are no longer part of LERO.

One way of looking at that is resignations.

Another way of looking at that is certainly we are aware of the austerity problem, and that is addressed in the testimony.

I think what Mr. Miller has done is to attempt to characterize LILCO's responses to his prior questions as being unresponsive, and I don't think that that has been the case.

MR. MILLER: I am not attempting to characterize anything. I think it is relevant information. It is responsive to my questions, and the information should be provided to the Board so that the Board has the full information before it.

JUDGE LAURENSON: At this point, the only request is that LILCO supply the number or percentage of people in LERO who have resigned. And I don't think there is any -- I mean, you can argue from that what it means, but at this point I think it would cause us to

1 speculate as to what that argument would be. 2 And we think it is a relevant piece of information on the question of attrition. MS. MONAGHAN: We will attempt to get that 5 information. 6 BY MR. MILLER: Mr. Daverio, there is a memo, dated May 1, 1984, which has been handed out earlier today. 9 It is a three-page document, dated May 1, 1984 to 10 Dr. Cordaro from Mr. Weismantle. 11 Do you have that in front of you? 12 A Yes, I do. 13 You were copied on this memorandum; isn't that 14 correct? 15 Actually I signed it. 16 You signed it? 0 17 So you have actually seen it before then, right? 18 A I have seen it before. 19 Did you write it? 20 No. It was written by Mr. Weismantle. I 21 may have input different concepts that are in here, but 22 he wrote it. He happened to be on the stand when it 23 was going out and I signed it. 24 MR. MILLER: Judge Laurenson, I guess this 25 would be EP 60, if we could have that marked for identification.

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JUDGE LAURENSON: It will be so marked.

(The document referred to was marked Suffolk County Exhibit No. EP-60 for identification.)

BY MR. MILLER:

Mr. Daverio, on page 2 of SCEP-60, there is a paragraph about the middle of the page. It talks about attendance levels at the training sessions, and then it says, "We have concluded that contrary to initial concerns, the poor attendance was not attributable to implicit 'resignations.'"

Do you see that?

A Yes, I do.

Do you know what is meant by the term "implicit resignations"?

A I can give you some of the background of what was possibly in Mr. Weismantle's mind when he wrote the exact words.

It was that there was some concern in April, after the layoffs in March, that there may have been some people not going to the training session because they didn't want to anymore participate as part of LERO. When we went back in and looked, as that paragraph shows you, it wasn't due to that fact. And he was just reporting that to Dr. Cordaro.

Q Mr. Daverio, you have stated that if someone were to resign from LERO, that person would need to inform someone within LERIO and then be given permission to leave the LERO organization; is that correct?

A I don't know if I used the word "permission."

I think you may be throwing that word in. He had to notify us that he didn't want to participate anymore in LERO. He doesn't ask permission not to participate.

Q And once LERIO receives such notification, the person is automatically considered dismissed from LERO; is that correct?

A That is my understanding.

Q Isn't is possible, Mr. Daverio, that persons could resign from LERO without informing anyone within LERIO or LERO beforehand in any way? Simply, for example, by not showing up to any more of the training exercises or drills or classroom sessions.

A Well, I don't believe they would do that because I have faith in our employees and, second, we, if we saw something like that, would investigate it like we did in this case and found out it wasn't the facts.

Q But there is that possibility, isn't there, Mr. Daverio?

A As I stated, I don't think it is very likely, but

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there is always a chance of an isolated case, and we would then try to determine it by attendance.

Q At the time this memorandum was written,
Mr. Daverio, did you or Mr. Weismantle or anyone else to
your knowledge look into this matter to determine whether
or not people had implicitly resigned?

A The sentence before in the memo specifically addresses our investigation into the matter and what our conclusions were.

It states, "Our analysis indicates that about 10 percent of the 35 percent absentee rate was attributable to vacations and jury duty, and 20 percent was attributable to priority being taken by departmental work."

We, of course, went in and did an analysis when we saw there might be a problem.

Q Yes, sir. And that refers to the month of April and the fact that -- let's just talk about this for a second.

It says, "50 training classes were held for a total of about 275 LERO personnel in April. Attendance was disappointing. It averaged 65 percent compared to the about 90 percent levels we experienced in classroom training held last year.

"Our analysis indicates that about 10 percent of the 35 percent absentee rate was attributable to

vacations and jury duty, and 20 percent was attributable to priority being taken by departmental work."

Is that correct?

A That is what it states.

Q Now, once you made your analysis from the month of April regarding this disappointing attendance, did you follow it up and make any determinations regarding attendance during the month of May?

A It is my understand, and Mr. Varley may be able to add more information to the answer, the attendees -- this problem of having a lower than expected attendance rate was brought up to the vice presidential level and it was discussed.

I wasn't involved, but there may have been a meeting with the department managers to rediscuss the issue of attendance at LERO drills, and the problem you have to realize is this is a couple of weeks after the austerity program was initiated. Each department did lose personnel. It is understandable that the first couple of weeks there was some problem with shifting normal departmental work to allow the LERO training program to fit in.

It is not surprising and Mr. Varley has something to add.

A (Witness Varley) To follow up exactly on your

question, Mr. Weismantle has now directed the training division, since the beginning of May, to catalogue or to summarize attendance at all of the table tops and drills now the day after that that particular session was conducted and to indicate how many people were scheduled to attend, how many people did attend. Of those that didn't attend, did they notify us in advance. If they didn't notify us in advance, we then have to call the individual to find out, in fact, why he didn't show up.

Q You say this is being done for the table tops and the drills?

A Yes, it is.

Q What about for the training classes?

A I am not sure. I would have to go back and check on that.

Q This paragraph --

A I didn't answer that.

Q Excuse me, Mr. Varley. This paragraph in SCEP-60 talks about the disappointing attendance at the training classes.

A To answer you question, we are not currently conducting classroom training, so that is why that is not being done right now.

A (Witness Daverio) We had make-up sessions after the April program where those 35 percent were, and I believe

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the majority of them -- maybe Mr. Varley has the exact statistic -- were asked to attend and did attend their make-up sessions.

Q Are you saying that all of the 35 percent that constituted the absentee rate have now attended those training classes?

A (Witness Varley) That is correct. There may be 1 or 2 percent, as usual, that are still lingering. But, yes, the vast majority of that has now completed their training.

Q And there were no training classes held during May other than the classes for these 35 percent?

A Other than for the resultant makeups, that is correct.

Q Do you have any classes scheduled in June?

A We are currently in the process of scheduling the annual training program to start in July.

Q Mr. Daverio, when LILCO was or IMPELL was rescheduling the make-up classes for the 35 percent constituting the absentee rate, are you saying that phone calls were made to each of these individuals?

A (Witness Daverio) I don't know for a fact how they would notify the make-up classes. Maybe Mr. Varley does.

A (Witness Varley) The standard practice that we use

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to schedule people and then to reschedule them is

one in which the initial route of notifications go out to

everybody at the beginning of the classroom training

program, notifying the individuals of the times and dates for
their attendance at the various sessions.

As the instructor leaves the classroom, he turns in his attendance sheet to the individuals in the personnel department who then put that on their computer tracking program.

The personnel department generates what is know as a training exception report which indicates those individuals who have not completed a certain training session that is required of them. Those training exception reports are then looked at by an individual in my group who then goes about rescheduling individuals who have not completed a particular training session.

That then goes to another computerized notification mail out that goes back to the individual.

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Q Mr. Varley, in light of this disappointing attendance from the month of April, did IMPELL simply follow its standard procedure as you have described it for scheduling makeups or were special efforts made in any sense to get the absentee individuals into their makeup sessions?

A (Witness Varley) No. It was the normal practice of scheduling people.

alluded to before, I believe there was a meeting of the Department managers at which Mr. Acker who was the Vice President in charge of the personnel matters at LERIO, got up and gave a discussion on the status of LERIO and why it was important again to emphasize attendance at the Department level, because as it says there, one of the problems we had was that the departments were using the people to do departmental priorities rather than going to LERO training. And we had the Vice President reemphasize the training program.

Q Mr. Daverio, do you keep attendance rates for the drills and exercises as well as the training classes?

A I believe we do.

Q Do you happen to know what the absentee rate was for the month of April with respect to drills and exercises?

A There were -- if you will give us a second we

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will look and see. I don't recall any drills or exercises in April.

Q While you are looking, would you also look for the month of May?

A (Witnesses looking through documents.)

There were no drills in April. In the month of May, as the next paragraph in Mr. Weismantle's memo stated, we went to table tops. We ran thirty-two table tops during the month, and Mr. Varley just relayed to me that we had somewhere around eighty-five, ninety percent attendance at the table tops.

Q Were the May drill or exercises the first that have been held since the layoffs from the austerity program?

A I believe that's true.

Q Mr. Daverio, there is another document that was given this morning. It's a two-page letter from Don Irwin, who I think you know, to Tip Letche of my office. Do you have that in front of you?

A The problem I have is that I think Dr. Cordaro may have taken that with him. If you will just give me a second.

(Ms. Monaghan provided the witness with a document.)

Yes. I have it in front of me.

Q This is a two-page letter, dated March 23, 1984.

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Mr. Daverio, have you ever seen this letter before?

A I would say yes, because I see everything that goes to you.

(Laughter.)

MR. MILLER: Judge Laurenson, perhaps we can mark this as SC EP-61.

JUDGE LAURENSON: It will be so marked.

(The letter referred to is marked as Exhibit SC EP-61 for Identification.)

BY MR. MILLER: (Continuing)

Mr. Daverio, in terms of the replacement personnel for LERO resulting from the layoffs in March at LILCO, at this time does LILCO know the numbers regarding replacement personnel that were requested in this letter back in March of 1984?

A The number I have with me is the number of people who have left LERO for any reason since March 6th through May 23rd.

- Q The number that have left LERO?
- A That's correct.
- Q And what's that number?
- A One hundred and sixty-six. That includes the austerity and any reason since March 6th.
  - Q Now, Mr. Daverio, this number, one hundred sixty-six.

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that is referred to by Mr. Irwin in this letter and also the union employees?

A That's correct.

Q Have -- or, has LILCO at this time replaced, replenished LERO's staffing to take account of this one hundred and sixty-six people who have left the organization?

A The majority of those positions have been recruited.

Q Are we talking fifty percent? Are we talking seventy-five percent?

A A hundred twenty-four out of a hundred and sixty-six.

Q Have those hundred and twenty-four persons been trained at this point?

A Those were the April classes. And the May makeups that we have just been talking about.

Q Are you saying that all the classroom training at this point has been completed for these replacement personnel?

A That's correct. And then we had the May table tops, and this month we are running drills, as Mr. Varley alluded to a couple of times.

Q Let me ask you, Mr. Daverio, are you having trouble getting the personnel necessary to replace all

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one hundred and sixty-six people who have left the organization?

A No. There is still some sorting out of additional personnel, but I don't define that as trouble.

You are talking forty people out of an organization of about eighteen hundred.

Q I was looking at it more in terms of forty out of the one sixty-six.

A I look at it in a different perspective. We put a hundred and fifty percent margin on -- as a minimum on every job just to cover a problem with a couple of people out of an organization of eighteen hundred.

Q Mr. Daverio, in Answer 14, you state that the attrition rate of LILCO employees is low, and then you give an estimate of about five percent including retirements for the years 1982 and 1983.

Do you see that?

A Yes, 1 do.

Q Do you have a projection of the attrition rate at LILCO for 1984?

A No, I do not.

Q Does LILCO have such a rate, an attrition rate, projected?

A I'm not aware of one.

Q And I assume you would not have an attrition rate

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projected for any time in the future at this point?

A No. To prepare to testify, I worried about what the LERO rates were, and that's why I have those numbers with me.

Q Is it fair to say, Mr. Daverio, that the attrition rate for LILCO prior to 1982 was also approximately five percent?

A It's my understanding that was fairly constant, but that's just from discussions.

The one thing to realize is Dr. Cordaro may know that number, he is also a sponsor and he happens to not be here right now.

Q Mr. Daverio, you are getting a lot of these because Dr. Cordaro is not here.

A I mentioned that to him as he was leaving.

Q In Answer 15, there is discussion regarding the recent layoffs, and this goes to the austerity program layoffs whave been discussing, doesn't it?

A Yes, it does.

Q Since the layoffs in March, Mr. Daverio, from the austerity program have there been other layoffs at LILCO?

A Not to my knowledge.

Q Is there a prospect of future layoffs at LILCO, do you think?

A From what I've heard the Chairman say, I don't

believe so.

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Do you know, Mr. Daverio, you are going to look up for me the attrition rate since the inception of LERO, but --

A No. I think I was looking up the resignation number.

Q Okay. Let me ask you this. Do you know the attrition rate within LERO since the March layoffs, and include retirements in that?

A That's the number I just gave you, a hundred and sixty-six.

Q Okay.

Through May 23rd, as I stated.

Q Yes. I was -- well, you haven't got that broken down between those resulting from the layoffs and those since layoffs, have you?

A That's the total number for any reason.

Mr. Daverio, the personnel selected to replace the LERO workers who were laid off, what was the selection process for those replacement personnel?

MS. MONAGHAN: Objection. This is beyond the scope of the contentions and is not discussed really in the LILCO testimony at any point.

MR. MILLER: Judge Laurenson, I'm looking at Answer 16. LILCO has already identified LILCO personnel to #16-8-SueT

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replace those LERO workers who were laid off. Whether you call it identification or selection, it's the same thing.

MS. MONAGHAN: I don't really see the relevance of that to this contention which deals with whether or not attrition is going to be a problem. The point in issue here is whether there has been attrition and whether those people have been replaced.

The selection process that was used to replace those people is not at issue.

JUDGE LAURENSON: I think it bears generally on the question of how you deal with attrition which is raised in the contention.

The objection is overruled.

WITNESS DAVERIO: When the austerity program was announced and we became aware of a loss of some LERO members, a meeting was held with Mr. Weismantle, myself, Mr. Acker, Mr. Seal. It may have been someone from our Personnel Department at that meeting also. I don't remember.

And in which we discussed the number of people we needed. Mr. Acker directed the people responsible for recruiting LERO volunteers, and discussing it with them, to look at the available personnel within the Company and to see from that pool of people if additional volunteers could be recruited.

And it was the same type of process that we used

with the initial assignments.

BY MR. MILLER: (Continuing)

Mr. Daverio, the personnel that were selected to replace LERO workers laid off, those were persons not selected initially in the formation of LERO; isn't that correct?

A That's correct.

You have another document in front of you. It's a four-page document. It says at the bottom righthand corner, Rev. 1, 3/22/83.

MR. MILLER: Judge Laurenson, maybe we can mark this as SC EP-62.

JUDGE LAURENSON: It will be so marked.

(The document referred to is marked as Exhibit SC EP-62 for Identification.)

BY MR. MILLER: (Continuing)

Mr. Daverio, have you ever seen this document before?

A Yes, I have.

Could you describe to me what it is?

It is a document that was prepared in March of last year, actually when we only had a concept of what the LERO plan would be, since the LERO plan wasn't filed until May, outlining to our Personnel Department the types of

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the approximate number of people we might need, and giving them some background that the emergency planning people -- at that point, even LERIO didn't exist -- and that table was provided to Art Seal and his group who then went through the personnel within the Company to see if there were any matches.

It was a very early document. As you mentioned, it was prepared almost a year and a half ago. Actually it was prepared by Mr. Varley.

Q Did IMPELL have any input into the selection of replacement personnel for LERO from the layoffs?

A I don't believe so.

Q Was there, in selecting replacement personnel, a matching of job skills held in LILCO to job responsibilities in LERO to any extent?

A As with our initial assignment, that was taken into consideration, where it could be, we felt, some applicable use of their normal job skills.

Q I gather, Mr. Daverio, that certainly not in all cases was that the case, though; is that right?

A As with the initial process, of course.

Q Why is it, Mr. Varley, that when you prepared what has been marked as SC EP-62 that you looked at background qualifications in what would be preferred for a LERO job

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position?

a little bit better.

A (Witness Varley) Back at this point in time when we were still developing the plan and procedures, there was a parallel effort being initiated to start looking within the LILCO organization for people whose job functions could in some way enhance the selection process and make compatibility between LILCO jobs and LERO jobs

At this particular point in time, I was also involved in writing the portion of the plans and procedures that had to do with organizational structure.

Mr. Weismantle tasked me with working with Mr.

Renz to outline for the Personnel Department some type of compatibility structure that they could look at. In other words, if we are talking about initial notification, what kind of things would already exist within LILCO that would compliment the initial notification process that would have to go on through LERO.

So I worked with Mr. Renz to an extent on developing this particular document, and then Mr. Renz worked with the Personnel Department in the further selection process. If Mr. Renz would have something further to add to that --

Q Well, I'm just trying to understand the process.

I don't think we need to get into it in detail.

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A Yes, I do.

A (Witness Daverio) Mr. Miller, this was prepared because at the time there wasn't a plan to specify what type of people might be required. This was, as Mr. Varley said, a parallel effort that was going on at the same time we were writing the plan. We were at this time talking about these are the types of functions we had to perform, and it was a list of the types of people who could fill those functions and the requirements, if they existed within the Company, we would like to see within those personnel.

Q And where possible, Mr. Daverio, you looked for personnel in LILCO who had experience in job categories that could be used in the LERO organization; isn't that right?

A Where there was compatibility, we looked for it.

Mr. Daverio, Answer 17 on Page 28, you talk about, as you have mentioned earlier, the two different groups I guess of LERO personnel, the first group being the people that would have to staff LERO on a twenty-four hour a day basis; and, you say that for those personnel there is a two-shift operation with enough reserve personnel to staff a complete third shift.

Do you see that?

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Q Can you give me the approximate number of workers in LERO who fall in this category? If you can't fine. I just want something off the top of your head if you have it.

MS. MONAGHAN: Objection. This just goes to level of detail that is not probative of the issues.

JUDGE LAURENSON: You are asking for the total

numbers?

MR. MILLER: What I would like, Judge Laurenson, is an estimate from Mr. Daverio as to, my first question would be as to these people who staff on a twenty-four hour per day basis two shifts; and, then I would like also the approximate number for the field personnel who -- there are enough workers for one shift with some reserve.

JUDGE LAURENSON: The objection is overruled.

and give you my best guess from sitting here. We have, as we testified earlier, in the communications area a hundred and fifty people per shift carrying beepers. And we know that's three shifts. So, that's four hundred and fifty people. I would throw maybe another hundred, a hundred and fifty on top, and you are talking somewhere with that, that's six hundred people with the rest of the organization being one shift. You can get the exact numbers by sitting down and adding them up off the organization

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chart. But that's a guess on my part.

BY MR. MILLER: (Continuing)

Q Now, Mr. Daverio, when you say, the last sentence on Page 28, this second category of LERO jobs is staffed at approximately one hundred and fifty percent, does that mean that there is a fifty percent reserve?

A It means that if there are a hundred people required, we have a hundred and fifty in that job category.

Q And with respect, Mr. Daverio, to the first category, the category where you have the two-shift operation with enough reserve personnel to staff a third slift, does this basically mean that there is one extra LERO member for each job that must be staffed throughout the emergency?

A No. What that is trying to -- yes, but what that is trying to explain, just so I can hopefully make it clearer to you, there are three people per position. What we expect in an emergency is to go to a two twelve-hour shift rotation with a third makeup shift if we have a problem in a particular position. But there are three complete shifts.

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Q Now, you state on page 29, Mr. Daverio, middle of the page, it is estimated that evacuation of the EPZ will be completed within less than six hours under normal weather conditions.

Do you see that?

- A (Witness Daverio) Yes, I do.
- Q I can't recall the time, Mr. Daverio, offhand for LILCO's -- under LILCO's analysis for adverse weather and so forth for an evacuation of the ten mile EPZ, but is it roughly eight to ten hours?
  - A That is what I would have said. Traffi guides?
- Q Well, traffic guides, for example, were they ever told during training, to your knowledge, that they may have to man a post for anywhere from six to ten hours during an emergency at Shoreham?

MS. MONAGHAN: Objection. It is beyond the scope of the contentions, and it is not addressed by the testimony.

MR. MILLER: Judge Laurenson, it goes to the issue of having one shift of workers for field emergency personnel, with a fifty percent reserve.

JUDGE LAURENSON: The question is the staffing, not what particular trainees are told. Objection is sustained.

BY MR. MILLER: (Continuing)

Q Mr. Daverio, on page 30, you state, about five

lines down the answer, any personnel changes can be monitored 1 by the computer program, and can be automatically brought 2 to the attention of the personnel department. 3 Do you see that statement? (Witness Daverio) Yes, I do. 5 Are you stating that LILCO has this capability, 6 or that LILCO will do these things. It is done right now. 8 And later, in that same paragraph, Mr. Daverio, 9 you state that the LERO organization has the capability 10 of knowing who is absent due to vacation, prolonged 11 illness, disability or retirement. 12 Do you see that? 13 Yes, I do. 14 And then it goes on to discuss once a long term 15 vacancy has been identified. Can you tell me how does 16 LILCO define, 'a long term vacancy?' 17 A In my opinion , that would be something that 18 would be in the couple of months range. 19 Well, do you know, Mr. Daverio, if anywhere 20 long term vacancy is actually defined with respect to 21 LERO? 22 A I am the emergency planning coordinator. It 23 would be my judgment as to what a long term vacancy would 24 be. I would worry about a couple of months, having a 25

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person out.

I would consider that someone that I couldn't rely on, and I would make an evaluation of whether that was important.

Q Now, Mr. Daverio, you state later that LILCO is committed to maintain staffing at 150 percent.

Do you see that?

A Yes, I do.

Q And I gather, Mr. Daverio, that if you are going to maintain staffing at 150 percent, new personnel must be replaced promptly after LERO members leave the organization for any reason, isn't that correct?

A That is correct, and the promptness would depend on the job as to how quick we had to train them.

Now, when you state toward the end of page 30 that -- you give examples of two job positions for which there are the two shifts plus the reserve shift, and you talk about the Director of Local Response and the Health Services Coordinator.

Do you see that?

A Yes, I do.

Q Is it fair to say, Mr. Daverio, that the job positions that have such staffing are basically the jobs at the EOC?

A I am not sure what you mean by that question.

Do you mean the three shift staffing? 1 0 Yes. 2 There are some people at the staging area, I 3 think, that are three shifts. 4 And you say, Mr. Daverio, in the case of such 5 positions -- again referring to the three shift staffing 6 -- arrangements and prompt training of replacement personnel 7 will be made by the Emergency Planning Coordinator, do you see that? 9

Yes, I do. A

And you are the Emergency Planning Coordinator?

Yes, I am. A

Now, when you say, 'prompt training,' is this your judgment as to how quickly that training needs to be provided?

If you mind, I might explain what this means. What we are trying to say in the first instance, is that we maintain 150 percent staffing as what we would like to maintain.

If we go to a 146, we wouldn't set -- 146 percent, we wouldn't go to a special training session to pick up the additional four percent. That is why we maintain some margin.

What I am trying to say in the last couple of sentences, if one of the seven senior coordinators, and

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this would be my judgment, for some reason could not 1 perform as part of LERO, we would set up a special training 2 program if we determined it necessary so that we could get 3 that three level staffing back up as quickly as possible. 5 and those were just two examples of the types of positions where we would give prompt and special training for. 6 Q I see. So, it is for the seven senior level 7 personnel, including the Director or Manager of Local Response. Seven would be something as a starting point. 10 If we lost RAP Health Coordinator from IMPELL, and I 11 thought we needed another one of them quickly, I would 12 set up a special program for them. That is my judgment. 13 Q Mr. Daverio, how long has Mr. Kessler been a 14 member of LERO? 15 Since its inception. 16 What was his position before he became --17 You would have to let me look at an organization 18 chart to remember where he fit. 19 He is now the Director of Local Response, correct? 20 21

He is now the Director. That was not his

initial position.

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Let me try this. When did he become Director of Local Response; one of the Directors?

Some time after March 6th. I don't have the

exact date when someone made that decision. 1 Q When named the Director of Local Response, Mr. 2 Daverio, did Mr. Kessler have to receive any training over 3 and above what he had previously received as a member of LERO? 5 Yes, he did. 6 A 7 Has he received all that training? 8 A Yes, he has. Do you know how soon after his appointment to Director he received that training? 10 A To the best of our knowledge, we set up a 11 special training program. He was trained one-on-one to 12 get his classroom training done as quickly as possible. 13 14 Do you know how quickly that was done? No, I don't. 15 MR. MILLER: Judge Laurenson, this would 16 be a good time for the first break. 17 "JDGE LAURENSON: All right. We will take 18 a ten minute recess. 10 (Short recess taken.) 20 JUDGE LAURENSON: Mr. Miller? 21 BY MR. MILLER: (Continuing) 22 Mr. Varley, as Manager of LERO Training, could you tell me -- do you know when Mr. Kessler received his 24 training as Director of Local Response?

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A (Witness Varley) I couldn't give you exact 1 dates, no. I am aware that Mr. Kessler has been undergoing 2 a training process, and that he has also participated in 3 his first drill as Director of Local Response. I believe it was yesterday. 5 Q Would you look, please, at page 31 of the testimony, gentlemen? Question and Answer 21 begins the discussion of the annual retraining of personnel. Mr. Daverio, let me ask you who will conduct 9 the retaining program for LILCO? Is that IMPELL? 10 (Witness Daverio) Yes, it is. 11 Can you tell me, Mr. Daverio, to your knowledge 12 will the same instructors conduct the retraining with 13 respect to the classroom sessions as conducted the initial 14 training? 15

I know the same people are at IMPELL. Whether we get exactly everyone, or that is not one new trainer, I can't state at this time.

Q Mr. Varley, I take it that the retaining sessions will basically repeat the initial training sessions, is that correct?

A (Witness Varley) That is correct.

And, I gather, Mr. Varley from your testimony that those who are receiving retraining will attend the classroom sessions with new personnel being trained for the

first time, is that correct?

A That is correct.

Q Do you believe, Mr. Varley, that those persons previously trained will generally retain the training given to them in the classroom setting initially by IMPELL?

A Could you re-ask that question. I am not sure I followed it.

LERO persons who have been initially trained, and who will be going through the retaining process will have retained generally the classroom training given to them at the time of the initial process.

A I think what they will come into the classroom with for retraining is a very good understanding of exactly what their job responsibilities are, and exactly how they will perform those responsibilities.

That would be a combination of their understanding of what the initial classroom training was, plus the amount of experience and knowledge that they gain during the drill and exercise program.

I can't say how much of either one would be the dominant factor.

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Q Tell me, Mr. Varley, how does IMPELL and LILCO intend to prevent retraining sessions from being boring and keep attention from lapsing if those who are being retrained come into the classroom setting with familiarization of the LERO organization?

MS. MONAGHAN: I object. That is beyond the scope of the contentions and the testimony.

(Pause.)

MR. MILLER: Judge Laurenson, I am looking at answer 21 which talks about LERO workers having to complete the entire review program annually, and I am basing my questions now on the answers given to me by Mr. Varley regarding the fact that it is generally the same training program initially given to LERO workers that will be repeated on an annual basis.

MS. MONAGHAN: Judge Laurenson, the fact that there is the existence of an annual retraining program which has a certain format and structure does not raise the issue of whether or not during that retraining program persons involved in the retraining process may find portions of that program repetitive or boring. And that is not an issue that the county has raised in its contentions.

JUDGE LAURENSON: That is what I was looking for. I don't see anything in the contentions dealing with retraining, at least on 39.A and B. But maybe I am

not looking in the right area.

On the other hand, you have submitted testimony concerning the retraining matter. And while it doesn't specifically talk about how to keep the interest of people being retrained, I think that a certain amount of leeway should be allowed in connection with probing how these two interface since you have combined the retraining with the training of new people.

In any event, the objection is overruled.

WITNESS VARLEY: Mr. Miller, could you restate your question, please?

BY MR. MILLER:

Q What I am wondering, Mr. Varley -- I think

Judge Laurenson put it pretty well -- how is it that

LILCO and/or IMPELL intends to keep the interest of LERO

members during this retraining process when the same

information is generally being repeated?

A I think the fact that we only repeat this information on an annual basis, as far as classroom training is concerned, would limit any boredom that might arise.

And in addition, I might want to add that when we institute this annual training program, we fully intend to evaluate just how effective is this annual training program. And if there are any problems or complications

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that would arise with it, we would have to at that point make an adjustment to the program.

- Q How will you evaluate that?
- A Through instructor input.
- Q What does thatmean? Instructors observing the classrooms?

A Yes. Obviously, if the instructor that is running the classroom sessions comes back to us and says, gee, you know, the people are listless, they have seen this material and they are not interested or they are not happy with the way things are going, then we take actions to do something about that.

But like I said, right now we don't anticipate that, and once we get into the annual training program, we are going to try and make it the best annual retraining program that we can make for everybody.

Q And the retraining program, Mr. Varley, is starting in July, is that right?

A That's correct. We are currently trying to come up with a schedule to institute that program in July.

Q Mr. Varley, will the new LERO workers participate in drills or exercises prior to their completing classroom training sessions?

A What we are tying to establish is a program in which an individual is, through his classroom training

prior to being entered into the computer for availability

for the drill and exercise program, we have found instances

where that didn't occur, and we are working to correct

those problems so that we have a structured program that,

one, identifies people that have to go to classroom training

that haven't received all their training.

Once they have accomplished all their classroom training, then they will be allowed to enter into a computer program that we go to that allows us to come up with a list of people for drills and exercises. So what we are striving for is a program like that.

We have had instances in the past where, unawares to us, an individual that was newly assigned to LERO was, in fact, taken and put into a drill and exercise position before he had completed his classroom training.

We identified that deficiency and we are trying to work now to resolve that kind of a problem.

Q With respect to the retraining sessions that are set forth on pages 32 and 33, Mr. Varley, the subjects set forth about the middle of the page 32 are the general LERO training subjects that every LERO member is expected to take; is that correct?

A That's correct.

Q And you state, "Every LERO member is scheduled to

attend each of these sessions once in one of the four quarters for a given year."

Do you see that?

A Yes, I do.

Q Could it be in any quarter of the year up to the -is it left up to the trainee?

A What we are trying to do is to develop a schedule in which we offer this material on a quarterly basis and then working with the department managers, identify which people we want to schedule in each of those four quarters to see that material such that we can spread out the workload for the departments over the full year's basis.

Q So at you are stiving to do, Mr. Varley, is to schedule LERO members for particular class sessions; is that correct?

A That's correct.

Q And then the other subject areas listed, beginning at the bottom of page 32 and going over to page 33, those are the job-specific modules which only certain LERO members take, depending on their assigned responsibilities, correct?

A That is correct.

Q And you state that these sessions are held once every other quarter during the year, correct?

A That's correct.

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Q Is it IMPELL's intent to again structure the retraining so that individuals will be assigned to particular classroom sessions with respect to the job-specific modules?

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A That's correct.

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Q When it says, Mr. Varley, about the middle of page 33, "By so structuring the training program, LERO

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members are afforded flexibility to attend the sessions

members are arrorded frexibility to attend the session

which best fit into their normal work and vacation

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schedules" --

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A Yes, it does.

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Q -- that would be contrary to the testimony

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that you have just given, wouldn't it, that you are

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looking to assign individuals to attend particular sessions?

A No. I don't think it is contrary. I think

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what we are trying to indicate is that we are realistic

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in the fact that we know that LILCO also has to operate

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a utility and that people also need to take vacation.

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program and schedule individuals. What you have to understand

What we do is we outline a quarterly training

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is, whenever we schedule individuals, notification also goes

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to department managers as well as to the individuals.

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schedule that we are not aware of or we can't be aware of

If an individual has a particular vacation

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in advance of doing scheduling for this number of people,

that information is fed back to us.

In addition, if the department identifies that they have got a particular project that they know this individual is going to be working on, they have the ability to let us know, and we reschedule that particular individual to fit both the working needs and the vacation needs for the individual.

I gather, Mr. Varley, that you are still working on putting together or structuring these classroom sessions with respect to retraining of LERO members at this time?

That's correct.

You state at the bottom of page 33, Mr. Varley, "The structure of the training program also provides the capability for a new LERO worker to complete his initial classroom training within six months."

Do you see that?

Yes. I see that. I would like to also point out that that would probably be the worst case condition.

We could potentially schedule the individual to complete it in three months or less.

Couldn't it be a year? 0

I don't see any reason why it would be a year.

Could it be a year? You have the job specific training offered on an every other quarter basis.

That's correct.

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- Q So couldn't it be a year before a member receives his classroom training?
  - A I don't think I can conceive of that happening, no.
- Q You say that, Mr. Varley, based upon your intent to assign LERO members to particular class sessions?
  - A That's true.
- But I take it, Mr. Varley, that there will be conflicts in which people will have to attend make-up sessions; is that correct?
- A I don't anticipate the type of conflict that would delay the individual's training for more than a week or so at a time.
- Q If an individual was assigned to a training class which is offered every other quarter and if an individual misses that training class, would that individual then have to wait for six months before he could attend the class?
- A No, because what you have to understand is, although we are saying that class is offered every quarter, it is not just one class once a quarter. There is an entire series of classes that go on to train people.
- We don't just offer module 12 one time in that quarter, but there are a series of classes that we offer within that quarter.
- Q Are the class sessions, Mr. Varley, offered throughout the entire quarter?

A What I am saying is, we schedule a number of classes, depending upon looking at how many people we have to train over the year. And there would have to necessarily be more than one traffic control class taught in the second quarter because obviously there are more than 30 people that we would need to train in that particular quarter.

So if an individual was unavailable to attend a class on Monday, it is more than likely that we are running that class Monday, Wednesday, and Friday for three or four weeks, and we would just put him into a slot the following week or the week after that.

Q What I am trying to understand, Mr. Varley, are the classes, when they are offered within the quarter, are they offered within the same time frame, within the space of a week or two weeks, for example?

A No. They are spread out over the three-month period.

Q Over the course of the quarter?

A Yes.

Q Mr. Daverio, under the LILCO training program,
I take it that attendance is used as a measure of whether
training is adequate as a measure of whether learning
has been accomplished; is that correct?

A (Witness Daverio) I am not sure I understand your question. Could you repeat that?

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Q Do you use attendance, under the LILCO program, as a measure of whether the training has been adequate?

I wouldn't use the word -- it has been completed. As we stated before, adequate includes the classroom training, the review module, drills and exercises, and the critiques to go along with that. That is the whole program. And ultimately, the FEMA exercise.

Mr. Berger, let me ask you a question.

Do you believe it is good instructional practice to give new and repeat adult learners the same instruction?

- (Witness Berger) The same instruction?
- Yes, sir.
- Sure.
- In the same classroom setting?

Oh, I think there could be some real advantages to that. Specifically, the people who are going through on the retraining can add, if you will, from their experience during the course of what they have encountered during the last year.

Can there be disadvantages, Mr. Berger, in your opinion, to this situation?

The only disadvantage that I could think of is that the experienced learner, if you will, may outpace the inexperienced learner.

Q Does that lead to boredom?

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Not necessarily. It depends again here as to what the role or perception of the experienced learner is in the classroom. If they are contributing to the class, it can be quite exciting.

Could it lead to boredom, Mr. Berger?

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I suppose it could.

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Would you look, please, at page 34 of the testimony. Contention 39.B deals with training members of the non-LILCO organizations that participate in LERO; is that correct,

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Mr. Daverio?

response.

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(Witness Daverio) I would have to go back and

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look at it, but generally that is correct.

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and DOE, Mr. Daverio, that if desired by either organization,

Q You say, with respect to the American Red Cross

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LILCO will provide training and information sessions to

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acquaint these organizations with their role in the LERO

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Do you see that statement?

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Yes, I do.

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At this time, have either of these organizations expressed this kind of desire to LILCO?

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A We have had discussions with both of them concerning it. I am not sure that I could say they have

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epxressed a desire. We have discussed the pros and cons and

their opinions on it.

Q I take it, Mr. Daverio, that in your opinion, it would be important for the American Red Cross and DOE to know their LERO roles and how they function within the LERO organization?

A It may enhance it. I don't necessarily think it is important. They both do the same role for any type emergency in the Red Cross's case. And in DOE's case, they do it in radiological emergencies throughout the region that they represent DOE in.

Q Would it be desirable to have LERO training provided to these organizations in your opinion?

A As I stated, it would enhance it, but I am not sure how, whether that relates to your desirable.

A (Witness Mileti) If I could add something to that, it would be that emergency organizations that normally do emergency work when emergencies happen often know how to do that emergency work well. And if there are no differences in that emergency work between different types of emergency, that doesn't necessarily mean that they need more training or more information in order to be able to respond well.

There may be some cases in which -- some organizations where that is the way things might go. They don't need any more training. And others where they might

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indeed need more training.

One needs to address that on an organization-byorganization basis.

Q Mr. Daverio, let me ask you, this kind of backtracks a little, but what happens to a LERO member if he or she continually fails to attend training sessions?

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MS. MONAGHAN: Objection. I think that's beyond the scope of the contention. I think the contention Mr. Miller is asking about is 39.A which deals with attrition.

MR. MILLER: We have just talked, Judge
Laurenson, for twenty minutes about the retraining and
initial training, including classroom training, of LERO
members.

I'm asking what happens if LERO members don't attend those class sessions.

JUDGE LAURENSON: Are you back to 39.A?

MR. MILLER: Yes, sir.

JUDGE LAURENSON: LILCO employees.

MR. MILLER: Yes, sir, very briefly. LILCO employees.

JUDGE LAURENSON: Okay. The objection is overruled.

where we have had that problem and, therefore, I am not aware of us ever following the procedure. But if it was brought to my attention, I would talk and discuss it with Mr. Weismantle who I know would take it to Mr. Acker, and it it was a problem with attitude or a problem with the person really wanting to belong, we would address that, just as we did when we saw a low attendance rate, we analyzed it. So, if we saw a problem with one individual, we would

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analyze it and take it to the proper channels in the Company to find out why it is occurring.

BY MR. MILLER: (Continuing)

So you would find out why it's occurring and then, depending on the reasons, you would take action; is that correct?

That's correct. We may find, when we did that, his Department Manager has always, for some reason, not realized he had to go to LERO training and gave him another assignment. If that was the problem, we could work it out with the Department Manager.

And if it was a problem of the individual participant just not wanting to attend the class sessions or the training sessions of any kind, what would be your action in that respect?

A If that was the attitude that was portrayed to me, it would be my recommendation that we ask that person to resign from LERO.

Any repercussions, in your opinion, Mr. Daverio, to the person's job within LILCO?

MS. MONAGHAN: Objection. That's clearly beyond the scope of the contentions and the testimony.

JUDGE LAURENSON: I think we have gone about as far as it's relevant to this testimony.

The objection is sustained.

BY MR. MILLER: (Continuing)

Q Mr. Daverio, you start at the bottom of Page 34, going to Page 35, talking about the non-LILCO support organizations consisting of the Coast Guard, ambulance companies and helicopter companies.

Do you see that discussion?

A Yes, I do.

Q You say: This training consists of videotape presentations, workbook materials, instructor question-and-answer sessions, and hands-on demonstrations for topics as indicated in Figure 5.1.1. of the LERO training matrix.

Do you see that?

A Yes, I do.

Q Could you tell me, Mr. Daverio, the hands-on demonstrations which are provided to these non-LILCO organizations?

A One example that would pop right into mind is dosimetry and their use, and zeroing dosimetry.

Q Isn't it correct, Mr. Daverio, if you look at
Attachments 7 through 9, and the objectives stated in
those attachments, that the only example of hands-on
demonstrations is with respect to dosimetries, dosimeters?

A It could be true. I would have to review the documents to agree or disagree.

Q Mr. Daverio, with respect to Answer 24, talking

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again about the Coast Guard, ambulance and helicopter companies, you say LILCO does not anticipate that the rate of attrition at either the Coast Guard, ambulance companies or helicopter companies will pose a problem.

Can you tell me, is this just your judgment?

A Yes. Some of my judgment would be involved in that answer.

Q Is there anything underlying that answer other than your judgment?

A Some knowledge of the Coast Guard being a somewhat military organization, they would know if they were having a major turnover and if they needed additional training. As we state in a letter to them, they can call us and we would come and retrain their personnel.

I don't see ambulance companies and helicopters as a problem. It's -- for a couple of reasons. It's my understanding our contracts with them call for training personnel with the vehicle or helicopter they are providing us. If they have a problem after we have trained them with attrition, we would make them the same offer we make the Coast Guard. Give us a call and we will come and do additional training for you whenever you require it.

But we, by contract, require trained emergency planning personnel from both the ambulance companies and helicopters. And that's in the contract they have signed

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with us.

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Q Well, you state at the end of that paragraph,
Mr. Daverio, that LILCO has requested these organizations
to inform them if they need additional training for their
personnel.

Can you tell me which, if any, of these organizations have agreed to give such notice to LILCO?

A It's my understanding from reading it, and other people here have read it also, that the Coast Guard plan that has been -- I don't know if it's Rev. 1 but it's a revised plan that they have put out recently does call for them to call us if they feel that they have reached a level of manning that requires additional training.

Just to clear that up, we have not as of now written as specific a letter as Attachment 10 to the ambulance companies and helicopter, because we haven tfinished their training. That is our intent.

But, as I stated, our contracts do call for training personnel with the vehicle.

- Q This Coast Guard plan, Mr. Daverio, that you referenced, is that a plan which has been written and adopted by the Coast Guard?
  - A That's my understanding.
  - It's not a draft plan, is it?
  - The draft plan that we talked about earlier

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has been revised and it's my understanding they now have a plan for Shoreham. I don't know what state it's in.

But they have sent us another plan.

Do you believe, Mr. Daverio, that these organizations, that is the Coast Guard, ambulance companies and the helicopter company, have an obligation to inform LILCO if and when they need additional training for their personnel?

A As I just stated, I think the Coast Guard by their plan called for it. And, as I've also stated, I believe per our contract, to be under contract with us, the ambulance companies and helicopter have agreed to provide manned, trained equipment to us in an emergency.

So I would take that to be some commitment on their part to provide that.

Q Do you think, Mr. Daverio, that these organizations have an obligation to maintain the staffing necessary to support LERO?

A I am not a lawyer, but I believe under contract they have the right -- have some right to provide the necessary personnel to provide the equipment with trained people to the level the contract calls for.

Q And would your answer be the same for the Coast Guard?

A No. As I stated, the Coast Guard plan calls for

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it. We have no contract with the Coast Guard. We have a letter of agreement that they will respond and their plan calls for having enough trained people, and it states if they don't they would call us for additional training.

Q So, you wouldn't feel that the Coast Guard has an obligation to maintain the staffing necessary to support LERO, would you?

A They have a self-imposed one, in their own plan.

Q With respect to your last statement on that page, Page 35, Mr. Daverio, LILCO will provide training to the replacement personnel on an ad hoc basis.

What do you mean by ad hoc basis, on an individual by individual basis?

A Ad hoc in that sentence means that when we are notified by one of those organizations that they feel that they are below the staffing level they are required to maintain, we would provide a training program. If it turned out, after discussions with them, that there was a one-on-one training required, we would provide it.

Q And the organizations themselves make the determination as to when they would be below the staffing levels necessary to support LERO; is that right?

A As I stated, per contract there is a certain amount of equipment and people trained the have to

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provide to us. So, they know what the level is that they have a contract to provide.

And they make the determination; is that correct?

The contract makes that. But we also talk to them. Of course, we are not just going to never talk to them after we've signed the contract.

Starting on Page 36, we go to Contention 40. and if you would look please at Page 38 of the testimony, Dr. Mileti, I believe we have a few pages sponsored by you.

Let me ask you, first of all, in the question it is stated that the contention alleges in effect that on the job training and experience are necessary for radiological response workers and that periodic training is automatically inadequate because emergency workers, to be adequately prepared, must continually and frequently exercise their emergency duties.

Do you see that?

(Witness Mileti) Yes, I see the question.

Can you tell me, Dr. Mileti, where this concept of automatically inadequate comes from? Is it anywhere in the contention?

I certainly can look. But I didn't write the question; I wrote the answer.

That's fine, then. With respect to the beginning of your answer, Dr. Mileti, you state that: What is

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pertinent in addressing the question is the obvious difference between experience and training.

Do you see that?

I think I said what is not important, in answering that question.

Is not the obvious difference between experience and training?

Yes. I think the two are different.

Now, can you tell me what, in your opinion, is the obvious difference between experience and training?

I think experience is practice, doing it, as part of implementing the job. And I would define in this context, training to be learning what to do as well as how to do it.

Now you state, Dr. Mileti, there is no doubt that, in the best of all possible worlds, emergency workers are best selected to do emergency jobs that match their routine jobs as closely as possible.

Do you see that statement?

Yes.

Do you say this, Dr. Mileti, because emergency workers must know their jobs and how to do them?

A I say it for a variety of reasons. That's among them. There are also other reasons. There are also some disbenefits that come from, for example, having police do

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police work in an emergency.

Q You are saying that when it comes to doing police work in an emergency, police shouldn't do that?

A Absolutely not. I agree with my testimony, and that is in the best of all possible worlds, the best people to do police work are policemen. But there are some disbenefits associated with that, but more benefits than disbenefits.

For example, one of the things that typically happens, both in emergency planning, preparedness and response in an actual emergency, with police departments is that a portion of the police department's efforts are directed at things that we know are not problems and manpower in many way is expended where it doesn't need to be expended.

For example, protecting homes that have been evacuated from looters. And looting typically doesn't occur in the kind of emergencies we are talking about here. When the emergency is over, the police department typically thinks that they have been successful in keeping looters out.

I would consider that a disbenefit. But benefits associated with having policemen do police work are larger than those disbenefits.

Q Could you tell me, Dr. Mileti, let's look at the

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other side of the coin. What are the benefits to having professional emergency workers such as police officers perform emergency tasks during emergencies?

A You don't have to train them to direct traffic, for example. They already know how to do that. To have other people assist traffic to get from one place to another, you need to train them to do that. To have non-policemen do that sort of thing makes training much more difficult.

I'm not saying that it can't be done, it's just more time consuming and more effort needs to go into it.

Q Dr. Mileti, looking at Page 39 of the testimony, you state that it does require that training provide emergency workers with the opportunity to know their emergency jobs and how to do them. And the "it" I guess refers to the alleged lack of daily job related experience of LERO workers; is that correct?

A Yes. In reference to all LERO workers, they need to know what they are supposed to do and they need to know how to do it.

Otherwise, I would suspect they couldn't do it.

Q So, Dr. Mileti, you are not saying that knowledge is all that is necessary to have LERO workers be able to perform their emergency jobs, are you?

What I said was that LERO workers need to know

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what their job is, and they need to know how to be able to do it.

Q Do they need to be able to practice those jobs?

A I imagine practice is one way that they might learn how to do it, as well as what it is that they are supposed to do.

Q And police officers, to stick with that example, Dr. Mileti, they get practice during their daily job performance, correct?

A It depends on what you mean by they get to practice. They certainly don't get to practice directing traffic in a radiological emergency.

Q But they may get to practice directing traffic?

A Certainly. I would assume that some of them do.

Q Dr. Mileti, do you think that an emergency worker only needs to know what to do and how to do it?

A I think if you know what to do and you know how to do it, that you will be able to do it. I think those two concepts pretty much are the whole ball of wax.

Q Well, I'm going to stick with your example of the police officer for a while. Would you agree with me, Dr. Mileti, that in addition to knowing what to do and how to do it, a good police officer would be someone who is resourceful?

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A I have no idea what the components of being a good policemen are.

Q Do you think resourcefulness is something that would be an attribute of a good emergency response worker in general?

A I think that is a desirable attribute in human beings, and because I think that I would assume that of emergency workers as well. I don't know that it's essential to be an emergency worker.

Q What about command presence, Dr. Mileti? Do you think that command presence might be an attribute of a good police officer?

A Well, if what you mean by command presence -and I really don't know what that term means -- is being
tall, I could speculate that I guess police departments
have height requirements, so they think it's important.
So, knowing that they think it's important, I assume they
know what they are talking about.

Q Do you think that an attribute such as command presence could be something to be strived for with respect to emergency response workers in the LERO organization?

MS. MONAGHAN: Objection. I think this is beyond the scope of the contentions and the testimony that has been submitted by LILCO.

MR. MILLER: Judge Laurenson, I think it is

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directly relevant to the contention, Contention 40, which talks about lack of experience. And I think it is directly relevant to Dr. Mileti's testimony which I'm trying to explore with him as briefly as I can, which is set forth beginning on Page 38 of the testimony.

JUDGE LAURENSON: The objection is overruled.

WITNESS MILETI: I remember the question. My answer is absolutely not, unless what you mean by command presence is being able to be seen. And I would assume that human beings can be seen.

But the notion of command presence underlying that, and that that's important for an emergency worker, is a premise that I absolutely don't agree with.

And that is, it presupposes that one is going to be encountering people that are riotous or angry or aberrant in one way or another and that they need to be managed or controlled in some way. And I know that I don't agree with that premise. You know that I don't agree with that premise. In fact, I've talked about it a dozen times in different ways, shapes and forms.

In reference to directing traffic, I think it's the role of the people who will be giving information to those who are evacuating to help them find the right way or see the right way or confirm the information that they are hearing or have read in their brochures or heard over the

radios, et cetera. I don't think that those evacuees will be aberrant. I, therefore, don't think that controlling the public or controlling those evacuees is an appropriate concept. And, therefore, I don't agree with the underlying assumption that command presence is necessary.

Now, if we were talking about riot control, then I would not say what I just said.

BY MR. MILLER: (Continuing)

- Q Dr. Mileti, have you ever driven a bus?
- A A Volkswagon bus.
- Q Have you ever directed traffic?
- A No, I haven't.
- Q Have you ever driven a tow truck?
- A No, I haven't but I've been driven in one.

  (Laughter.)

1	Q Have you ever performed any task, Dr. Mileti,
2	which required interaction with the public during an
3	emergency?
4	A (Witness Mileti) Yes.
5	Q What was that?
6	A I was interviewing someone.
7	Q Excuse me?
8	' A Interviewing them, as a sociologist would in
9	performing research.
10	Q During the emergency you were interviewing
11	somebody?
12	A Yes.
13	Q Did you continue your interview during the
14	emergency?
15	A Well, I assume we have a different concept
16	of emergency.
17	Q What is your concept. What emergency are you
18	talking about?
19	A I am talking about several. The one where I
20	did most of this was Rapid City.
21	Q Were you interviewing during the flood in
22	Rapid City?
23	A Yes. Not when the flood was hitting, but
24	certainly during the emergency period. We went a whole
25	raft of us went to Rapid City three days after the flood

hit, and search and rescue activities were still going on 1 at that time, and people were still being rescued at that 2 time. 3 During the actual emergency, any actual emergency, Dr. Mileti, have you performed any task that 5 relates to interaction with the public during the emergency? 6 MS. MONAGHAN: Asked and aswered. 7 MR. MILLER: It wasn't answered. 8 JUDGE LAURENSON: I think the problem is your 9 definition of, 'emergency.' He answered it by -- he told 10 you what his definition of the emergency was, which includes 11 the search and rescue. 12 Now, if you have a different definition, then 13 perhaps you ought to ask the question differently. 14 The objection is sustained. 15 BY MR. MILLER: (Continuing) 16 Doctor Mileti, other than interviewing someone, 17 have you performed any such task? 18 (Witness Mileti) I have not performed emergency 19 work in an emergency. 20 When you say, Dr. Mileti, on page 39, that 21 objectives can also be achieved with training that is 22 elaborate enough to compensate for deficiencies in on 23 the job experience. 24

Do you see that?

Yes, I do. A

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Are you referring there to the classroom training portion of the LILCO Training Program, when you say, 'elaborate enough?'

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No, I would be referring to that kind and variation of education-training that would be necessary to give people mileage sufficient enough such that they would know what it is they need to do, and how it is they need to do it.

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Q And Dr. Mileti, looking at page 39, again, toward the bottom of the page you state the emergency response tasks that are assigned to individual LILCO employees generally are not complex or difficult and do not require daily practice to ensure proficiency.

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Do you see that statement?

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Yes, but that is not my testimony.

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I am sorry. You are correct. Let me ask this -- let me ask you, Mr. Daverio. Can you tell me which emeryency task, in your opinion, are complex and/or difficult, and perhaps do require daily practice to ensure

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proficiency?

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(Witness Daverio) The one that jumps to mind quickly is the RAP Health Coordinator.

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Are there any others?

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I will check the list of people to see if I think

there are any others.

(Witness peruses papers)

That is the only person, given -- quickly going through this that I can think of that has a skilled job that requires some doing of it on a periodic basis to keep up the speed.

Q Well, Mr. Daverio, when you say that generally the task assigned to LILCO employees in LERO are not complex or difficult, what about traffic guides. Is that a task which you consider neither complex or difficult.

A As we explained in the communications testimony, given the way our plan is structured, that is correct.

Q What about command and control functions performed by supervisory personnel of LERO?

A That was one I was going to mention. Those people in those position make command and control decisions on the operation of the company every day. I couldn't draw a direct parallel. That is why I didn't use it, but they are people who make decisions every day.

Some of them, as I think Mr. Kessler testified the other day, in emergency situation, particularly in our gas operations where there may be a gas main leak that they have to deal with which is an emergency.

Q What about security personnel, Mr. Daverio? Would they perform, in your opinion, tasks which are neither

complex nor difficult?

A Within our plan, that is correct, because they are -- as Mr. Varley stated earlier -- told if there is a real, police-type matter, you call the police.

We found those references in a training module, and a training tape, where the security people are told that if there is a civil-type disturbance to call the Police Department.

The major functions of security is to limit access like to the EOC, or to help -- like security people do in a parking lot at a football game, to move people in the right directions.

Q What are security personnel instructed to do,
Mr. Daverio, during the time that they call the police but
before the police arrive, assuming they would arrive?

A The same thing any citizen would do if there was a disturbance going on, I would imagine.

O Which is what?

A Just try to calm it down until the police arrive.

Q Now, would you consider that, under those circumstances, circumstances of a radiological emergency, to be neither a complex or a difficult task?

A As Dr. Mileti stated, we don't expect that to happen, and after discussions with him, I would agree that I don't believe that is a complicated task.

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1 2 3 4 5 6 7 Doctor Mileti, that is your opinion and judgment, correct? 10 that I have read. 11 12 13 14

(Witness Mileti) And I would like to supplement that answer by saying no one is saying here that there couldn't be some aberrant behavior in an emergency. What I recommended to LILCO, on the basis of the research that I know about, is that the emergency itself, not be seen as something that would precipitate aberrant behavior. Emergencies don't cause that; in fact, they lessen it.

That is my opinion based on all the research

Looking at page 40 of the testimony, there are statements in here regarding LILCO's experience with its emergency restoration organization. Do you see that, Mr. Daverio?

(Witness Daverio) Yes, I do.

Are you equating, Mr. Daverio, jobs performed in LILCO's emergency restoration organization with the emergency jobs and responsibilities assigned to LERO personnel under the LILCO Plan?

No. And I don't think that says that.

When you say, Mr. Daverio, that in certain instances, the LERO organization has made use of the job related skills of LILCO employees when assigning them to LERO jobs.

Do you see that?

A Yes, I do.

Q Could you tell me an approximate estimate -percentage, if you would -- of where it was the case that
job related skills of LILCO employees were matched to
LERO jobs.

A If you will let us confer we might be able to come up with that. It would be our best estimate.

(Panel confers.)

Given the text in this answer, it would be somewhere in the 40 to 50 percent range.

Q Could you give me, Mr. Daverio, just a couple of examples of where, in your opinion, these job related skills of LILCO employees were matched to LERO jobs?

A Yes, the first one being the example we give right in the answer, the bus drivers. Another one would be the initial notification people, as we mentioned to you, those are our customer service operators who take notifications of other types of emergencies.

Road crews. The majority of road crews come from our transportation department who deal with vehicles every day, or the construction department, which deals with moving with cranes.

Transfer point coordinators deal with radios, and directing people into the field. That is their job every day. Let me just look again.

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Bus dispatchers is another one that has the same type function.

Material purchasing. That whole support service area in the EOC comes out of our purchasing department; people who buy equipment for the company daily.

I think those are the types of people we put together to come up with that forty to fifty percent.

'Q Mr. Daverio, isn't it a fact that bus drivers were selected in part because certain individuals in LILCO had a Class 2 license?

A I only know, personally, of one or two instances where any of the LILCO people had a Class 2 license.

As stated in our testimony, the reason a majority of the bus drivers were chosen was because they were underground lines people who drove trucks or other large vehicles on a daily basis.

Q I had my licenses confused. Those persons then would have a Class 1 license, correct?

A I don't know what that means.

Q Mr. Daverio, if you would, give me a couple of examples where, in your opinion, the job skills of LILCO employees were not able to be matched to the tasks and responsibilities assigned to those employees under the LERO organization?

A Radiation Health Coordinator. That is why we

That is why we went to an outside contractor for that function. Of course, the most obvious is traffic guides.

Radiological monitoring, and decon people. Well, we use people from our engineering staff, to a large extent, -- they were engineers, not nuclear engineers or involved in radiation.

Most of the EOC people were chosen for reason of being managers, and therefore, decision makers and movement of large people, but that didn't really relate directly to their work. So most of those positions -- I think that covers most of the organization, Mr. Miller.

There may be a couple of jobs I missed, but that is the best that I can do.

Q Okay. Thank you. Mr. Varley, looking at

Answer 27 on page 40, you state that drills and exercises

are designed to give LILCO personnel experience in performing
the emergency jobs which they have been assigned, do you
see that?

A (Witness Varley) Yes, I do.

Q Under the LILCO drills and exercises, there is no experience provided to LERO personnel with respect to dealing with the public, is there?

A If I understand your question right, you are asking me if during the drills and exercises we institute situations in which they deal with the public, the answer to

that would be, 'no,' with the exception of the people in the emergency news center, where they would have to deal with the press.

If you would consider the press the public, as part of what we do in the emergency news center is that we have people act as the press, and pose questions to the people in the emergency news center.

A (Witness Daverio) Mr. Miller, I would like to add that while I didn't take credit for it, many of our people, including the people assigned to traffic guides, are field forces who are out in the general public, seeing the public, maybe responding, maybe even questioned by the public every day.

They go read the person's meter that is attached to their house. I am not taking credit for it, but that is something that they do as part of their normal job.

Q Mr. Daverio, the example of dealing with the public that you just gave for the meter readers, would that be the sort of situations, the sort of dealing with the public situations that, in your opinion, would arise during an emergency at the Shoreham plant?

MS. MONAGHAN: Objection. I think that this line of questioning about dealing with the public, except to the extent that it may concern what has been simulated in drills is beyond the scope of the contentions.

End 20 21

JUDGE LAURENSON: Overruled.

WITNESS DAVERIO: Well, I wouldn't say it is directly relatable. They are the symbol of LILCO in the field, and thet deal with people as LILCO.

The other thing to realize -- another thing we mention about emergency restoration, is the third day of a storm, if you are in front of a person's house, and they have been out of electricity for three days, they are not -- they may come out and discuss it with you.

I am not saying it is equal to a radiological emergency, but there is some dealing with the public in all our restoration and all of our emergencies, and many of our employees, given correct circumstances, are dealing with the public potentially in emergency situation.

Gas underground lines, which are the bus drivers, as Mr. Kessler testified, he himself has crawled under buildings during an emergency. They work on that all the time if there is a gas leak.

So they deal in emergencies every day. Some of our people do that.

Q Could you give me, Mr. Daverio, your best estimate of the number of LILCO people who deal with emergencies every day, as you say, who are also members of the LERO organization?

A Mr. Renz, who came to us from underground lines, may be able to add to this, but it would be my opinion, depending on the day, anyone in undergrounds may be called to a gas leak which would be an emergency to repair and to deal with.

While they may not do it on a daily basis, they may do it any day.

Q But I was going back to your last answer; I thought you said to me that you have people that deal with emergencies every day.

A In the context I just gave it. They don't know that there is going to be an emergency. You can't predict it, but there may be one that they may be called to at any time.

Q It could be one during the week and it could be a year before they have to go to an emergency; isn't that right?

A I have no knowledge as to how many times that would occur.

Mr. Renz may be able to add.

A (Witness Renz) A good example of that aspect of

the company that might be exercised in a gas or electric emergency on close to a daily basis, if not a weekly or biweekly basis, would be that of customer service.

They, in addition to now holding certain LERO responsibilities, as testified to in our testimony on contention number 26, customer service also responds to PSE instituted exercises, real gas emergencies. They coordinate various departments and make certain notifications, in addition to any kind of distribution, electric distribution emergencies that may arise in the field, either in conjunction with storm restoration or isolated instances such as a pole down as a result of a car hitting it or other matters.

Q Let's talk about in the field emergency workers under the LILCO plan in the LERO organization. What in the field workers, in your opinion, Mr. Daverio, or Mr. Renz, deal with emergencies every day, as you say, within LILCO?

A (Witness Daverio) As I stated, underground lines, as a department, may be called on any day to deal with an emergency. I can't say they do it every day.

But any day they could be called on to do it, if there happened to be a gas leak.

Q Any other examples other than the underground lines department?

A Overhead lines, while we don't use as many

people as underground lines, we do have I believe 100 or so
 of them in there. They may be called on any day, again,

to handle down distribution, down primary, down secondary,

which are high voltage lines. Again, the same thing. They

may not be called on any day or they may be called on any

day.

It depends on the day and the emergency that may occur on that day.

- Q Can you tell me, you say generally about 100 people from overhead lines are in LERO. Is that right?
  - A That is about right.
- Q What would be your estimate for approximately the number of people from underground lines in LERO?
  - A It is the whole department, 450.
- Q And what jobs generally do the underground lines department have in LERO?
  - A From the director down to bus driver.
    - Mr. Kessler is the vice president of gas operations.
- Q Is there a way of telling me, Mr. Daverio, where the majority of those people fall with the LERO organization?
- A The majority of them fall within the transportation part of LERO.
  - Q Bus drivers, correct?

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A Bus drivers, staging area coordinators maybe, transfer point coordinators and staging area support staff and bus drivers.

Q And with respect to the overhead lines department, those personnel, could you tell me generally where they fall within the LERO organization?

A I think they fall within that same general confine.

MR. MILLER: Judge Laurenson, this would be a good time for the second break.

JUDGE LAURENSON: All right. We will take another ten-minute recess.

MS. MONAGHAN: Before we go off the record,

Judge Laurenson, Dr. Babb has a 6:00 o'clock class tonight,

if he could be excused, depending upon whether Mr. Miller

has cross-examination questions for Dr. Babb.

MR. MILLER: I can't say whether I am going to have questions for Dr. Babb sitting here now.

MS. MONAGHAN: Dr. Babb is not on any answers that come up within the next ten pages, and given the speed that we have progressed through the testimony at this point, I sincerely doubt that we will get to the questions which Dr. Babb sponsors.

In addition, Mr. Miller has not addressed one question to Dr. Babb today.

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And he will be here tomorrow at Mr. Miller's disposal to answer whatever questions are necessary.

JUDGE LAURENSON: I have looked ahead 20 pages and I don't see any testimony by Dr. Babb so I think you are pretty safe in leaving. We will excuse you as a witness at this point.

We will take a ten-minute recess.

(Recess.)

JUDGE LAURENSON: Mr. Miller?

BY MR. MILLER:

Q Mr. Varley, looking at the question and answer 27, which begins on page 40 and goes over to page 43, is it your testimony, Mr. Varley, that the LILCO drills and exercises simulate actual emergency conditions?

A (Witness Varley) As we state, simulate as closely as we can within reason.

Q And do you believe, Mr. Varley, that in simulating as closely as you can actual emergency conditions, you have made these drills and exercises realistic to the participants in the LERO organization?

A Realistic to the extent that we can, yes.

Q Is it true, isn't it, Mr. Varley, that during the LILCO drills and exercises that have been conducted to date, the initial notification has been pre-planned rather than spontaneous or unannounced?

A Yes, that is correct.

Q And it is true, isn't it, that the consequences of improper or poor performance during a drill or exercise under the LILCO training program would not be the same as the consequences of poor performance during an actual emergency?

A I don't know what the consequences of poor performance would be during an actual emergency versus a drill. You would have to cite a specific example of poor performance.

Q As example, Mr. Varley, of drills and exercises which you say are structured and conducted in a manner as to simulate actual emergency conditions, you use the drills and exercises regarding the EOC and the three staging areas; isn't that correct?

A That's correct.

Q And that discussion is set forth on page 41 of the testimony, correct?

A Correct.

Q Now, one of the things you mention with respect to the EOC is that operations are carried out in response to information presented in the same form and manner as it would be in a real emergency via the various emergency communications circuits.

Do you see that statement?

П

A Yes, I do.

Q And you say at the bottom of that paragraph,
"The EOC itself is set up for the drill just as it would
be for a real emergency."

Do you see that?

A Yes, I do.

Q Let me ask you preliminarily, are all the communications circuits -- have all the communications circuits been operational during the drills and exercises conducted to date?

A I would like to defer that to Mr. Penz.

A (Witness Renz) I am sorry. Your question was, have all the emergency communications circuits been operational and available during exercises?

O And drills conducted to date.

A No. A number of radio communications have yet to be fully installed.

Now, Mr. Varley, looking at the discussion regarding staging areas at the bottom of page 41, do -- well, during these drills and exercises -- let me ask you a series of questions. I would like a yes or no from you, please.

Do bus drivers drive the routes and pick up people along those routes during the drills or exercises?

MS. MONAGHAN: I think that has been asked and

answered.

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JUDGE LAURENSON: It sure has been answered .
somewhere along the way, but I am not sure where.
Overruled.

WITNESS VARLEY: No.

BY MR. MILLER:

Q Do route spotters, Mr. Varley, drive through the EPZ in an attempt to spot congested traffic?

MS. MONAGHAN: Asked and answered.

JUDGE LAURENSON: I know we have been through all of these before in the testimony. I don't know how many of these type of questions you have to go through, but this certainly is providing cumulative evidence on the record.

Is there some reason that you are asking these over again?

MR. MILLER: I am not sure that I am asking them over again, Judge Laurenson. If I have asked them, I apologize.

JUDGE LAURENSON: You might not have asked them.

I am not saying for sure that you asked them, but someone sure asked them for the county and they are in the record on each one of these.

How many of these questions do you have?

MR. MILLER: There is a series of four or five

here, Judge Laurenson, of which I am going to ask for 1 2 a yes or a no. 3 JUDGE LAURENSON: For the purpose, I guess, of laying a foundation, we will allow these. The objection 5 is overruled. 6 WITNESS VARLEY: Could you repeat the last one? 7 BY MR. MILLER: 8 Do the route spotters, Mr. Varley, during the drills or exercises drive their routes in the EPZ and 10 attempt to spot congested traffic? 11 A No. 12 Do the road crew members during the drills or 13 exercises attempt to remove disabled vehicles from roadways? 14 A No. 15 Do the traffic guides direct traffic? 16 A No. 17 Do the monitoring and decontamination personnel 18 go to relocation centers and monitor evacuees? 19 A No. Now, Mr. Varley, at the top of page 42 --21 let me start at the end of page 41, you say, "In short, 22 the scenarios used in conducting the drills and exercises 23 provide information which must be evaluated by and enacted

on by the drill or exercise participants in the same manner

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as in a real emergency."

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1 Do you see that statement? 2 Yes, I do. A 3 Is that still your testimony, Mr. Varley? Yes, it is. 5 Mr. Varley, you have in front of you a number of documents that were handed out during the break. 7 One is a February 8, 1984 report from Mr. Krasner 8 of IMPELL to Mr. Daverio. One is a February 15, 1984 report from Mr. Krasner to Mr. Daverio. And one is a stack of 10 documents, the first page of which says, November 1983. 11 Do you see those three documents? 12 Yes, I have those in front of me. 13 MR. MILLER: Judge Laurenson, could we have 14 these marked as SCEP-63, 64, and 65; 63 being the 15 February 8, 1984 report; 64 being the February 15, 1984 16 report; and 65 being the larger document with the 17 cover page saying November 1983. 18 JUDGE LAURENSON: They will be so marked. 19 (The documents referred to 20 were marked Suffolk County 21 Exhibits EP63, 64 and 65 for identification.) 23 BY MR. MILLER: 24 Mr. Varley, looking first at what has been

marked as SCEP-63, the February 8, 1984 report, have you

ever seen this report before?

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Yes, I have.

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Can you tell me briefly what this report is?

The report is, as I discussed earlier,

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required by the Long Island Lighting Company to institute

starting with the January 28 drill or exercise, we were

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a critique process whereby a formal written critique was

submitted by the lead drill controller for the whole

drill at the competion of that drill.

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Suffolk County EP63 is that formal written

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critique supplied to LILCO for the February 8 exercise.

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And to make sure we have our terminology

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correct, Mr. Varley, this is a report from an exercise,

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correct?

That is correct.

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And during an exercise, one of the factors is

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that there should be no prompting by the controller or

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observers or the participants, unless there is danger

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to the participants or to others participating in the

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exercise; is that correct?

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far afield because an individual is carrying out his activities incorrectly and it may misdirect the entire

A Or to the extent that the exercise may go too

exercise.

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Q Now, the February 15, 1984 report, which has been marked as SC EP-64, could you briefly identify that report for me, please?

A That is another example of the same thing that I indicated was for Suffolk County EP-63, but it was done for the February 15th exercise that was conducted.

Q And again this is an exercise, correct?

A Correct.

Q And you have seen this report before?

A Yes.

Q Did you help prepare these reports, Mr. Varley?

A No, I did not. I was not involved in the conduct of either of these exercises.

I think it may be helpful to explain that at this point I was no longer involved as a lead person with respect to the exercise program but that that was assumed by Mr. Krasner so that I could be free for other responsibilities at the time.

COURT REPORTER: What was that name?

WITNESS VARLEY: Mr. Ken Krasner.

BY MR. MILLER: (Continuing)

Q Mr. Varley, would you look please at what is numbered as Page 16 of the February 8, 1984 report. And I will represent for the record that the pages are numbered in this respect, Judge Laurenson, because apparently the

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report involved both on-site and off-site aspects of the exercise and the County was provided only with the off-site aspects, and those aspects began at Page 11 of the report.

Do you have Page 16 in front of you, Mr. Varley?

A Yes, I do.

Q Now, this is -- these are comments prepared regarding the staging area aspect of this exercise, correct?

A That's true.

Q And do you see, beginning in the first paragraph of that page where it says that several key people in the staging area were not drilled in the positions 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?

A That's correct.

And do you see the next paragraph, Mr. Varley, where it's talking about vehicles were not available and as a result twenty bus drivers were never sent out and three traffic control posts were not manned?

A Yes, I see that.

And do you see the fourth paragraph under the facilities and the equipment heading which says an insufficient number of dosimeters was a problem at Port Jefferson and that people were dispatched into the field

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Yes, I do.

And do you see the last paragraph on the page, Mr. Varley, where it says that personnel in the staging areas appear to be lackadaisical in their attitude toward the exercise, there was no general concern regarding the emergency, and when questioned about the condition of the

Yes, I see that.

emergency people did not know?

And would you look, Mr. Varley, at the last page of what has been marked as EP-64, and isn't it correct, Mr. Varley, that this page sets forth a number of deficiencies in the performance of personnel at the emergency worker decontamination facility?

My question is, doesn't forth a number of deficiencies?

Yes, it does.

And doesn't it state that the personnel for this drill were the same as those on the January 28 exercise?

Yes, it does state that.

And doesn't it say at the end that it should be noted that these errors or omissions were still taking place after repeated prompts from the controller?

A Yes, it does.

Now, is it still your testimony, Mr. Varley,

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that, as you state on Page 42 of the testimony, that the scenarios.used in the drills and exercises provide information which must be evaluated by and acted on by the participants in the same manner as in a real emergency?

A Yes, I do.

as SC EP-65? I will represent to you that this group of documents was put together in the following way. These documents were provided to the County by counsel for LILCO on June 1 pursuant to the Board's Order to give the County completed drill and evaluation forms.

The documents are as provided by LILCO, Mr.

Varley, except they have been rearranged and in this case
the stack, at least in my opinion, addresses the issues of
realism in the drills and the exercises of the LILCO
training program.

The only thing that the County has added to this stack are these cover pages, November 1983, and there is a cover page that is going to say January 1984, and there is a cover page which is going to say February 8th, 1984, and there is a cover page which is going to say February 15, 1984. That was done for ease of reference in trying to find out way through the documents.

Are you familiar, Mr. Varley, with the critique, completed critique and evaluation forms that were provided

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to the County on June 1, 1984?

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A I'm aware of the amount of material that we turned over. I can't say that I am aware of every page that was contained within those things.

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Mr. Varley, if you would look please at the first page of EP-65, not counting this little cover sheet, do you see the comment where it says: B-1, a handwritten comment, communicators in EOC were under-utilized because some of the other facilities were activated -- because none of the other facilities were activated?

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A I do.

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Q And on the next page, Mr. Varley, which comes from the January 24 drill, do you see a comment that talks about the fact that bus drivers had to car pool?

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A I see that.

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Q And the following page also talks about the same problem with bus drivers car pooling, doesn't it?

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A Yes.

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MS. MONAGHAN: Judge Laurenson, I have an objection to Suffolk County's Exhibit 65 and this line of

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questioning.

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in terms of using these. I think I can represent to the Board that the critiques that are contained in Suffolk County

of these critiques was that we have to establish a pattern

I believe that the Board's ruling on the use

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EP-65 are a very limited number of critiques taken from a stack of critiques that were about twelve inches in height. And to start picking out individual drill controller's critiques and putting them -- lumping them together in a form such as this really isn't representative of the comments that were given in those critique forms, and does not adhere to the Board's Order that you have to show a pattern.

MR. MILLER: Judge Laurenson, let me respond to that. I can assure the Board that, one, this is not all the critique forms that we will be discussing this week. We have pulled from the stack mentioned by Ms. Monaghan, which is probably eight inches or more in height, the ones that we feel address a particular problem; that is, lack of realism in the drills and exercises.

There are other problem areas, and we will discuss these problem areas during the course of the week. We clearly intend to show, Judge Laurenson, the pattern which you sugg sted the County was going to have to show when the documents were produced on June 1 of 1984.

What we are doing here, Judge Laurenson, two points must be kept in mind. One, the drill evaluation forms, exercise forms, do not address themselves to individual performance. They address themselves to performance of groups, for example, bus drivers having to #22-7-SueT 1

car pool, security personnel being lackadaisical. In that respect, the critique and evaluation forms address a general problem that has been reviewed during the course of the drills and exercises. They do not address isolated instances.

More importantly, Judge Laurenson, this stack indicates that particular problems reoccur, and those problems have reoccurred during the course of the November drill, the January drill and the two February drills, which are the only drills that we were given evaluation critique comments for, with the exception of some limited traffic guide materials in May. These problems have reoccurred during the course of the drills and exercises that we have been given information about.

And according to the witnesses testimony today, apparently during the course of these, problems that are indicated in the course, are the only documents that have been retained by LILCO or IMPELL regarding these drills and exercises. The pattern is there, and I will demonstrate the pattern if I can continue my questioning.

JUDGE LAURENSON: What is the asserted relevance of this?

MR. MILLER: The relevance, Judge Laurenson, is the fact that the LILCO testimony, for example, more than on these two pages, but in particular on Pages 40 to 42

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states very explicitly that the drills and exercises

depicted conditions to participants in the same manner as

in a real emergency.

The County would argue that the drills and exercises do nothing of the kind. And that's what we want to show.

JUDGE LAURENSON: Well, as far as the first set of these documents, which is Suffolk County EP-65, since Mr. Miller has just started his questioning, we really can't tell whether or not any pattern can be established at this point. So, I think we have to give him some more opportunity to develop that.

And since everyone is aware of the reservations that we have concerning the admissibility of these documents in evidence, I think we can deal with the admission of this evidence subsequently. And if it turns out that this is not admissible, or not admitted rather in evidence, then I think we can then determine what to do with the testimony that is taken on it.

But I think that at this point it is premature to make any ruling on it until the County has an opportunity to establish the pattern of these documents.

MR. MILLER: Judge Laurenson, let me -- there is one other point I want to make also. The County would preter not to have to go through these kinds of pages to

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make a point. That's why I began my questions with respect to the written reports, which as Mr. Varley has testified are summaries of the overall exercise scenario. I was hoping that we could establish our point through questions regarding the summaries.

But when the witness does not agree with our position and maintains that the testimony is accurate as set forth, then I think we are at that point compelled to look at the underlying documentation which goes to these particular written summary reports of the exercise. And that's what comprises EP-65, the underlying documentation.

JUDGE LAURENSON: Since you raised the question,

I didn't see the connection between the IMPELL document

that you questioned Mr. Varley about and your final question

to him about whether that changed his testimony. It didn't

seem to me that you were talking about the same things, or

why the information that was in that document would cause

him to change his opinion on the question you asked him.

MR. MILLER: Well, my question, Judge Laurenson, asked him if he still believed they are realistic, and he said yes. The questions that came from these documents are such things as the fact that participants were prompted, the fact that bus drivers were never sent out, the fact that traffic control posts were never manned, the fact that people were not given dosimeters, the fact that personnel

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in the staging areas appeared lackadaisical and had no general concern regarding the emergency.

To me, all --

JUDGE LAURENSON: I would think that you would want to argue that that's realistic, that that is what is going to happen from the County's point of view, in terms of the deficiencies that are described among the LILCO personnel.

I just didn't see the connection or why you are asserting now that the fact that Mr. Varley didn't change his testimony based on that question now prompts plowing through this stack of documents.

MS. MONAGHAN: If that's Mr. Miller's foundation for trying to go into Suffolk County Exhibit 65, it seems that he hasn't laid an adequate foundation for going through this mass of documents. He has given Mr. Varley no opportunity to explain why he wouldn't change his testimony based on the comments that were read to him.

JUDGE LAURENSON: Is it your position, Mr. Miller, that the documents in 65 are just the underlying or support documents for the overall conclusions of IMPELL in 63 and 64?

MR. MILLER: In some cases, that's true, Judge Laurenson. The unfortunate part is that at least based upon our review of the documents provided by LILCO, not all #22-11-SueT 1

the, if you will, negative aspects that resulted from the drills and exercises always show up in the summary report.

I will try to keep the questions limited, but I think that in light of the answers I'm going to have to go through the backup documentation, and I will try and keep it as short and as brief as possible.

I might also point out the foundation has been laid, and if Ms. Monaghan has things that she wants to try to show she has the same documents she gave to us and she can do that on her redirect.

MS. MONAGHAN: Foundation and redirect are two entirely different things. My position is that there has been no foundation laid to impeach Mr. Varley's testimony based on his response that he wouldn't change his testimony after being read portions of the summaries.

And if that's why Mr. Miller thinks he needs to go through Suffolk County Exhibit 65, I don't really think that he has laid any foundation for going through all these documents.

MR. MILLER: Judge Laurenson, nothing has been said about impeachment.

JUDGE LAURENSON: Well, the point is, you know, we have summaries here in the form of these reports from IMPELL, Numbers 63 and 64. And they seem to be rather succinct, whereas on the other hand we have a large stack

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of documents, most of which are handwritten and probably illegible, at least to a certain extent, that is going to require a lot of time. And my question I guess really is, whether the material that you are trying to get out of 65 is already summarized in the other two documents?

MR. MILLER: The problem, Judge Laurenson, is that it is not always summarized in the other two documents.

I think I can avoid, in light of the encouragement
I am getting, going through all these pages in EP-65. I
will try to shorten this process.

are going to be duplicating what is already in the other exhibits, unless LILCO is going to object to that, the first two exhibits being received in evidence -- and I don't know whether they are or not -- but unless there is a claim that there is no foundation for that, or whatever else they are going to object to, then this would seem to be duplicative, to spend a lot of time --

MR. MILLER: I think I can do this in a way not to duplicate what shows up in the written summaries.

JUDGE LAURENSON: Well, we had this problem, as we all know, when we started through these individual reports of the drill participants once before. And having that experience behind us, I think we are determined not to repeat our past mistakes.

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So, we are trying to find some method, to the extent that you have relevant evidence that deserves to be in the record, you know, we are trying to find some way to put it in. If it doesn't meet our test for relevance, then it won't come in.

But I'm trying now to find some method by which you can develop this, or at least so we can make a determination on that.

MR. MILLER: Judge Laurenson, the other important point I think, other than the fact that not all the information in EP-65 shows up in EP-63 or EP-64, is that whereas EP-63 and 64 were prepared by one person at IMPELL, apparently Mr. Krasner, EP-65 is made up of the comments given by the controllers and observers of the exercises, more than one person went into this process and more than one person was able to observe problems which developed during the exercises.

In this case, what I'm offering this information for relates to the lack of realism of the drills and the exercises that have been conducted by LERO. And I will try to do it as shortly and as briefly as I can do it.

JUDGE LAURENSON: The fact that you have many people contributing to this Exhibit 65, I don't know that that makes it any more or any less credible than a summary that is prepared by IMPELL.

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MR. MILLER: I think what makes it relevant, though, is the fact that these are comments offered by .

IMPELL's own people whose responsibilities include reviewing and evaluating the drill and exercise participants.

JUDGE LAURENSON: Your statement is that all of these documents in 65 were authored by IMPELL people?

MR. MILLER: To my knowledge, that's the case.

JUDGE LAURENSON: Maybe I misunderstood before.

I thought we had testimony today that some LILCO people
were serving in these capacities.

MR. MILLER: Mr. Varley might be able to clarify that. If I remember correctly, the names of the participants, including the observers and controllers, were redacted when the documents were provided. So, I really can't tell who wrote these comments.

MS. MONAGHAN: Judge Laurenson, I think that you are correct as to the testimony earlier today. IMPELL personnel are not the only people who made these comments.

But the comments with respect to the February 8th and February 15th drills were, in fact, reviewed by Mr.

Krasner from IMPELL and were summarized in the report.

JUDGE LAURENSON: How would you distinguish these,
Mr. Miller, from the previous documents that we didn't
receive in evidence, knowing that you think that we probably
made a mistake in not receiving them in evidence, from the

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individual drill participants?

MR. MILLER: Yes, sir. The main, very important distinction was that during communications I thought it was the Board's position that since these -- since those documents were documents prepared, filled out by individual drill participants, that they maybe were not probative or representative of all the participants of the drills.

In this case, we have comments prepared by observers and controllers that cut across the board with respect to every drill and/or exercise that has been provided to the County by LILCO. They begin in November, they go through January and they go through February. The pattern continues throughout.

And the comments don't relate to individuals; they relate to categories of workers.

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MS. MONAGHAN: Judge Laurenson, it seems to me we have precisely the same problem here with these individual drill comments.

Whether they were done by a drill participant, or whether they were done by an individual observer. What is important here is that they were summarized in these reports that were produced by Mr. Krasner, and to go through these individual comments, you know -- if Mr. Miller is permitted to put this into evidence, and go through each of these individual comments, I can represent to the Board that there is a stack of paper down here that includes other comments that are going to contradict what Mr. Miller has said, and I am going to have to go through all of those and put those into evidence on redirect, and I think that is burdening this record with far too much evidence that has little probative value.

MR. MILLER: You are making that representation?
MS. MONAGHAN: Yes.

MR. MILLER: Have you looked, at this point?

MS. MONAGHAN: I have read all the documents,

Mr. Miller.

MR. MILLER: Have you looked at those documents with respect to this particular point regarding lack of realism?

MS. MONAGHAN: My recollection of the documents

-- I have not looked at it particularly with respect to that. I didn't know what you would be using the documents for.

## (Board confers.)

JUDGE LAURENSON: The Board has conferred concerning the state of the record at this point, and our conclusion is that based upon the representations by Mr. Miller that he will establish a significant pattern through this document marked Suffolk County EP-65, and that that pattern is not reflected in either of the other two summaries marked Exhibit 63 and 64. That we will allow the County this opportunity to establish that significant pattern.

However, if it turns out that after this questioning that no such pattern is established, we probably will not allow this leeway in the event the County wishes to introduce other stacks of similar documents later on this week, as you have indicated.

MR. MILLER: I will do my best, Judge Laurenson.

BY MR. MILLER: (Continuing)

Q Mr. Varley, I believe we got up to the first page of the February 8, 1984 exercise. If you would turn to that. Do you have that, sir?

A (Witness Varley) Yes, I do.

Q Do you see the comment, Mr. Varley, it begins

two lines down.

Realistically, this observer would anticipate many more calls about accidents, et cetera.

The traffic leads were busy but frequently due to problems stemming from their lack of training for this specific job. Had they been adequately trained for their task, they wouldn't have been adequately tested by this scenario, I don't think.

Do you see that comment?

A Yes, I do.

Q And on the next page, Mr. Varley, do you see, four lines from the top, No. 2, where it says: Times to report and activate the staging areas were artificial?

A Yes, I see that.

Q And do you see on the next page, Mr. Varley, the first three lines: Due to the simulation aspects, some of the communications links were not demonstrated.

A T see that.

Q Now, Mr. Varley, to save some time, would you jump with me four pages, where at the top of the page it has the number 2, and it says mobilization and notification were pre-positioning.

Do you see that?

A Yes, I do.

Q And would you agree with me, Mr. Varley, that

the next six comment sheets all go to the same point regarding pre-positioning of the exercise scenario?

A Yes, I see that.

Q Would you agree with me, Mr. Varley, that these all regard pre-positioning as IMPELL calls it, of the exercise?

A Yes, I agree about that.

Q And how would you define pre-positioning?

A The fact that we notified and indicated to people that they were to be at a certain facility for the start of the drill.

Q Now, beginning, Mr. Varley, with the page after those six pages we just talked about, it says: 2-8-84, and location has Emergency Worker Decontamination Facility.

Do you see that?

A Yes, I do.

Q Now, on this page, do you see the comment across from the line 1115, which says: Decontamination leader was anticipating the arrival of people early in the afternoon, so he sent his people outside to set up, although he had not received word to do so.

I okayed the move, since we were running on a compressed time schedule. He also sent one-half his crew to lunch.

Do you see that comment?

A Yes, I do.

...

Now, would you go ahead Mr. Varley, skip a page and you come to a page which is still discussing the emergency worker decontamination facility, and at the bottom of that page, do you see where it says: The biggest problem was attitude. They didn't want to be serious enough. They were afraid to inconvenience regular employees. Try to stess that they must play it to the hilt for a graded exercise.

Do you see that comment?

A Yes, I do.

And on the next page, Mr. Varley, do you see where it says, about the middle of the page; The dosimeter recordkeepers, only two out of three showed were virgins, and needed a lot of direction by their controller-observer to even get the drill to function. Very poor staffing, scheduling, in large capitol letters, for a drill that was to be a, 'hands off' observer drill.

Do you see that?

A Yes, I do.

And on the next page, Mr. Varley, do you see

a Number 5, and comments across from that Number 5 would

say: Several people from each group in Group 2 did not have

previous drill experience. They were helped trained by

observers from LILCO who had the experience from previous

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drills. These observers took active rolls on several occasions despite controller instructions at drill commencement. These occasions were: One, calling the EOC for the lead traffic guide to report a dosimeter reading of a traffic guide.

Two, maintaining sign in -- I am having trouble with the words here, too -- let's go on to three -- taking an active role in resolving four missing transfer point coordinator box. Four, providing various instructions and/or advice. Five, two people helped bus dispatcher dispatch drivers.

Do you see all that?

A Yes, I do.

Q Do you see on the next page, Mr. Varley, the comment, about two-thirds down, where it says had to prompt public and private school coordinator?

A Yes, I see that.

Q Do you see on the next page, Mr. Varley, the comment people didn't know where they had to go, or what they had to do, and had to be briefed before or prompted during the drill.

Do you see that comment, at the top of the page?

A Yes, I see it.

Q And do you see at the bottom of the page, Mr. Varley, in that same page, I spend much of the time out

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Whereabouts is that?

at Traffic Control Post No. 6 with a traffic guide. Since 1 he was unfamiliar with the area he proceeded to turn west 2 on 25-A, and PCP No. 6 is east. I immediately corrected 3 him, and he would have eventually corrected himself, but valuable time could have been lost. Do you see that comment? Yes, I do. 7 Again, there are more of the same in this stack, Mr. Varley, but to try to save some time, could you look at the last two pages of this particular grouping for 10 the February 8th drill. And these pages relate to 11 dosimetry. 12 Do you see a page where at the bottom it says: 13 No decontamination was attempted due to weather and lack 14 of time. 15 Yes, I see that. 16 Q And on the next page, do you see, four lines 17 up from the bottom, the statement traffic quide eas careless 18 with dosimeter, threw it across room to another individual 19 who was passing them out. Do you see that statement? 21 I see that. A 22 Mr. Varley, quickly --23

JUDGE LAURENSON: I don't see that last one.

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MR. MILLER: It is the last page, Judge Laurenson, four lines from the bottom.

JUDGE LAURENSON: Oh, yes. I see it.

BY MR. MILLER: (Continuing)

Mr. Varley, going on to the comments from the February 15, 1984 exercise, do you see in the very first page the following comment: The Coram transfer point was supposed to handle 60 buses. Only 6 buses and six routes were assigned in this drill. The drill was not realistic, and it didn't provide enough activity as far as this transfer point is concerned.

Do you see that comment?

A Yes, I do.

And on the next page, Mr. Varley, do you see at the bottom of the page: many traffic guides who doubled up were given double assignments to be able to fill all positions?

Yes, I see that.

Do you see in the next page, Mr. Varley, the comment: Route alert driver dispatch message came in one-half hour after traffic guide dispatched message. Unrealistic.

Yes, I see that.

And on the next page, Mr. Varley, do you see the comment he will be notified -- this is close to the bottom -- he will be notified as to end of evacuation.

1 However, for drill purpose, end of exercise is 3:20, 2 regardless. 3 Do you see that? Yes, I do. 4 Isn't that because 3:20 is quitting time for 5 these employees? 6 No, that is not true. 7 Why is that, then? The 3:20. A Why is what? What does that relate to. Why is the quitting 10 time 3:20 regardless? 11 For the termination of the exercise, that was 12 the time outlined. 13 Do you see on the next page, Mr. Varley, at 14 the bottom of the page, the comment: The only unrealistic 15 procedure was that the call for route alert drivers came 16 in twenty-five minutes after the evacuation notice. 17 This doesn't really make sense. Problem at 18 EOC, perhaps. Do you see that? 19 A Yes, I do. 20 Q Mr. Varley, will you skip a page, and you see 21 a comment, form, with the date 2-15-84, and the location, 22 EWDF. 23 A Yes, I see that. 24 Q Now, I am going to ask you some questions regarding 25

nd 23. 20

the attitude during this exercise, Mr. Varley, and do you see about the middle of the page of that first sheet, where it says: Attitude is bad? This is right across from the 12:30 time line. Do you see that: Attitude is bad?

A Yes, I see that.

And on the next page, Mr. Varley, middle of the page, do you see the statement, general attitude is not good. All are more worried about layoffs and are having trouble playing the game.

Do you see that?

A Yes, I do.

And on the next page, Mr. Varley, do you see the statement, about middle of the way down: Told them several times. Looked bad, but no action was taken. The response was why care or bother, when we don't know from Friday-to-Friday whether we have a job. This same group performed very well on the Saturday drill. Today, they did lousy, and didn't seem to care.

Do you see that comment?

A Yes, I do.

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Q And at the bottom of the next page, the very bottom, do you see the statement, "I think these drivers are not taking this seriously"?

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A I am not sure that I see that one.

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Q It is the last two lines and it is difficult to read.

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A Yes, I see that.

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Q And on the next page, Mr. Varley, do you see the comment towards the end, "Poor radio protocol and etiquette, holding mike up to car radios, joking and laughing around"?

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A Yes, I see that.

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Q And do you see on the next page, about the middle of the page where it says, "Too many traffic quides were calling the base in rapid succession without waiting the base to respond to the first caller. This is either lack of courtesy on the air or fooling around by the drivers"? Do you see that comment?

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A Yes, I do.

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Q Mr. Varley, without going through the details,

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would you agree with me that the next five pages all

did not show up in their own vehicles and, therefore,

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relate to the fact that drivers, participants in the exercise

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there had to be car pooling?

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A Yes, I would.

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And without going into the details again, Mr. Varley, would you agree with me that the last four pages all indicate that, like in the February 8 exercise,

the February 15 exercise was not a prepositioning exercise?

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MR. MILLER: Judge Laurenson, I tried to do it At this time I would move SCEP-65 into evidence. quickly.

JUDGE LAURENSON: As long as we are doing it now, we might as well hear the argument as to what information you have just brought out from your questioning of Mr. Varley about these documents that is not contained in the summaries 63 and 64?

MR. MILLER: The most telling comment, Judge Laurenson, without going back through all these pages and trying to make the individual points, I asked Mr. Varley about, I think I began asking him about EP63 which is the February 8 written report. I asked him, I think, about four different paragraphs on page 16 of EP63, and I asked him, having read those comments, did he still believe his testimony to be accurate, his testimony regarding the fact that drill and exercise participants experience --I should read the language, "exercises provide information which must be evaluated by and enacted on by the drill or exercise participants in the same manner as in a real

emergency."

Mr. Varley told me that neither the February 8 .

report or the February 15 report changed his testimony in any respect.

I then, Judge Laurenson, went through these individual comments, or at least some of them in EP65, and the most telling one, it seems to me, is the very first page of the comment form from the February 15 exercise where the statement is made, "The drill was not realistic." We had other comments where perhaps more interpretation has to be given to the realism involved such as time frame was artificial or equipment not provided or individuals did not take their roles or their jobs seriously, joked around, laughed, would not play the game.

All those factors go directly to, in our view, at least, the realism or the lack of realism of the drills and exercises that have been conducted by LILCO to date, at least those for which we have been provided information.

Again, I think it is unfortunate that we had to go into the backup, but in light of the response from the witness and in light of the fact that some of the comments, as I think you have just heard as I have read them and Mr. Varley has responded, are not included in the summaries that are set forth in EP63 and EP64.

I am not sure what else to say. In terms of the patterns that I think cut across the board, there is a pattern of not taking the roles seriously, there is a pattern of where the observers themselves say that the exercises were not realistic. There is a pattern of people not showing up with their vehicles and having to car pool.

There is a pattern of dosimetry equipment not being given out to the participants. There is pattern of short cuts being taken by the exercise participants.

There is a definite pattern of prompting by the observers and controllers which is, according to the LILCO witnesses' testimony, -- supposedly should not occur during an exercise.

I think I could probably go on, but I am not sure I need to at this point.

JUDGE LAURENSON: What is LILCO's position on this.

MS. MONAGHAN: Judge Laurenson, LILCO's position is that we object to the admission of Suffolk County

Exhibit 65 into evidence. I don't think that Mr. Miller has established a pattern that exists separate and apart from the summaries that are Suffolk County Exhibits 64 and 63.

He has pointed to certain incidents where
-- in particular, where he is talking about there being
a pattern of dosimetry, a lack of dosimetry equipment.

My recollection, having gone through with him reading these parts of EP65, there was only one comment where it went to the lack of dosimetry equipment. I certainly don't think that that establishes a pattern.

In addition to that, I don't think that the comments that Mr. Miller has elected to include in Suffolk County EP65 contradict what is in 63 or 64 or really amplify them in any material respect.

To permit this kind of evidence to come into the record will merely overburden the record with evidence that is not going to be probative of the issues that this Board has to decide.

(Pause.)

MS. MONAGHAN: Judge Laurenson, if I might add one more thing, with respect to what Mr. Miller was addressing here, my understanding of the reasons he is offering these documents is that he is questioning the testimony which states that exercises provide information which must be acted upon by the participants and that they provide the participants with a simulated emergency situation in which to behave.

I don't really think that this collection of comments demonstrates that that hasn't been done in the LILCO drills and exercise scenarios.

The fact that those people may not have been

Mot every single portion of the ultimate emergency response is exercised in every single drill or exercise. And I think that that has been made perfectly clear on the record.

MR. MILLER: Judge Laurenson, that is fine, if the witnesses would say that. But that is not what their testimony says. Their testimony clearly says, in the same manner as in a real emergency.

JUDGE SHON: Ms. Monaghan?

MS. MONAGHAN: Yes, Judge Shon.

the dosimetry thing, in which you say there was a limited number of instances cited, but what Mr. Miller's position seems to be is that the entire thing, especially the car pooling of bus drivers, the prepositioning, the attitude of people who are laughing and joking, that this all shows a pattern of lack of seriousness and lack of realism and that this pattern of lack of realism and seriousness, failure to take this thing as a real emergency, in itself serves to contradict the testimony of your witnesses.

I don't think -- you didn't to my way of thinking address this notion of a pattern as fully as I would like to see it addressed. Could you do that?

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MS. MONAGHAN: Yes. Just a minute, Judge Shon. (Pause.)

JUDGE LAURENSON: Let me just inquire as to the position of the state and the staff, if you have one on this exhibit.

MR. ZAHNLEUTER: Yes, the state has a position.

One thing that rings clearly in my mind, I think it

was about a week ago when LILCO moved into evidence a

stack of letters that they had written concerning hospital

plans and musing home plans. And although I disagree with

the Board's decision, the Board came back with a decision

that it was some evidence -- I believe that that was

the exact phrase that the Board used, "some evidence."

I don't want to epeat what Mr. Miller said about his particular documents here, but I do have one observation, that there is some evidence in these exhibits. Of course, this has all had to be done on a very impromptu basis, but I look at the Suffolk County Exhibit, which is 63, and that describes the February 8 exercise. And on page 16 there is a comment about lackadaisical attitudes.

But I want to distinguish that point because when you look at Suffolk County Exhibit 64, which describes the February 15 exercise, and you go to page 12, which is the same section on command and control at staging areas, there is absolutely nothing in there about a poor attitude

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of the people who are participating in the exercise.

And what Mr. Miller just showed us was that in LILCO's Exhibit EP65, concerning the February 15 exercise, there are many instances of citations of poor attitudes.

I am looking right now at this observer controller log sheet, dated 2/15/84, which describes the -- their response was, "Why care or bother when we don't know from Friday to Friday whether we have a job."

My point is that these comments about a poor attitude are in the February 15 portion of EP65 and they are not reflected in the summary for February 15, 1984. So I think that there has been a showing that there is some evidence and that these documents, although I think only 65 was moved into evidence, I think that EP65 should be admitted into evidence for the fact that it shows some evidence.

MR. MILLER: Judge Laurenson, if I could just make a statement, this might help the arguments of the staff and LILCO. We also intend to offer EP63 and 64 into evidence as well.

JUDGE LAURENSON: Does the staff have a position on this?

MR. PIRFO: Yes, your Honor. Thank you. We were under the assumption you were offering 63 and 64 to which we have no objection. As to 65, a critique or

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summary by its very nature is not going to contain

every recital of every instance that is being summarized or critiqued. Given that, we don't find anything more or less probative in 65 or an eight-inch stack of favorable comments that would cause Mr. Varley to change his testimony.

If the issue is whether he is going to change his testimony on the basis of 64 or 63, that is one thing. If it is whether he is going to change his testimony on the basis of 65, that is a different issue entirely. It would be the staff's position that 63 and 64 suffice and the record should not be burdened with the admission of 65 and presumably the remainder of the seven and a half inches that are not in front of it now.

So we would be opposed to the admission of 65.

JUDGE LAURENSON: Ms. Mohaghan?

MS. MONAGHAN: Judge Laurenson, I think that when you initially laid out the two things that the county must show in order to have these critique forms admitted was, one, that the comments must not appear in the summarized forms of the critiques, that they must not be indicated so that we don't have repetitive evidence, and that the county had to show a pattern of a critique problem.

I think, as Mr. Zahnleuter pointed out, the

summaries do, in fact, indicate some of the same problems
that are shown in the critiques. And I point the Board
to Suffolk County EP63 where on page 16, the paragraph
that Mr. Miller in fact read to Mr. Varley said, "At
Piverhead, seven vehicles were not available to run the
routes for this drill due to lack of leases. As a result,

control points were not manned."

So, in fact, that is there and it is in the summary.

20 bus drivers were never sent out and three traffic

In addition, I think that Mr. Miller has read selected comments from these critiques. If you look back -- it is awfully hard to get back into these documents once we have gone through. If you look at the February 15.

1984 comments on the second page of those, the very bottom of the page --

JUDGE LAURENSON: You are back into 65 now?
MS. MONAGHAN: Yes, sir. We are.

At the very top of that page, to identify the page for you, the date is 2/15/84. The location is Port Jeff. If you look at the same comment that Mr. Miller read, saying "Note, many traffic guides who were doubled up given double assignments to be able to fill all positions." So it is clear here that there was an effort made to in fact show realism in this drill by making them

fill two positions and run those routes. But there was an attempt made, when there weren't enough cars, to in fact repair the problem and get them to all go out and run routes. They double people up and they added additional routes.

If you go to the third page further in EP65, unfortunately there is no date on the top of this page, but the first word on that page begins, "Overall this drill went very well," if you will look, the paragraph that beins on that page, "It was probably reasonably realistic as calls to dispatch traffic guides and road crews and route spotters came within three minutes of each other which would be potentially a problem. The three lead traffic guides handled the pressure and workload quite well."

If you look at the bottom of the page, which is the comment that Mr. Miller, it says, "The only unrealistic procedure was that the call for route alert drivers came in 25 minutes after the evacuation."

So apparently in this particular drill observer's opinion, it was a very realistic drill and the only unrealistic thing was the thing that Mr. Miller pointed out.

If you go to the fifth page into the February 15 critique, and you look at the bottom of the page where

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Mr. Miller read at the bottom of the page that they
weren't taking the drill seriously, right before that
the comment right under general comment reads, "The
transfer point coordinators were very good and efficient."

So even if they weren't taking the drill entirely as seriously as they might have been, they apparently performed their tasks quite well in the opinion of this particular observer.

I really haven't had time to completely peruse all the comments that Mr. Miller has offered into evidence but I think that this shows that -- and also, one other additional comment.

If you look at the February 28, 1984 Summary

Sheet, which is EP-63, as Mr. Zahnleuter aptly pointed out,
on the bottom of page 16, it indicates the lackadaisical
attitude in the staging areas which was a comment that was
pointed out in the critiques, and it also appeared in the
Summary.

So, it seems to me as the Board has outlined the County's burden of proof with respect to the admission of these critiques, the County has not met the burden of proof.

In fact, a number of the things that the County has pointed out in the individual critiques, in EP-65, were in fact, addressed in the summaries, and that for the comments that the county has indicated that they think are problematic, it appears to me from just leafing through these documents rather quickly that LILCO, in fact, can find other comments where the individual observers thought that the drills were in fact unrealistic -- unrealistically.

MR. MILLER: Judge Laurenson.

JUDGE LAURENSON: I didn't mean to get you off
the track before. I think I interrupted you before you were
going to answer Judge Shon's question. Have you answered
that or responded to the question about the pattern. I
think when I called for comments by the State and the Staff
we may have gotten off the track a little bit.

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JUDGE SHON: The question was, and we have had some additional material on it developed by Mr. Zahnleuter, I think, that whether you did not also, or we should not also, perceive a pattern. A pattern of lack of realism. A pattern of disregard for the situation, mentioned not once but several times.

For example, the lackadaisical attitude, quote, that Mr. Zahnleuter pointed out in the summaries was for an earlier drill.

He then pointed out that it had occurred again in a later drill. But not been noted in the summary of that one. So that the pattern idea, the note that this is in some sense a paradigm, was not really addressed, or seemed not really to be addressed by saying, oh, they mentioned it once in the summary.

Mr. Miller's position seems to be that this thing shows a pattern all the way through. I don't think you have answered my original question, which was: Why do you think there isn't any pattern there?

MS. MONAGHAN: Judge Shon, I -- it is LILCO's position that these documents that are contained in Suffolk County EP-65 are a small sampling of all of the comments and critiques that were turned over to Suffolk County.

They have examined those comments, and they have

selected these comments from them.

That is only a very small sampling of the comments that were provided. And I don't think that these are indicative of a pattern in the overall comments. Yes, there are more than one comment that said that there was an attitude problem at the February 15th drill, but I don't remember that there were more than about three of those comments, and to me, that doesn't establish a pattern when the number of documents that dealt with the February 15th drill are this many.

JUDGE SHON: So, essentially what you are saying is that just as one swallow does not a summer make, neither does half a dozen or a handfull.

MS. MONAGHAN: That is correct, Judge Shon.

JUDGE SHON: Thank you.

JUDGE LAURENSON: Is there anything else that has to be added to the record on this before we make a decision.

MR. MILLER: I will just respond briefly, because I know it has been a long day. I will respond to Ms.

Monagahan's point about vehicles by saying that she indicated the summary mentioned lack of vehicles. When I went through the documents, I indicated many more than one instance where there were not vehicles reporting to the exercises.

Ms. Monaghan says that the comment regarding

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traffic guides shows it was realistic. That comment shows they had traffic guides running routes, and traffic guides aren't supposed to run routes. They man positions and posts.

Ms. Monaghan went to one page in one of the bck-ups in EP-65, and made a favorable comment to LILCO. I did not try to read all the comments I could. On that very same page, there is another margin note which again says the dril' was unrealistic, and lastly with respect to Ms. Monaghan's claim that these instances that we have presented is but a small sampling, I -- my representation is otherwise.

I have been through the documents very carefully, and I know this is not a small sampling, and they cut across every single exercise for which we were given documents by LILCO.

JUDGE LAURENSON: All right. We will consider the arguments and the positions of all the parties on this. We will examine the three documents in question tonight, and even though we haven't had a lot of luck lately examining documents and making rulings, we will try to do better this time and give you a ruling tomorrow morning before we start.

So, we are adjourned until 9:00 a.m. tomorrow morning.

(Whereupon, the hearing recessed at 6:25 p.m., to reconvene at 9:00 a.m., Thursday, June 14, 1984.)

## CERTIFICATE OF PROCEEDINGS

This is to certify that the attached proceedings before the NRC COMMISSION In the matter of: Long Island Lighting Company 5 Date of Proceeding: Wednesday, June 13, 1984 Place of Proceeding: Hauppauge, New York 7 were held as herein appears, and that this is the original 8 transcript for the file of the Commission. 10 Rebecca Eyster : 1 Official Reporter - Typed 12 13 Officia Reportet - Signature 15 Myrtle Traylor Official Reporter - Typed 16 17 19 Garrett Walsh 20 Official Reporter - Typed 21 22 23

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