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UNITED STATES OF AMERICA

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NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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 :  
 In the Matter of: :  
 : Docket No. 50-322-OL-5  
 LONG ISLAND LIGHTING COMPANY : (EP Exercise)  
 :  
 (Shoreham Nuclear Power Station, : (ASLBP No. 86-533-01-OL)  
 Unit 1) :  
 :  
 ----- -X

DEPOSITION OF MARY GOODKIND

New York, New York

Friday, January 30, 1987

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NUCLEAR REGULATORY COMMISSION

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DEPOSITION OF MARY GOODKIND

New York City, New York

Friday, January 30, 1987

Deposition of MARY GOODKIND, called for examination pursuant to notice, at the Federal Emergency Management Agency, 26 Federal Plaza, New York City, New York, at 1:17 p.m., before Garrett J. Walsh, Jr., a Notary Public in and for the Commonwealth of Virginia at Large, when were present on behalf of the respective parties:

MICHAEL S. MILLER, ESQ.  
GOEFFREY KORS, ESQ.  
Kirkpatrick & Lockhart  
9th Floor, South Lobby  
1800 M Street, N. W.  
Washington, D. C. 20036-5891  
On Behalf of the Intervenor, the County  
of Suffolk, State of New York



APPEARANCES: (Continuing)

JESSINE A. MONAGHAN, ESQ.  
Hunton & Williams  
707 East Main Street  
P. O. Box 1535  
Richmond, Virginia 23212  
On Behalf of the Applicant, the Long Island  
Lighting Company

WILLIAM R. CUMMING, ESQ.  
Federal Emergency Management Agency  
500 C Street, S.W.  
Washington, D. C. 20472

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C O N T E N T S

Mary Goodkind

Examination by Mr. Miller ..... Page 3

E X H I B I T

Goodkind Exhibit Number 1 For Identification, Page 5

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

(1:17 p.m.)

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3 Whereupon,

4 MARY E. GOODKIND,

5 was called as a witness, and having first been duly sworn,  
6 testified as follows:

7 DIRECT EXAMINATION

8 BY MR. MILLER:

9 Q Good afternoon, Ms. Goodkind. My name is Michael  
10 Miller. With me is Geoffrey Kors, with the firm of  
11 Kirkpatrick & Lockhart. We represent Suffolk County in  
12 the licensing proceedings before the Nuclear Regulatory  
13 Commission regarding the Shoreham Plant.

14 First of all, I appreciate very much your  
15 rearranging your schedule to be available this afternoon  
16 for this deposition. As you probably know by now, the  
17 deposition of the FEMA witnesses extended a bit beyond what  
18 we had estimated, and again, we appreciate your accommodating  
19 us in this regard.

20 A You are welcome.

21 Q In terms of this deposition, I will be asking  
22 you questions regarding your retention by LILCO as an



1 expert witness, and your contemplated testimony with  
2 respect to issues raised by the Government in contentions  
3 filed concerning the February 13th 1986 exercise at the  
4 Shoreham Plant.

5 For purpose of my questions, I will try to use  
6 the term, 'exercise' to refer to the February 13, 1986  
7 exercise, and that will be my shorthand reference if that  
8 is okay with you.

9 A Fine.

10 Q If you have any questions of me during the course  
11 of the deposition, or if you want clarification of any  
12 matters that I may ask about, please tell me and I will be  
13 glad to try to reach a common understanding with you so  
14 that we have a common understanding in our questions and  
15 answers.

16 MS. MONAGHAN: Mr. Miller, before you begin  
17 your questions of Ms. Goodkind, I would like to state for  
18 the record that Ms. Goodkind was available this morning at  
19 9:30 as you previously noted. As I stated to you in  
20 our discussions concerning this deposition yesterday  
21 evening, she is available up until six o'clock this evening,  
22 and then must leave for the airport for an appointment she

1 has in Chicago.

2 MR. MILLER: Let me have marked as Goodkind Exhibit No. 1  
3 a copy of a two page document which appears to be the resume of Mary E.  
4 Goodkind.

5 (The document referred to is marked as  
6 Goodkind Exhibit No. 1 for identification.)

7 BY MR. MILLER: (Continuing)

8 Q And let me ask you, Ms. Goodkind, if this is a resume prepared  
9 by you, in fact?

10 A Yes, it is.

11 Q Is it a true and correct resume in terms of the matters  
12 contained therein?

13 A Yes, it is.

14 Q Can you tell me when this resume was prepared?

15 A It was prepared about one month ago.

16 Q Was it prepared in connection with your retention by LILCO?

17 A Yes.

18 Q Who are you employed by?

19 A I am employed by Impell Corporation in the Midwest Region  
20 Office, located in Bannockburn, Illinois.

21 Q I suppose I should ask you if you would state your name and  
22 address for the record. It should be my first question.

A My name is Mary Goodkind. I reside at 821 Michigan

indexx

1 Avenue, Evanston, Illinois.

2 Q How long have you been employed by Impell?

3 A Almost exactly one year

4 Q And what is your job at Impell?

5 A My title is Lead Senior Engineer and one of my  
6 primary current assignments is emergency planner, and what  
7 they refer to as Project Engineer for Commonwealth Edison  
8 Company.

9 I am assisting them with emergency planning  
10 activities at their nuclear plant sites.

11 Q What sites are those?

12 A My primary effort at the current time is at  
13 the Quad Cities nuclear station. This station is located  
14 on the border between Illinois and Iowa, and I have been  
15 particularly assisting counties in Iowa and the State of  
16 Iowa.

17 Also provide other assistance as needed to  
18 Commonwealth Edison to assist them in emergency planning.  
19 These duties might include providing public information to  
20 groups such as schools, industries, fire departments;  
21 providing general assistance and education and training,  
22 and public information, in addition to writing operating



1 procedures.

2 Q Can you tell me approximately when you were  
3 retained by LILCO in connection with the upcoming litigation?

4 (Witness confers with Ms. Monaghan.)

5 A I have been retained by Hunton & Williams, and  
6 that relationship has been official I would say for about  
7 three weeks.

8 Q Prior to your retention by Hunton & Williams,  
9 have you ever performed any duties of any kind relating to  
10 the Shoreham Plant?

11 A Would you repeat the question? I am not sure --

12 Q Have you ever performed any duties, tasks,  
13 consulted for, whatever, with respect to Shoreham prior to  
14 being retained by Hunton & Williams approximately three  
15 weeks ago?

16 A No.

17 Q In your -- in connection with your job at Impell,  
18 do you work with the Impell Office on Long Island?

19 A No.

20 Q Do you know a Mr. Dennis Behr?

21 A I have met him yesterday when I was here. I just  
22 met him briefly.

1 Q Have you met with any employees or other  
2 representatives of LILCO with the exception of counsel?

3 A I met with Mr. Aidikoff while Ms. Monaghan was  
4 with us in a meeting.

5 Q Was that yesterday also?

6 A Yes.

7 MR. MILLER: Let's go off the record for a  
8 second, Joe.

9 (Off the record discussion ensues.)

10 BY MR. MILLER: (Continuing)

11 Q Now, you have met with Mr. Aidikoff and Mr.  
12 Behr yesterday. Have you met with anyone else at LILCO  
13 or who consults for LILCO?

14 A I have not met anyone else from LILCO. Anyone  
15 else I met was very much in passing. Nothing more than  
16 an exchange of names, and maybe just a brief description of  
17 what their involvement may be.

18 Q Could you tell me what the purpose of yesterday's  
19 meeting was?

20 A I wanted to discuss with Ms. Monaghan what the  
21 testimony might be that I would be preparing, and I wanted  
22 to have the opportunity to question Mr. Aidikoff about

1 some aspects of the planning at LILCO.

2 Q You wanted this opportunity with respect to Mr.  
3 Aidikoff, but not Mr. Behr?

4 A I had no particular interest in talking with Mr.  
5 Behr.

6 Q What was your interest in talking with Mr.  
7 Aidikoff?

8 A This meeting was arranged by Ms. Monaghan in order  
9 to give me the opportunity to get a more indepth understand-  
10 ing of what took place during the exercise, and to understand  
11 more about the LERO organization.

12 Q Is it fair to say your meeting with Mr. Aidikoff  
13 was more or less a meeting to bring you up to speed on LERO  
14 and the LERO training program?

15 A At least to some extent.

16 Q What else would it have been at that meeting?

17 A Well, I would tend to say it was one source of  
18 information that I was using.

19 Q Information? What kind of information?

20 A Well, I reviewed several documents in order to  
21 prepare for presentation of testimony, and talking with  
22 Mr. Aidikoff was another source of information for me.



1 Q What is your understanding about who Mr. Aidikoff  
2 is?

3 A It is my understanding that he is very well  
4 informed about the organization of emergency planning at  
5 LILCO.

6 I am not aware of his specific title.

7 Q Does Mr. Aidikoff have his own consulting company?

8 A I do not know.

9 Q Do you think he is a LILCO employee?

10 A Yes.

11 Q Did you discuss the LERO plan with Mr. Aidikoff,  
12 or provisions of the LERO training program, or both?

13 A I would say both.

14 Q Have you at this point in time, read or reviewed  
15 the LILCO Plan with respect to offsite emergency matters at  
16 Shoreham?

17 A No.

18 Q Have you read or reviewed any of the implementing  
19 procedures?

20 A I haven't reviewed the documents themselves. I  
21 have reviewed how the Plan is organized, and how training  
22 is conducted, what types of materials are used, but only

1 in general.

2 I have not reviewed specific training materials  
3 or specific procedures.

4 Q What have you reviewed that tells you how the  
5 LILCO Plan is organized?

6 A How the plan is organized?

7 Q I thought you just told me that you reviewed how  
8 the plan is organized?

9 A I reviewed in general how emergency protective  
10 actions would be carried out in the transition phase, under  
11 the transition phase, so that I have an understanding of how  
12 the LERO organization would function without the present  
13 support from State and counties.

14 Q What have you reviewed that has given you this  
15 understanding? Is it a document or documents that you have  
16 reviewed?

17 A I have reviewed several documents, and then I have  
18 also questioned Mr. Aidikoff at length. Ms. Monaghan has  
19 provided me some information.

20 Q Could you give me a listing of the documents you  
21 recall having reviewed?

22 A I reviewed the Post Exercise Assessment, the FEMA

1 RAC Review.

2 Q Of Revision 7 and 8?

3 A Yes. I reviewed the contentions. And in  
4 preparation for preparing testimony, I have reviewed a  
5 number of standard reference materials with which I am generally  
6 familiar, but I have re-examined them.

7 Specifically, NUREG 0654. All of the current  
8 operative FEMA guidance memoranda, plus one draft memoranda,  
9 FEMA guidance memoranda, known as Ex.3.

10 Q Can you think of any other documents that you have  
11 reviewed at this time?

12 A I reviewed two letters from Ms. Monaghan that  
13 present some initial outline of what may be addressed in  
14 testimony.

15 Q Anything else?

16 A I have looked briefly at some previous exercises  
17 where I have been an evaluator or a controller.

18 Q And what was the purpose of that review?

19 A I anticipate that part of my testimony will be  
20 comparing the performance that was shown during the  
21 exercise at Shoreham, with what I have observed at other  
22 exercises.



1           Q       Is it fair to say, Ms. Goodkind, that you  
2 anticipate rendering testimony in which you would compare  
3 the performance of LERO personnel during the exercise to the  
4 performance of other personnel at other exercises?

5           A       Yes.

6           Q       And I assume that would be in a training context?

7           A       Yes.

8           Q       Is it your opinion that you can draw conclusions  
9 about the accuracy of a training program from the performance  
10 of individuals during a FEMA-graded exercise?

11          A       I think you can draw some conclusions provided you  
12 have enough information available on which to base that  
13 conclusion.

14                   And I say that -- to give an example, the way  
15 FEMA does its evaluation, they might cite one or two  
16 instances when training did not appear to be effective, but  
17 they may not tell you what the base of that sample was, so  
18 that you may not know whether they interviewed two people,  
19 and two people were unaware of their function, or whether  
20 they interviewed five hundred people, and found two out  
21 of the five hundred.

22                   So, in general, yes, I believe if an evaluation

1 is properly written, and gives you enough information, it  
2 is some indication of how effective training is.

3 Q You have reviewed the FEMA Post Exercise  
4 Assessment Report for Shoreham. I usually call that the  
5 FEMA Report, to save words.

6 Is it your opinion that the FEMA Report for the  
7 Shoreham exercise permits one to draw conclusions about  
8 the accuracy of the LERO training program?

9 A Yes, I think some conclusions can be made.

10 Q Would you just describe for me the conclusions  
11 that you think can be drawn from the FEMA Report?

12 A Well, I see from the report that FEMA evaluated  
13 a number of very important elements in emergency planning.  
14 The elements that are probably most essential in carrying  
15 out a protective action.

16 And from my examination of what FEMA found, I  
17 believe that they had very positive things to say for each  
18 one of those functions, and it is my feeling that FEMA's  
19 evaluation shows a very effective training program in most  
20 respects.

21 Q Now, from your review of the FEMA Report, are  
22 there any functions which you believe the FEMA Report would

1 indicate the contrary, that there are problems with the  
2 LERO training program?

3 A There are instances cited by FEMA that additional  
4 training is needed, or possibly change in procedures. I  
5 would see these really as an indication that training needs  
6 to be fine-tuned, or that the training needs to take  
7 advantage of what was learned during the exercise.

8 Q Can you give me a listing of those areas where you  
9 think training needs to be either fine-tuned to take advantage  
10 of those areas noted by FEMA during the exercise?

11 A It was shown that the Emergency News Center, there  
12 was some unnecessary delays, and LERO by changing procedures,  
13 has circumvented the chain of events that resulted in un-  
14 acceptable delays, so I think in this case a change in  
15 procedure has eliminated some of the training difficulties.

16 That by setting up a system by which information  
17 can go directly to a computer display, they have reduced the  
18 need for training of as many people at the Emergency News  
19 Center.

20 Q Can you think of any other examples other than the  
21 Emergency News Center?

22 A In the instance of the impediments, you know the



1 instances to which I am referring; the fuel truck and the  
2 gravel truck. It is my understanding that agreements earlier  
3 with regard to FEMA review of the plan had -- there had  
4 been a concurrence that major impediments were so unlikely  
5 on the road system in the vicinity of the plant that it would  
6 be, really, unnecessary to spend a great deal of training  
7 effort on dealing with very massive impediments.

8 But since FEMA choose to insert this type of a  
9 free play incident in the exercise, LERO has agreed to do  
10 additional training now to cope with that kind of an  
11 incident, and I feel that the participants at the exercise,  
12 based on the experience they had there, and the additional  
13 training on coordination of this type of activity will  
14 improve the flow of information.

15 While I think the response that was called for  
16 was adequately carried out, FEMA did note that communications  
17 were not optimum.

18 I feel this is another area with really a minimal  
19 effort for the fine tuning of the training program that  
20 the response can be significantly improved.

21 Q Ms. Goodkind, did you just tell me that it is  
22 your understanding that at some point prior to the exercise



1 FEMA had concurred with LILCO that training for large scale  
2 traffic impediments was not necessary?

3 A It is my understanding that the plan was reviewed  
4 by FEMA and that there was discussions with LILCO over how  
5 much attention was to be given to the issue of major  
6 impediments, and it is also my understanding that LILCO was  
7 able to demonstrate because of the good highway system, and  
8 the low velocities expected in traffic, and also the  
9 availability of shoulders along the roadways and so on,  
10 that any impediment that would occur would probably not be  
11 of real major significance.

12 Q Is it your understanding that FEMA concurred in  
13 this view by LILCO?

14 A Yes.

15 Q What was that understanding based upon?

16 A Discussions with Mr. Brant.

17 Q Mr. Aidikoff?

18 A Mr. Aidikoff.

19 Q Do you believe, Ms. Goodkind, from your  
20 discussions with Mr. Aidikoff that LILCO considers the  
21 nature of the impediments required to be simulated during  
22 the exercise to have been unfair?

1           A       I don't know that -- I can't characterize his  
2 feeling of it. We didn't discuss how he personally felt  
3 about it.

4           Q       You didn't draw any conclusions from discussions  
5 you had with him in that regard?

6           A       As far as being fair or unfair, I don't know what  
7 his conclusions are.

8           Q       What about realistic or unrealistic?

9           A       Well, it seems clear to me that there was -- there  
10 were a number of features of that incident that became  
11 unrealistic partly due through some errors. Some of those  
12 errors on the part of FEMA.

13                   I think a large part of the difficulty that was  
14 experienced in simulating the removal of the impediments were  
15 due to the simulation itself. That the difficulties would  
16 not have been experienced, or at least not to the degree  
17 that occurred had it been a real event instead of a  
18 simulation.

19           Q       Because, for example, LERO personnel in the field  
20 couldn't actually see the accident to report it?

21           A       Yes, for one thing. Also, where the initial  
22 message was inserted was somewhat unrealistic, and resulted

1 in the consumption of a fair amount of time while road  
2 crews attempted to verify the information which is the way  
3 the information flow certainly would come from the field.  
4 If there were an accident, the route spotter or traffic  
5 control people would be the first ones to note such an  
6 incident.

7 Q Do you believe that during the exercise it would  
8 have been better if FEMA would have input simulated traffic  
9 impediments in the field rather than at the EOC?

10 A I think that might have been a better choice.  
11 As it happened, when some other things got combined with  
12 the simulation, the FEMA evaluator being in a different  
13 location than what people understood he was going to be in,  
14 there were a combination of things during the exercise that  
15 made this a rather difficult demonstration.

16 So, even if the message had been inserted elsewhere  
17 there were still other factors that contributed to confusion.

18 Q Are you aware, Ms. Goodkind, the fact that since  
19 the exercise on February 13th there have been training  
20 drills held by LERO?

21 A I have been told that is the case, yes. I have  
22 not looked at the drills or any documentation relating to



1 the drills.

2 Q If you will assume with me that following the  
3 exercise, around June of 1986, there was a full scale  
4 training drill of all the LERO personnel called out, in  
5 which the same scenario used at the February 13th exercise  
6 was employed again, including the two traffic impediments,  
7 and the same kinds of problems occurred again with respect  
8 to LERO performance, would you draw any conclusions from  
9 that?

10 A Well, one of the things I am aware of was that  
11 after the exercise, LERO committed to make some changes.  
12 For instance, preparing badges with written instructions for  
13 bus drivers so that they wouldn't get confused over when  
14 they were supposed to report in doses, or what instrumen-  
15 tation they were supposed to use. Things of that nature.

16 It was my understanding that by June not all of  
17 these things had been accomplished, materials available,  
18 and changes in procedures prepared.

19 I know that LERO is on a quarterly drill schedule,  
20 and that the drill may likely have been just one of their  
21 previously scheduled drills. It may have not been timed  
22 in a way to test resolution of all the items that were



1 brought up in the exercise.

2 Q Well, I don't understand what difference it makes  
3 that LERO is on a quarterly drill program. How does that  
4 impact the question, and the question is: Assume after the  
5 exercise there was a full scale training drill. LILCO  
6 employed the same scenario used at the February 13th  
7 exercise, including the same two traffic impediments, and  
8 the same kind of problems happened again.

9 I have heard a lot of excuses that I think have  
10 been offered to you about why LERO performed the way it  
11 performed on the day of the exercise. What conclusions, if  
12 any, would you draw after the exercise, using the same  
13 kind of scenario, the same performance results occurred  
14 again?

15 A Well, I guess I just have to reiterate that the  
16 lessons learned from the exercise were that there were  
17 some changes needed in procedures and equipment, and I  
18 think in order to assume that everything would flow better  
19 that the same mistakes wouldn't be made, you would want to  
20 have the opportunity to make sure those changes had been  
21 made, procedures had been written, that the equipment had  
22 been obtained.

1           If LERO had not had the opportunity to complete  
2 the fixes that they had designed to resolve the issues, then  
3 I don't know that a retest, given the same physical set of  
4 circumstances, would show anything very much different.

5           Q       Do you think that a fix that essentially consists  
6 of a badge with the instructions on the back to read your  
7 dosimeter would have some impact on how LERO personnel  
8 performed to simulate a traffic impediment?

9           A       Well, we are talking about two different things.  
10 The badges, I am referring to bus drivers, where FEMA, I  
11 believe, found that LERO bus drivers functioned very well,  
12 and were very well trained, and were very well informed  
13 about their duties and responsibilities, but they noted  
14 some cases where emergency workers didn't call in doses  
15 at proper times, or didn't know the proper dosimeter to use.

16           I think even though these are rather minor  
17 issues not connected with their major role in a major  
18 function, they are the things that were cited in the exercise  
19 and in order to keep those findings from reoccurring in a  
20 subsequent drill, I feel that something like the badges that  
21 were developed would be very helpful.

22           Q       Is it your understanding that FEMA determined

1 that the performance of the LERO bus drivers being evaluated  
2 was a very good performance. Is that what you told me?

3 A Yes.

4 Q Are you aware of the fact that FEMA evaluated  
5 eight general bus drivers?

6 A I don't recall the exact number.

7 Q You have read the FEMA Report, though?

8 A Yes, I have.

9 Q Do you recall that of the bus drivers evaluated,  
10 three or four were found to do such things as go to the  
11 wrong transfer points, get lost on their routes, things  
12 of that nature?

13 A I am aware of the errors that occurred. I know  
14 that there were bus drivers dispatched from three staging  
15 areas, and it is my impression that the drivers at two of  
16 the staging areas stood very well, and that there were some  
17 problems with drivers from, I think it is the Patchogue  
18 Staging Area.

19 I am also aware that LERO fielded a great number  
20 of bus drivers for the exercise. Certainly many, many times  
21 the number of bus drivers that I have seen in any other  
22 exercise. And that FEMA was given an opportunity to select



1 among this large group of people.

2 Q Well, that is correct. And of the bus personnel  
3 that were fielded by LERO, FEMA selected eight, and of those  
4 eight, three or four failed to perform adequately. Isn't  
5 that what the FEMA Report says?

6 A I didn't see the words that they failed to  
7 perform adequately. There were some mistakes made by some  
8 of them. Whether you can say it was an inadequate  
9 performance, I am not aware of that characterization.

10 Q Well, assume with me that my numbers are correct,  
11 and that of the eight that FEMA I suppose randomly selected  
12 to evaluate, three or four were concluded to have failed to  
13 perform adequately.

14 Is it your testimony that that still, nevertheless,  
15 would not be a significant training problem?

16 A Well, I guess we are still kind of differing on  
17 characterization of failed to perform adequately.

18 Q Well, let me give you an example so we don't miss  
19 the point here between each other. FEMA when they select a  
20 bus driver to evaluate, typically actually gets on the bus  
21 and rides and observes the driver. Is that your understanding?

22 A Yes. They will observe a certain number of



1 drivers.

2 Q Okay. So for the purpose of my question,  
3 assume that the FEMA evaluator got on a bus and observed the  
4 driver drive his route, but unbeknownst to FEMA, the driver  
5 drove the wrong route, or the driver got lost, or the driver  
6 went to the wrong place.

7 That is my definition of, 'failed to perform  
8 adequately.' Now, if that in fact was the case during  
9 the exercise, and three or four of the eight observed  
10 bus drivers performed in that way, would that tell you  
11 anything about the quality or adequacy of the LERO training  
12 program?

13 A Well, you are citing a case where a driver  
14 got lost, and I don't know that I saw that during the  
15 exercise.

16 Q Assume the basis of my question. It is a  
17 hypothetical.

18 A Well, the function the bus drivers are trying to  
19 do is assist in evacuation of people, and I feel the bus  
20 drivers are not isolated, and that bus drivers can make  
21 mistakes, and the function can still be carried out.

22 So, if you see that a bus driver got lost, would

1 you conclude that all the bus drivers failed -- even if  
2 all -- if you had eight bus drivers, and eight bus drivers  
3 got lost, was the function a failure? If you had people  
4 at the transfer points who could use independent judgment  
5 and could redirect the drivers, so the function still got  
6 carried out efficiently, then your system is not a failure.

7 The way I have to look at it, the bus drivers are  
8 part of the system.

9 Q Tell me, Ms. Goodkind, what would it take for you  
10 to draw the conclusion with respect to LERO bus drivers,  
11 there had not been adequate training? If eight out of the  
12 eight observed getting lost wouldn't tell you something  
13 about their training, tell me what it would take in your  
14 mind? If they can walk onto their bus, is that good enough?

15 A Well, in theory I presume that the operation  
16 could be carried out with bus drivers who had no training.  
17 You are asking for a hypothetical situation.

18 There are so many different cases. Bus driver  
19 equipped with a radio could, perhaps, fill the function with  
20 no training whatsoever. It is difficult for me to set the  
21 parameters that would define a failure of a training  
22 program.

1 Q Okay. Here we have Shoreham buses without  
2 radios. So, take that one out of your answer. Is your  
3 testimony that under the LILCO plan, or the LILCO system  
4 as you understand it, bus drivers could perform without any  
5 training?

6 A Well, you know, I have seen several evacuations  
7 that were successfully conducted with no plan, let alone no  
8 training.

9 Q I am not sure you answered my question, but is  
10 that your answer?

11 A I am looking at the overall function, and the  
12 overall function being carried out, and to me that is a  
13 definition of whether training is adequate.

14 Q And at this time have you determined in your own  
15 mind whether under the LILCO Plan the overall function can  
16 be carried out?

17 A Yes, I believe it can be carried out.

18 Q And what is that opinion based upon?

19 A Well, I believe that FEMA gave a positive  
20 evaluation of the performance of the bus drivers. They  
21 stated that LERO bus drivers were well trained.

22 Q I think we are back to where we started forty-

1-B



1 five minutes ago.

2 I don't think FEMA stated that, Ms. Goodkind,  
3 but I am not here to argue with you about what FEMA said  
4 and didn't say.

5 Let's go off the record for just a second, Joe.

6 (Off the record discussion ensues.)

7 BY MR. MILLER: (Continuing)

8 Q Ms. Goodkind, we started with your resume, and  
9 I got away from your resume, and I now want to go back to  
10 it. If you will look at it for me, please.

11 MR. CUMMING: Do you have an extra copy of it  
12 by chance?

13 (Mr. Miller hands Mr. Cumming a copy of Ms.  
14 Goodkind's resume.)

15 BY MR. MILLER: (Continuing)

16 Q Do you consider yourself a health physicist?

17 A Well, I have a Master's Degree in Health  
18 Physics. I consider myself more a safety specialist.

19 Q A safety specialist?

20 A Yes.

21 Q Where were you employed prior to going to Impell?

22 A I was employed with a consulting company called



1     ETA Engineering.

2             Q       Is that located in Chicago?

3             A       It is located in Westmont, Illinois. It is a  
4     Western suburb of Chicago.

5             Q       And what duties did you have while you were at  
6     ETA Engineering?

7             A       I was involved in emergency planning for  
8     Commonwealth Edison, particularly at the Quad Cities station.

9                     I was the controller during the 1985 exercise  
10    while I was at ETA. I also provided some assistance on the  
11    prompt alerting notification system for Quad Cities Station.

12                    I did a number of other functions related to  
13    health and safety, including safety plans for chemical  
14    facilities.

15            Q       How long were you at ETA Engineering?

16            A       I was there about three years?

17            Q       And where were you prior to that; prior to that  
18    time?

19            A       I worked for a consulting company called ESCOR,  
20    and while I was there I had a number of assignments. One  
21    of my assignments was to assist Argonne National Laboratories  
22    as observer in FEMA evaluated exercises.

1           Q       Ms. Goodkind, your various jobs with various  
2 consulting firms, does this resume reflect, at least  
3 generally speaking, the jobs that you have held? In other  
4 words, this resume is not confined to just your present job  
5 at Impell, is it?

6           A       No, it is not.

7           Q       So, this is a fair characterization of your various  
8 jobs and various consulting activities during your career?

9           A       Yes. There are some other areas that are not  
10 particularly emphasized on this resume. I have experience  
11 in the general field of environmental regulation. Also,  
12 areas such as noise control.

13          Q       When was the last time you consulted, or acted  
14 as a consultant for Argonne National Laboratories?

15          A       It was during 1986.

16          Q       Was it with respect to a nuclear facility?

17          A       Yes.

18          Q       Which facility was that?

19          A       There were two facilities. Vogel plant, and the  
20 Oconee plant in South Carolina.

21          Q       Do you still render consulting services to  
22 Argonne National Laboratories?

1           A       I am not at the current time.

2           Q       Are you aware of the fact that during the Shoreham  
3 exercise, Argonne National Laboratories worked with FEMA  
4 to help evaluate the exercise. In fact, essentially prepared  
5 the Post Exercise Assessment Report?

6           A       I know that individuals from Argonne acted as  
7 evaluators. I am not aware of what their role was in  
8 the Report preparation.

9           Q       Have you thought about whether there was any  
10 conflict between your retention on behalf of LILCO, and  
11 your consulting work you have performed for Argonne  
12 National Laboratories?

13          A       Well, as I noted earlier, I am not under contract  
14 to LILCO.

15          Q       You are under contract to Hunton & Williams, which  
16 is the law firm for LILCO.

17          A       I don't believe there is any conflict of interest,  
18 given the issues which I am going to be addressing.

19          Q       Is that a matter you have discussed with anyone?

20          A       No. I have been asked some questions by Ms.  
21 Monaghan about what my involvement was in certain aspects  
22 of training development.



1 Q Questions in the context of possible conflict of  
2 interest?

3 A I think to some extent related to that. Questions  
4 of whether I, for instance, prepared training materials for  
5 use at Shoreham, which I did not.

6 Q Approximately what time frame during 1986 did you  
7 last render services to Argonne National Laboratories? Late  
8 '86 or early '86?

9 A I gave them assistance with the exercises that  
10 I mentioned at Ocone and Vogel, which were both in the  
11 early spring. My recollection would be maybe March of '86.  
12 I could confirm the date.

13 Q What were the nature of the services you were  
14 rendering to Argonne at that time?

15 A I acted as FEMA evaluator under contract to  
16 Argonne.

17 Q While you are under contract to Hunton & Williams,  
18 do you believe that you could render consulting services to  
19 Argonne National Laboratories?

20 A Well, I don't believe that I would be in a  
21 position to accept any consulting work from Argonne  
22 Laboratories, but I haven't really thought about it. There

1 is no anticipated contracting between me and Argonne  
2 Laboratories.

3 Q Do you consider yourself a planner?

4 A Yes.

5 Q Do you consider yourself a trainer?

6 A Yes.

7 Q If you had to weigh one against the other and  
8 say which you think you are more expert at, which would it  
9 be? A planner or a trainer?

10 A Well, I don't know. It is rather difficult to  
11 say. I have done training on a number of occasions for  
12 different audiences, and I have also done quite a bit of  
13 planning activity, so it is difficult for me to weigh one  
14 or the other.

15 Q About equal in your mind? I am kind of curious.  
16 You head up a section on this resume: Radiological  
17 Emergency Planning Experience. And it goes on in most of  
18 this resume. But it is not radiological emergency training  
19 experience.

20 A Well, training is usually short term and  
21 intensive, and I have only -- I have cited some development  
22 of training materials, but I haven't mentioned on here

1 training sessions that I conducted, say, for industry  
2 groups or for county officials, or medical drills. I haven't  
3 included on my resume a tabualtion of training activities.

4 But, for instance, I have conducted training --  
5 I think I did cite in here for the U. S. Department of  
6 Energy to help train their evaluators, but my current  
7 assignment with Commonwealth Edison is primarily related to  
8 planning.

9 Q Are you a certified trainer?

10 A I am a certified safety professional. I don't  
11 know what the category of certified trainer would be. A  
12 certified safety professional is the person who is knowledge-  
13 able in health and safety issues, and a large part of what  
14 safety professionals do includes teaching training education.

15 Q But you are not a certified training instructor,  
16 is that correct?

17 A No. I am not even aware there is such a category.

18 Q Under the category Radiological Emergency Planning  
19 Experience on your resume, Ms. Goodkind, you have an  
20 indication that -- in fact, it says you have radiological  
21 emergency planning experience that includes -- and you have  
22 three bullets. The first one you list is that you have



1       been evaluator -- exercise evaluation as a FEMA observer.

2                       And at the bottom of the page, you state that  
3       you participated in ten exercises as an evaluator.

4                       Do you draw a distinction between observer and  
5       evaluator?

6               A       I am sorry, distinction between --

7               Q       -- observer on FEMA's behalf, and evaluator?

8               A       No. I do draw a distinction between being an  
9       evaluator or a controller.

10              Q       I understand that distinction. Between observer  
11       and evaluator?

12              A       No, I am not making any distinction between  
13       evaluator and observer.

14              Q       Now, the next bullet says you have developed  
15       emergency plan procedures and training. Could you tell me  
16       what training you have developed that would relate to the  
17       training of what I would characterize as emergency service  
18       personnel. Do you know what I mean by the term, 'emergency  
19       service personnel?'

20              A       Yes, I think so. Well, there are a couple of  
21       different kind of things. Impell Corporation has a number  
22       of different types of training documents that they have

1 prepared as a kind of standard training modules.

2 One of the things I have done is select among  
3 available material to design a training program appropriate  
4 for, say, an ambulance company that might be expected to  
5 respond to an emergency.

6 And then as part of the development of training,  
7 I might do something like develop a scenario of how a person  
8 would become injured, and become contaminated and I would  
9 set up a training session that might include audio-visual  
10 material, hands-on experience with equipment, and practice  
11 drills scenarios, as I mentioned for ambulance companies or  
12 for fire department.

13 I have also done training on what is known as  
14 table top drills. I did one rather recently on recovery  
15 and reentry with county officials.

16 Q With respect to emergency services personnel,  
17 typically that would be your police and your fire departments,  
18 would you agree?

19 A Yes.

20 Q What I am interested in is what training have  
21 you specifically developed, if any, with respect to emergency  
22 services personnel. You mentioned an ambulance company and

1 fire departments. Is there anything else?

2 A Well, some of the training has been in EOC  
3 situation, where you would have a sheriff participating  
4 in table top training.

5 One of the things that Impell does is to help  
6 people understand what their role is in an exercise or in  
7 an emergency. Impell provides to an EOC, such as a county  
8 EOC, what we call an EOC work book, and one would be given  
9 to the police department. One would be given to the local  
10 education administrator. One would be given to the fire  
11 chief, and what I would be doing -- what I am doing for  
12 Commonwealth Edison is extracting from the overall plan  
13 and putting together materials that are specific to each  
14 individual function, and then we will be offering training  
15 -- providing training to each of the responsible individuals  
16 who would report to the EOC so that they are familiar with  
17 their portion of operating procedure.

18 We have a staff of trainers at Impell. Some of  
19 them are ex-military. Some are former sheriffs. Depending  
20 on their special expertise. I might go, or one of our other  
21 people, if we have someone who is with the fire department  
22 or the sheriff's department, which we do. These people might



1 be assigned.

2 Q Is it fair to say that typically in a training  
3 context you prepared the materials for the training program,  
4 rather than actual instructing the people that are being  
5 trained?

6 A Not necessarily. Sometimes it is one way,  
7 sometimes it is the other. Sometimes it is both. There  
8 is some use of standard material prepared by our company.  
9 There is some use of materials that might be prepared by  
10 other organizations; atomic industrial forum, or any other  
11 organization.

12 And parts of training are just about always  
13 produced for the application.

14 MR. CUMMING: Could we go off the record for  
15 a second.

16 (Off-the-record.)

17 BY MR. MILLER: (Continuing)

18 Q Ms. Goodkind, let me back up for a minute to  
19 what you said about your experience as a trainer. Have  
20 you ever developed from scratch a training program for  
21 emergency services personnel?

22 A I wouldn't say from scratch, because certainly

1 when you are working with emergency services people in any  
2 particular location, there is an emergency plan, and that  
3 emergency plan generally has a lot of written procedures, and  
4 the training uses those procedures.

5 So, I haven't been involved in a situation where  
6 there are no training materials that have been prepared and  
7 used with emergency workers.

8 I have prepared some original training materials  
9 for people in Government. For instance, the Department of  
10 Energy, but that is not the question you asked. It wasn't  
11 emergency workers, such as policemen, fire. The training  
12 I have been involved in for those individuals has always  
13 made use of either plans and procedures that were well  
14 developed, or it has made use of some standard training  
15 materials, maybe on the nature of radiation, something like  
16 that.

17 So, I would say in most cases I have prepared  
18 some aspect that is specific to this application, like  
19 perhaps a drill, the format of a drill. If I were to work  
20 with an ambulance team, I would write up for them what they  
21 were going to simulate.

22 Q With respect to your experience in developing

1 training materials, is it fair to say that you typically  
2 take some base document or documents, and either use those  
3 documents, or modify those documents, to be used in training?

4 A I would say that is typical.

5 Q And I assume that a number of times those are base  
6 documents that are already at an organization, like at Impell?

7 A Either at Impell, or at the utility, or at the  
8 county, or at the state.

9 Q Now, is it correct that you have actually performed  
10 as a training instructor with respect to emergency services  
11 personnel?

12 A I have assisted with a team of other people with  
13 emergency personnel, yes.

14 Q Now, in the case where you assisted, what  
15 emergency personnel were involved in that training?

16 A Ambulance personnel and fire department.

17 Q And what was your role with respect to assistance  
18 you rendered in that training program?

19 A It was assisting them with learning about their  
20 instrumentation, how to charge dosimeters, how to read  
21 them, preparing many scenarios of events. I helped conduct  
22 drills. I helped train participants, such as fire chief on



1 how to operate a decontamination center, where my role was  
2 to go with them and help them understand the layout of the  
3 facility which Impell had helped develop.

4 How different areas would be used, and I assisted  
5 them in that training. That effort was led by the fire  
6 department. There was cooperation by national guard, the  
7 red cross. These are different instances that involved  
8 different things at different times.

9 Q With respect to your experience as a trainer, where  
10 you actually provided instruction as a member of some team,  
11 has your experience been limited to matters regarding  
12 dosimetry use and matters regarding radiological monitoring  
13 and decontamination?

14 A No.

15 Q What other areas have you actually trained  
16 personnel, emergency services personnel?

17 A I have trained, as I mentioned, on recovery and  
18 re-entry. Now, it may not meet your definitions precisely  
19 of emergency workers, although emergency workers are  
20 involved in that. Say, the police. In recovery and  
21 re-entry, police have a role in taking down the barriers and  
22 allowing reaccess to an area.

1 In training for decontamination, there are a  
2 number of things involved. Registering people, giving  
3 people instructions on where to -- be directed from the  
4 reception center. It is the whole flow of operation  
5 facility. Training on how to provide people with emergency  
6 medical assistance.

7 Also, done training of school personnel on  
8 protective action for children. Again, I don't<sup>know</sup> if that  
9 really meets your definition of emergency workers. It is  
10 part of the training that I have done. MEY

11 Q Have you ever been involved in evaluating the  
12 performance of emergency services personnel?

13 A You are saying as a FEMA evaluator?

14 Q No; in any context?

15 A Well, I have been a controller on two occasions,  
16 and on those occasions I was evaluating a number of functions  
17 out of the EOC such as traffic and access control.

18 We have evaluated the performance of ambulance  
19 crews in drills. Were they able to accomplish their  
20 tasks in an efficient way?

21 Q Okay. Have you personally evaluated the  
22 performance of ambulance crews?

1           A        I have done it in a somewhat informal way.  
2 We provide the teaching and then we observe them go through  
3 a practice, and then we debrief them on how they did. That  
4 would be a typical evening training program.

5           Q        From your review of various documents you have  
6 seen to date, are you familiar with the concepts of various  
7 LERO personnel, including the following: traffic guides,  
8 road crews, bus drivers, route spotters, route alert  
9 drivers?

10          A        Yes, I think I am familiar with their functions.

11          Q        Now, have you ever provided training with respect  
12 to any personnel whose job would be analogous to any of the  
13 LERO jobs which I just listed?

14          A        I provided training to sheriff, chiefs in the  
15 sheriff department, and fire chief. I think some of those  
16 tasks would be analogous.

17          Q        Has the training that you have provided been  
18 limited to more management functions, though, than field  
19 functions?

20          A        No, I don't think so. I am not sure exactly what  
21 you mean, but if you are asking have I gone to an ambulance  
22 company and actually physically gone over with them the



1 protection of ambulance equipment from contamination, have  
2 I done hands-on operation of instrumentation with them, have  
3 I physically gone to decontamination centers, yes. I think  
4 the answer to that is, yes.

5 Q No. With respect to the sheriffs and the fire  
6 chiefs that you mentioned that you have trained, have those  
7 people been performing in more of a management role than in  
8 a field hands-on role?

9 A They would typically be the people responsible  
10 for directing these people in the field primarily. I have  
11 done training where a large number of fire fighters are  
12 present, with not all management staff.

13 Q Was that dosimetry training?

14 A It is -- dosimetry training is included in it.  
15 It is also to familiarize them with the fact that an  
16 emergency plan exists, and how it affects them, and what  
17 their role is in an emergency response. What their primary  
18 duties are. How to protect themselves while they are  
19 providing assistance to others.

20 It is teaching them how they might receive notice  
21 that they are needed at a particular time. Who would be  
22 responsible for authorizing them to provide this response.

2-A

1 It is providing them with maps and information on, say,  
2 the medical teams, which hospitals have agreed to provide  
3 support. Where they should go once they get to the hospital.  
4 Whether there is a separate area that has been set up for  
5 someone potentially contaminated.

6 Q Towards the bottom of the first page, there is  
7 a paragraph that describes some of your background. It  
8 says that your training experience have included exercise  
9 evaluation, control, and training in the following areas;  
10 and you have a list of the areas.

11 Have you trained personnel in all those areas  
12 listed after the colon?

13 A Well, I have trained people in county emergency  
14 operation center functions. I have trained people for field  
15 team activities, primarily field team here -- the training  
16 would be more training people who need to monitor their  
17 exposures in the field. Where I have been involved  
18 generally, there are knowledgeable and trained field  
19 people doing radiological assessment. I haven't been  
20 involved in additional training for that type of staff.

21 Training for radiological dose assessment, I  
22 have assisted people with practicing that, and I think

1 practice is a part of training, so I think you can say I  
2 have done training in that area.

3 Prompt alerting and notification, I have assisted  
4 somewhat on providing information to media and stations, so  
5 it is not so much training as public information function.  
6 Early dismissal of school students, yes, I would say I have  
7 done training in that area. I have met with individual  
8 school principals and school superintendents, and have tried  
9 to provide them information about the emergency plan at a  
10 nuclear station, what duties might be expected of them.  
11 What provisions have been made for the protection of the  
12 school children. These types of activities.

13 I have also provided representation on behalf of  
14 Commonwealth Edison to respond to questions regarding  
15 emergency planning. Decontamination and relocation  
16 center operation, yes, I have provided training. Medical  
17 drills, yes; and recover and re-entry, yes, I have provided  
18 training in those areas.

19 Q Ms. Goodkind, do you draw a distinction between  
20 educating a person and training a person?

21 A Well, I ~~feel~~ <sup>feel</sup> by the nature of your question -- *mees*  
22 I am trying to answer your question as honestly as possible,



1 and as clearly as possible, and when you talk about  
2 training a fire department, I see some distinction between  
3 that and educating school principals. Training, I think of  
4 more teaching them how to do hands-on activities. How to  
5 calibrate dosimeters. How to put up protective materials  
6 against contamination. It is training maybe as repetitive  
7 actions.

8           Educating people, working with the superintendents,  
9 just to be sure they understand the plans and procedures that  
10 are in place. That is really the distinction I am drawing  
11 between training and educating.

12           Q       So, for example when you discuss what you have done  
13 with respect to the early dismissal of school students, and  
14 your meetings with superintendents or principals of schools,  
15 is that an educational function or a training function?

16           A       I would call that mainly an educational function.  
17 At times, it takes a training aspect. For instance, as part  
18 of the early dismissal program, we met with the PTA and the  
19 Lions Club, and members of the public in a general meeting,  
20 and that may be rather difficult to define whether that  
21 was educational or training. I would treat them as education,  
22 but it did involve teaching something about what happens

1 during an emergency. What organizations are required to  
2 respond, and what plans have been developed to coordinate  
3 a response.

4 And some general information about the nature  
5 of radioactivity, and what protective actions might be  
6 carried out. It is kind of a combination, I guess, of  
7 training and education.

8 Q You are familiar with the fact that under the  
9 LILCO Plan there is no participation by the State or Local  
10 Governments, including Suffolk County, is that correct?

11 A Yes, I am aware of that.

12 Q I assume that in the context of other nuclear  
13 facilities that you have been involved in educating and  
14 training personnel, the personnel primarily relied upon to  
15 provide offsite emergency response to protect the public health  
16 and safety, were personnel who are already knowledgeable and  
17 have been trained in performing public health and safety  
18 functions, is that correct?

19 A Maybe some -- it is a sweeping statement. If I  
20 could have the opportunity to rephrase it. The other locations  
21 where I have been controller or evaluator or developed plans,  
22 the state and counties have participated to a greater or lesser

1 extent in providing support functions.

2 Q Well, what I am curious about is, for example,  
3 at other plants you have been associated with, if traffic  
4 functions need to be planned for and trained for, I assume  
5 generally police would be relied upon to perform those  
6 functions, is that correct?

7 A Yes, I would say so. Police or the Sheriff,  
8 yes.

9 Q And under the LILCO Plan, LILCO personnel would  
10 be relied upon to perform those functions?

11 A My understanding of the way the training has been  
12 done for traffic control point workers, they have been  
13 trained on how to provide assistance. It is not exactly on  
14 how to assume the functions that a policeman or a sheriff  
15 would do, but it is to provide assistance that could make  
16 the movement of traffic easier, and I also understand that  
17 the training has addressed how the traffic control workers  
18 who would interface with police or sheriff representative,  
19 if such a person were there to offer assistance.

20 Q What is your understanding as to how a LILCO  
21 traffic guide would perform his or her function in the  
22 event of an actual emergency? What would they do?



1           A       It is my understanding they would have available  
2 things to use such as cones, to help with the flow of  
3 traffic. That they would be available to provide information  
4 to people on what routes might be best for them to take.

5                   That they would watch for any impediments that  
6 might occur. And if police officer, for instance, did decide  
7 to respond, then the traffic controller would be informed and  
8 educated on what the plan would be in those areas, and would  
9 be available to assist the officer.

10           Q       Is it your understanding that under the LILCO  
11 Plan, traffic guides would not actually attempt to direct  
12 traffic?

13           A       Well, I think they would direct traffic and  
14 assist the flow of traffic. They would not be doing functions  
15 like giving people tickets, or they don't have any enforcement  
16 status. So they would be there only to advise and assist.

17           Q       But they would stand at intersections and facilitate  
18 the movement of traffic by directing the traffic. You  
19 understand that is the case?

20           A       That is my understanding.

21           Q       Do you have any understanding, Ms. Goodkind, as  
22 to the people within LILCO who have been selected to perform

1 this function of traffic guide?

2 A I understand that they are regular company  
3 employees not specifically connected with the Shoreham plant,  
4 and that they would probably be people like line crews.

5 Q Meter readers, whatever?

6 A Something like that. My understanding that  
7 people selected, for instance, to be bus drivers, are all  
8 qualified for that type of vehicle and have experience with  
9 other types of heavy equipment.

10 Q Focus with me on traffic guides for the moment.  
11 Assume that the meter readers of LILCO primarily comprised  
12 the LILCO traffic guides. Is it your opinion that through  
13 training you can teach someone, some group of people, who  
14 have no experience in a function such as directing traffic,  
15 to perform adequately in the event of a radiological  
16 emergency that function?

17 A Yes, I think so.

18 Q Now, is that opinion based on any experience of  
19 any kind, or is that your judgment, or what is the basis  
20 for that?

21 A I have that opinion because the task is not very  
22 difficult. I think you can train someone reliably to observe

1 whether there is any obstruction in the area.

2           Since I understand that these people have radios,  
3 I think you can train them to perform an important function,  
4 even were they are only just to watch for problems along the  
5 road. I think that could be valuable.

6           And I also feel that their function is not  
7 necessarily essential to an evacuation. We have a lot of  
8 evidence that evacuations take place rather routinely without  
9 something like a traffic guide.

10           Q       That is a different issue. We are focusing here  
11 on traffic guides, and the ability to train them under the  
12 LILCO Plan.

13                   Now, the same with the traffic guides. Is it your  
14 testimony that under the LILCO Plan the task assigned to  
15 traffic guides is an easy task to perform? Is that what  
16 you said?

17           A       Yeah, I don't think it is a complex task.

18           Q       So standing in an intersection in the event of  
19 a radiological emergency, with the traffic that would be  
20 expected, and the kinds of people you may have to deal with,  
21 to you would be the performance of a relatively easy task?

22           A       Well, I don't know that easy and complex are



1 exactly opposites.

2 I don't think it is a complex task. There may  
3 be stress involved with it because of the accident conditions  
4 and the traffic congestion and so on, so it may be that it is  
5 not a complex task. It may not be an easy task to carry out,  
6 if you see the distinction that I am making. In terms of  
7 training, I think it is relatively easy to train someone  
8 on what it is they need to do.

9 Q Ms. Goodkind, there are no publications listed  
10 on your resume. Have you published any publications?

11 A Yes, I have.

12 Q If it is not an extensive list, you can just tell  
13 me. If it is an extensive list, then maybe you can provide  
14 it to me later.

15 A I was just last month listed in a publication from  
16 the National Safety Council, and I was the author of a  
17 chapter in a journal on hazardous waste management, and  
18 addresses how industry should manage hazardous waste. It  
19 is a somewhat related issue in that contingency plans are  
20 required and safe procedure plans. Emergency preparedness.

21 I am also the author of a paper that has been  
22 submitted as being considered for the meeting of the

1 International Atomic Energy symposium that will be held in  
2 Chicago this fall, and the paper will be on the topic of  
3 protection of school children, and it is co-authored by  
4 the manager of governmental affairs at Commonwealth Edison  
5 Company. One of their emergency planners.

6 I don't know that it has been accepted for  
7 publication, but I anticipate that it will be.

8 I am the author of an article that was presented  
9 at the Health Physics Society topical symposium on offsite  
10 radiation monitoring. It is a compilation of data that  
11 were collected at the ~~Quad Cities~~ <sup>Kewanee</sup> Nuclear Power Station, <sup>MCY</sup>  
12 in Wisconsin, and it analyzed several years of monitoring  
13 data in the environment.

14 I cited one training module that I prepared  
15 through Argonne National Laboratories, and I believe this  
16 is a part of their training material they had prepared under  
17 contract to the U. S. Department of Energy.

18 I was contributor of a report on low level waste  
19 options for the Illinois Atomic Energy Commission. This was  
20 a governmental appointment to an advisory staff.

21 That is all I can recall.

22 Q Can you tell me the thesis of the paper that

1 had been submitted with respect to the protection of school  
2 children?

3 A Yes. At the Quad Cities Nuclear Station, follow-  
4 ing the exercise there in August of 1986, the FEMA Region VII  
5 expressed some concern over the plan for protection of  
6 school children, and particularly with regard to what might  
7 happen during dismissal of school children, and whether there  
8 were adequate plans and procedures to make sure that students  
9 wouldn't be released into an area that would be more  
10 hazardous.

11 So, I worked with Commonwealth Edison planners  
12 and with county officials, and what they call in that area,  
13 area education administrators.

14 Impell developed what we call a standard operating  
15 procedure that gave four alternatives that could be selected  
16 for protection of school children.

17 We drafted this SOP. I reviewed it with the  
18 people I just mentioned, and it was incorporated into the  
19 plan. There were several issues along with that that needed  
20 to be considered, so that is the subject of the paper.

21 Q What were the four alternatives?

22 A The four alternatives are closing -- keeping



1 schools closed, and not opening them for the school day.

2 The other alternative is to shelter within the  
3 school. The third alternative is to do what we call a  
4 partial dismissal. If you can select among your students  
5 those who live, say, outside of the EPZ, you may choose to  
6 keep some of the students at the school, and send some  
7 children home. That is a partial dismissal.

8 Or, you may do a full relocation of students,  
9 where you would use school bus or some other transportation  
10 means and take all of the children to another location, such  
11 as a reception center.

12 Q I gather from your comment about having been an  
13 expert witness on environmental issues in the states of  
14 Illinois and Kentucky, that you have testified before?

15 A Yes, I have.

16 Q Have you ever testified before the NRC?

17 A No.

18 Q Is the testimony that you have rendered in the  
19 past been in a court?

20 A It has been before, for instance, the Illinois  
21 Pollution Control Board on numerous occasions, and the other  
22 was Kentucky similar-type administrative body in the State of

1 Kentucky agency that would issue air permits. This was  
2 related to development of a coal-fired power plant.

3 Q Have you ever testified in any matters relating  
4 to radiological emergencies preparedness, training prepared-  
5 ness?

6 A No.

7 Q Ms. Goodkind, do you understand the term,  
8 'performance objective?'

9 A I don't know specifically what context that comes  
10 out of. I guess in my own employment, for instance, my  
11 employer has performed subjectives (sic).

12 Q From a training context, does the term, 'performance  
13 objective' mean anything to you?

14 A To me, it would mean that in the development of  
15 training programs, you determine what you want the training  
16 to accomplish. What people would be able to demonstrate in  
17 terms of their performance.

18 Q And in a training context, would you want those  
19 objectives established prior to the commencement of the  
20 training program?

21 A I would think so, yes.

22 Q Now, does the term, 'performance standard' mean

1 anything to you in a training context?

2 A Not especially, no.

3 Q Have you ever heard the term, 'performance  
4 standard?'

5 A Yes.

6 Q Would you personally draw a distinction between  
7 'performance standard' and 'performance objective.'

8 A I don't know in what way performance standard  
9 would be applied. I don't know exactly what situation you  
10 would be applying it to.

11 Q I am just asking you in a training context -- let  
12 me ask it a different way. Do you believe that the terms  
13 'performance standards' and 'performance objectives' are  
14 interchangeable terms from a training perspective?

15 A I don't have an opinion on that really.

16 Q Do you believe that in the context of a training  
17 program there should be a way to determine whether performance  
18 objectives are reached?

19 A I think that would be a good goal. I don't know  
20 if it is possible in every instance. Most training is done  
21 in very much a real world type of environment. I think that  
22 is one advantage the LERO organization has, where the people



1 they are training are more of a captive audience.

2 A great deal of training that I have been exposed  
3 to is a less control situation, where you are subject to  
4 higher turnover in the trainees. You are interfacing with  
5 another organization, such as an ambulance company, that  
6 may be willing to give you a certain amount of training time,  
7 but is not willing to have their people subjected to tests.

8 Q Do you have any understanding as to whether or  
9 not the LERO training program has any mechanism for deter-  
10 mining whether performance objectives are met?

11 A I don't know, other than know that LERO has been  
12 running drills, if you want to call them exercises, and  
13 attempting to evaluate them themselves in a way similar to,  
14 say, how FEMA might evaluate it.

15 Q And at this time you have not seen any of that  
16 documentation, is that correct?

17 A I have not seen any of the documentation on  
18 drills and exercises following the February exercise.

19 Q Have you seen any of that material prior to the  
20 February exercise?

21 A I don't believe so.

22 Q When you use the term, 'captive audience,' is

1 it your assumption that LERO as an organization has not faced  
2 any problems arising from turnover of personnel?

3 A It is my understanding or my belief that their  
4 turnover is probably lower than is experienced when you are  
5 dealing with a wide variety of offsite organizations who  
6 provides support.

7 I know at some sites where I have been that  
8 whole organizations can be eliminated by executive fiat  
9 or something of that nature. In Illinois, we have an  
10 Illinois Atomic Energy Commission that provided some kind  
11 of activity, and it was eliminated by legislation.

12 Q Do you have any knowledge at this time as to the  
13 attrition rate that had been faced by LERO?

14 A I have asked that question of Mr. Aidikoff, and  
15 we discussed it rather generally. It is my understanding that  
16 turnover is relatively small.

17 Q Did he give you a percentage?

18 A I think he did quote a percent. It would be my  
19 recollection that it would probably be less than five percent  
20 a year.

21 Q Ms. Goodkind, do you consider yourself qualified  
22 to evaluate the performance of emergency services personnel?

1 The training performance of emergency service personnel, such  
2 as law enforcement personnel?

3 A Well, any one person can only be in one place at  
4 a time, so I don't know what you are asking. Can I look  
5 at documentation of what was expected, and how they did,  
6 and make some opinion of whether they performed well or not?

7 Q Well, lets focus on documentation review  
8 perspective. Do you consider yourself qualified to evaluate  
9 the performance of emergency services personnel, such as  
10 law enforcement personnel?

11 MS. MONAGHAN: I am going to object to the question  
12 as vague. It is unclear to me whether your question is  
13 directed in general, or it is in the contest of emergency  
14 planning. You can answer the question if you can.

15 THE WITNESS: Well, for instance, with medical  
16 drill, it is my feeling that the way we provide training,  
17 a medical team -- say, an ambulance team -- their primary  
18 function is to provide alleviation of the life threatening  
19 situation, and our training evaluation includes: Are they  
20 able to do their primary function? Which addressed that  
21 life threatening situation.

22 And then we also try to reduce the danger to the



1 support people by teaching them how they can reduce the  
2 risk to themselves.

3 So, I think a person evaluating what they are  
4 doing has to look at two things; you want to make sure that  
5 your training isn't interfering with what they know naturally  
6 as their function, and also that they have gained some  
7 confidence of what they would need to do if they were going  
8 into a certain area.

9 I think I am familiar with what constitutes a  
10 good performance on the part of a medical team.

11 Q Okay. Now, my question went to emergency services  
12 personnel, such as law enforcement personnel. What is your  
13 answer to that question?

14 A Well, again I know some of the factors that would  
15 be important in trying to assess whether people did a good  
16 job.

17 Do they know the purpose of access control? Do  
18 they understand evacuation methodology enough to perform their  
19 job. I think based on my knowledge of evacuation procedures,  
20 and the role that police or firemen would perform, I think  
21 I am aware of the factors that would be relevant to a good  
22 performance.

1 Q So, do you consider yourself qualified to render  
2 that sort of evaluation?

3 A Yes.

4 Q Earlier, you mentioned that you had reviewed the  
5 LILCO Plan, how that plan was organized, and you mentioned  
6 that your review was conducted in the context of the transition  
7 phase, I think was your term.

8 What did you mean when you said, 'transition  
9 phase.?

10 A It is my understanding that that is a term that  
11 is provided that is used to characterize the plan under  
12 which LILCO would use the LERO organization.

13 Q What is the transition?

14 A Presumably to the time when offsite personnel --  
15 offsite agency personnel would assume other parts of the  
16 function.

17 Q You are talking about in the event of an actual  
18 emergency --

19 A -- possibly, or --

20 Q -- when LILCO personnel performed duties, and  
21 when other offsite organizations came in to perform those  
22 duties?

1           A       The norm in emergency planning is that states  
2 and counties provide support to a utility. It is not my  
3 term.

4                   I didn't originate it. I was just using it because  
5 that is on the cover of the plan.

6           Q       Let me assure you, Ms. Goodkind, if there is  
7 one thing this case is, it is not the normal. Let me ask  
8 you. You said you were retained approximately three weeks  
9 ago. And you have given me a list of documents that you  
10 have generally reviewed since you were retained.

11                   In the course of preparing for this deposition,  
12 have you done anything other than reviewed the documents that  
13 you listed for me earlier, and I suppose had discussions with  
14 counsel.

15           A       Well, I have mentioned discussions I had with Mr.  
16 Aidikoff. There are other emergency planners in our  
17 organization. People I work with, and I discussed with them  
18 some general concepts or FEMA position on various aspects.

19           Q       Tell me what concepts or other FEMA positions  
20 you have discussed with personnel?

21           A       Well, for one thing, when I was at the post  
22 exercise informal briefing at Quad Cities at the end of



1 August, the FEMA representative from FEMA VII stated that  
2 FEMA was using a number -- percentage number to estimate  
3 how many people would show up at a reception center if you  
4 made an announcement to the general public that they could  
5 come, or should come to a reception center.

6 Q That number is twenty percent?

7 A I haven't seen the memo. That was the question  
8 I was asking and discussing with various people. I checked  
9 through FEMA guidance memoranda and other memos that I have  
10 from FEMA, and did not find that in my notes.

11 Q Have you reviewed any deposition transcripts?

12 A No.

13 Q Have you reviewed any transcripts from hearings  
14 -- previous hearings in this proceeding?

15 A No, I don't believe so.

16 Q And other than your conversations with Mr. Behr  
17 and Mr. Aidikoff and counsel, have you had any other  
18 conversations or meetings with respect to your retention  
19 as an expert for LILCO?

20 A No. I had a telephone conversation with Ms.  
21 Monaghan regarding my availability.

22 Q Have you reviewed all the contentions that have

1       been filed by the governments in this case?

2           A       I reviewed the -- I have a set of contentions  
3       that I believe are all the contentions. There are fifty  
4       some. I don't remember the exact number.

5           MS. MONAGHAN: Let me represent for the record  
6       that Ms. Goodkind has been given the December 4th version  
7       of the contentions.

8           BY MR. MILLER: (Continuing)

9           Q       Have you read or reviewed all the contentions?

10          A       Yes, I have.

11          Q       It is my understanding that you will be providing  
12       testimony just on Contention 50, is that correct?

13          A       That is my present understanding, and everything  
14       else that is exhumed or subsumed.

15          Q       However you want to characterize it.

16           MS. MONAGHAN: I think the word used is,  
17       'subsumed.'

18          BY MR. MILLER: (Continuing)

19          Q       Were you asked to review other contentions to  
20       see whether you would render an opinion on any contentions  
21       other than Contention 50?

22          A       I was asked to review other contentions, because

1       Contention 50 cites so many other contentions.

2           Q       Are you saying you were asked to review the  
3       contentions cross-referenced in Contention 50?

4           A       Yes.

5           Q       Were you asked to review any contentions other  
6       than Contention 50 with respect to rendering testimony, or  
7       possibly rendering testimony on LILCO's behalf?

8           A       There was some passing discussion of some other  
9       areas, perhaps. Say, on my experience with full exercises,  
10       compared to partial exercises. That was the only other  
11       area that was discussed.

12          Q       That would be Contentions 15 and 16 you are  
13       referring to?

14          A       Yes, I believe that is right.

15          Q       Were you asked to render an opinion on those  
16       contentions?

17          A       No.

18          Q       When you say there were some discussions regarding  
19       those contentions, do you know why it is at this time you  
20       will not be rendering an opinion on those contentions?

21               MS. MONAGHAN: Let me object to that question  
22       to the extent the question calls for you to repeat any



1 conversations which you may have had with me or with other  
2 attorneys from Hunton & Williams, I would instruct you  
3 not to answer. To the extent you can answer the question  
4 based on your own impression of why you have not been asked  
5 to render testimony on that contention, you may answer the  
6 question.

7 THE WITNESS: I don't have any particular  
8 knowledge on which to answer.

9 BY MR. MILLER: (Continuing)

10 Q In your opinion, was the February 13th exercise  
11 a full scale, full participation exercise?

12 A Yes.

13 Q I would ask what it is you based that opinion  
14 upon?

15 A Well, for one thing, at the very outset of the  
16 FEMA Post Exercise Assessment, there is a discussion of  
17 two options that may be selected for the exercise.

18 If I remember words in Option Two, there is the  
19 word, 'full,' I believe. Full activation and participation.  
20 I don't remember the words exactly, but I believe those  
21 words appear in Option Two, which was selected.

22 I think the other thing is -- although I don't

1 see a real definition of full participation exercise, I  
2 know what a limited participation exercise is, because I  
3 have been at a number of them. I know what a limited  
4 participation exercise is, because I have been at a number  
5 of them and I didn't see at this exercise what I have seen  
6 at limited participation exercises.

7 Also, I guess the third factor might be that  
8 I note that FEMA provided 38 evaluators for this exercise,  
9 which certainly is typical of a full exercise. I have seen  
10 exercises where a FEMA evaluator, where there were as few  
11 as 11 FEMA observers.

12 Q Ms. Goodkind, simply because a statement is  
13 rendered saying that the exercise should be a full scale  
14 exercise, would that lead you to draw the conclusion that  
15 it, in fact, was a full scale exercise?

16 A Well, I cited three factors.

17 Q I want to go through each one of the three. That  
18 was my first question.

19 A Well, lets say that it was defined -- I would say  
20 the first statement indicates that this was designed as a  
21 full participation exercise.

22 Q Or it was supposed to be designed as such an

1 exercise?

2 A All right.

3 Q Would you agree with me?

4 A Sure.

5 Q Now, the fact that there were 38 evaluators, or  
6 whatever the number of evaluators, that doesn't tell you that,  
7 in fact, you have a full scale exercise either, does it?

8 A Well, I think we are working here with a  
9 situation that we are not starting with a definition of a  
10 full participation exercise. That is what I started out  
11 saying.

12 And you asked me in my opinion is this a full  
13 exercise, and I would say that in all the aspects that I  
14 examined, it appears to me the way a full participation  
15 exercise appears.

16 Q Are you able to give me a definition of a full  
17 participation exercise? A full scale exercise?

18 A Well, there would be, to me, a demonstration of  
19 essential elements of protective actions, the actions that  
20 are needed to protect the public.

21 I don't believe there is a precise or agreed on  
22 definition of what elements have to be tested. There is



1 discussion by FEMA of what constitutes, if you want to call  
2 it, the core of an exercise. But that is not an official  
3 FEMA position, so if your question is what does FEMA consider  
4 a full exercise, I don't know that FEMA has informed anybody  
5 of what that definition is.

6 If you are asking do I have a definition of a  
7 full exercise, I guess I could tell you what my definition  
8 would be, but I can't speak for FEMA.

9 Q FEMA's position, which is not an official position,  
10 you are referring to FEMA Ex. 3, correct?

11 A Yes.

12 Q Do you know if the NRC has an official position  
13 as to what is a full participation exercise?

14 A It would be my feeling that that would be an  
15 issue that the NRC would rely on FEMA to define.

16 Q Why don't you give me your definition of what a  
17 full scale exercise would be?

18 MS. MONAGHAN: Let me just state for the record  
19 that as you know, Ms. Goodkind has not been asked to render  
20 testimony, as she stated before, on either Contention 15  
21 or 16, which deal with the issue of full participation  
22 exercise.

1 I am permitting your inquiry on this only  
2 insofar as it may deal with her background as a FEMA  
3 evaluator, and her knowledge of what FEMA does when it  
4 evaluates an exercise.

5 You may answer the question.

6 MR. MILLER: I am not going to respond, except  
7 to say that I have various reasons why I am entitled to ask  
8 these questions, including the fact that there have been  
9 discussions between the witness and counsel as to the  
10 possibility of rendering testimony on those contentions.

11 MS. MONAGHAN: Mr. Miller, I just stated for the  
12 record that Ms. Goodkind is not, at this time, going to  
13 render testimony on Contentions 15 and 16. She has only  
14 been asked to render testimony on Contention 50.

15 MR. MILLER: It is, 'at this time,' that bothers  
16 me.

17 MS. MONAGHAN: At this time, I don't anticipate  
18 that that will change.

19 MR. MILLER: Ms. Goodkind, do you remember the  
20 question?

21 THE WITNESS: You would like my definition of  
22 a full participation exercise?

1 BY MR. MILLER: (Continuing)

2 Q Please.

3 A Well, the objective of an exercise is to show  
4 that there is reasonable assurance that the public can be  
5 protected in the event of a radiation accident.

6 So, I think there are certain functions that  
7 are necessary to demonstrate that protective action could  
8 be carried out.

9 Part of that is the organizational ability, I  
10 think, 'organization' is probably the key. A great many  
11 resources exists in this country to deal with emergencies  
12 and evacuations, but because of the nature of a potential  
13 nuclear plant reactor, it has been a decision in this country  
14 to develop an organizational response that can provide  
15 prompt protection.

16 I think an exercise that demonstrates essential  
17 elements of that would demonstrate full participation. The  
18 capability to communicate with plant site, the ability to  
19 get information to the public in the immediate vicinity.

20 I, myself, would say the capability of making  
21 some assessment of what the radiation levels are, although  
22 I note in this area FEMA itself has put that down to what



1 they call a Category B, so I think there is some difference  
2 of opinion as to what constitutes essential functions.

3 It is a somewhat difficult issue, because in  
4 a full participation exercise, no one expects that every  
5 element of NUREG 0654 is going to be demonstrated, and  
6 certainly it is an important, significant factor that one  
7 of those elements might be omitted from an exercise, and  
8 it could still be a full exercise.

9 FEMA who has really developed the philosophy of this,  
10 expects exercises to select among those elements and rotate  
11 through them as they advise now, on a six year period.

12 So, I kind of talked around it, but I think it  
13 is easier to define what isn't full participation, where you  
14 have some part of the emergency response organization  
15 declaring at the outset that they are not going to activate  
16 all of their capabilities.

17 It is typically seen where you have EPZ that  
18 includes two states, and one state, such as Illinois, which  
19 has <sup>3</sup>(3) all reactors, often decides not to fully participate <sup>MEY</sup>  
20 in every exercise. But when they share the EPZ with another  
21 state, they may support that state by saying: We will staff  
22 all our telephones, and we will receive all the messages you

1 send us, and we will simulate the whole rest of our  
2 emergency capability.

3 And that is easily defined as limited partici-  
4 pation on their part.

5 Q Of the ten exercises or so where you have been  
6 either an evaluator or a controller, how many of those would  
7 you say have been full participation exercises?

8 A I believe that all of them had full participation  
9 by at least one state.

10 Some of them, for instance, the D.C. Cooke  
11 exercise, that actually was a small scale exercise, FEMA's  
12 term, so it is my recollection of that case that the county  
13 participated fully, and the State of Michigan, which also  
14 has several reactor sites, participated to a limited  
15 extent.

16 Q When you say that most of the exercises, one of  
17 the states participated fully, are you telling me that it  
18 was not a full participation exercise?

19 A D. C. Cooke?

20 Q No, with respect to the others. If there is more  
21 than one state who has a response role, and only one state  
22 participates fully, is that still considered a full

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1 participation exercise in your opinion?

2 A Well, I think FEMA considers that a full  
3 participation exercise for the state. States have certain  
4 requirements to exercise, so if that state fully participates  
5 they get the credit from FEMA for a full exercise.

6 Q Ms. Goodkind, have you done anything to prepare  
7 for the upcoming hearings -- let me break that down. Have  
8 you begun the process of preparing testimony?

9 A Only to a very, very limited extent. I have  
10 discussed with Ms. Monaghan some concepts for testimony, the  
11 direction the testimony may go.

12 Q Have you had discussions with anyone other than  
13 Ms. Monaghan in that regard?

14 A To a very limited extent, perhaps, with Mr.  
15 Zeugin.

16 Q Anyone other than counsel for LILCO?

17 A No.

18 Q Have you actually begun the process of drafting  
19 your testimony?

20 A I have not, no.

21 Q Do you know the other persons who, at this time,  
22 have been designated by LILCO to testimony on Contention 50?



1 A I have seen a list of people from Ms. Monaghan.

2 Q Now, other than Mr. Behr, who I believe is on  
3 Contention 50, have you met with any of these other people,  
4 or had conversations with any of these other people?

5 (Witness confers with her counsel)

6 A Mr. Purcell.

7 Q When did you have a conversation with Mr. Purcell?

8 A Over dinner.

9 Q A week ago, a day ago?

10 A A day ago.

11 Q Yesterday was a good day for you, wasn't it?

12 (Laughter.)

13 Did you and Mr. Purcell discuss your testimony  
14 on Contention 50?

15 A No.

16 Q Did you discuss anything about Contention 50?

17 A Not that I recall.

18 Q It must have been a pleasant dinner. Other than  
19 Mr. Behr and Mr. Purcell, do you recall any other meetings  
20 or conversations with any other persons who have been  
21 designated by LILCO to be witnesses on Contention 50?

22 A No.

1           Q       Have you, at this time, performed any research  
2 or analysis which relates to Contention 50 -- or may relate  
3 to Contention 50 in the testimony you may offer?

4           A       I have accumulated some past information regarding  
5 other exercises in which I have been an evaluator and/or  
6 controller.

7           Q       Can you tell me the kinds of information you have  
8 accumulated?

9           A       I have obtained copies of executive summaries of  
10 exercise assessments for a number of stations where I was  
11 an observer. That is primarily what I have done. I have  
12 reviewed again FEMA guidance memoranda.

13          Q       Okay. Let me go back to this accumulation of  
14 information. For the exercises that you have attended as  
15 an evaluator or controller, you have gathered together the  
16 executive summaries for those exercises?

17          A       Yes. Various materials. Typically, executive  
18 summaries. In some cases gotten the scenario or the  
19 objective. That is primarily what I have accumulated.

20          Q       What is the purpose of this task that you are  
21 performing in terms of accumulating this material?

22          A       I anticipate my testimony may make some comparison

1 to what was observed at the Shoreham exercise. What I  
2 have observed at exercises I had attended in the past.

3 Q In that regard, how would exercise scenarios help  
4 in the making of that comparison?

5 A Well, it seems to me that at the Shoreham exercise,  
6 events moved very quickly at the onset of the exercise. In  
7 other words, it would seem to me that the scenario moved  
8 quickly into general emergency, and if you criticize people  
9 for their performance, I think you need to keep some kind of  
10 view of realities and ask yourself are some of the problems  
11 that we are seeing artifacts due to the scenario or as we  
12 discussed previously, may be due to simulation.

13 It is just trying to gather some information to  
14 make the best assessment that you can, what kind of  
15 performance was demonstrated.

16 So, I have looked back at other exercises to  
17 see how much time transpired, for instance, between an  
18 alert stage site area emergency, general emergency.

19 Q At this point other than accumulating the various  
20 materials from other exercises you attended, have you begun  
21 the process of making a comparison?

22 A No, not really.



1 Q Are you performing, or have you performed, any  
2 other research or analyses in connection with Contention 50  
3 other than what you have just described?

4 A No.

5 Q And I gather you have prepared no reports at this  
6 time?

7 A That is true.

8 Q Are you able to tell me the exercises that you  
9 are gathering these materials -- from which you are gathering  
10 these materials?

11 A I have gathered materials from certain past  
12 exercises. Again, these are generally the exercises that  
13 I attended. There were four in Region II, at Ginna,  
14 Indian Point, Oyster Creek, James Fitzpatrick, all in 1982.

15 I have some follow-on information from Indian  
16 Point in subsequent exercises.

17 I have some information on exercises that I  
18 attended in Region V, D. C. Cooke and LaSalle Station, and  
19 in Region VII, Oconee and Vogel in 1986. MSJ

20 And then two Quad Cities exercises, 1985 and  
21 1986. I don't have the 1985 material, but I have 1986.

22 Q Do you recall the years of the D. C. Cooke and MSJ

1 LaSalle exercises?

2 A I believe it is 1982.

3 Q And is it fair to say you are primarily focusing  
4 on gathering the material from those parts of the exercises  
5 you had some responsibility for evaluating?

6 A For instance, I mentioned I was gathering  
7 executive summaries, primarily. Information on how the  
8 exercise was designed.

9 In most cases my role as an evaluator was at  
10 either state or county EOC, so that encompassed quite a  
11 number of functions that were being directed out of the EOC.

12 Q Have you ever had responsibility for evaluating  
13 any FEMA exercise, any field activities?

14 A Any what?

15 Q Any field activities?

16 A Yes.

17 Q What would these field activities have been?

18 A Evaluating radiological teams, field teams.

19 Q Anything else?

20 A No, I think that is the only time I have been  
21 assigned out in the field, and that was only on one  
22 occasion.

1           Q       At this time, are you aware of any research  
2 projects or analyses which are being performed, or have  
3 been performed, by other LILCO witnesses on Contention 50?

4           A       No.

5           Q       You were not at the February 13th exercise, is  
6 that correct?

7           A       I was not.

8           Q       What is your degree of familiarity with the LILCO  
9 training program at this point in time?

10          A       At the present time I am only familiar with  
11 the frequency of the training, the way the staff are rotated  
12 through the training, and the types of materials in general  
13 that are used. I know there are audio-visual materials, and  
14 work books instruction.

15          Q       Have you seen the actual materials at this time?

16          A       No.

17          Q       Do you intend to review any of the LERO training  
18 materials prior to rendering your testimony?

19          A       Not in any depth. There is a citation to one  
20 specific section of procedures within the contention. I plan  
21 to look at that.

22          Q       Do you recall which procedure you are referring to?



1           A       5.1.  OPIP is the reference in Contention 50.

2           Q       But in terms of documents such as training  
3  drill reports, or drill scenarios, or video tapes, work  
4  books, lesson plans, things of that sort, do you believe you  
5  will be reviewing those materials prior to rendering your  
6  testimony?

7           A       I don't think so.

8           Q       Are you prepared to say, then, that you will be  
9  basing your conclusion about the adequacy of the LERO  
10 training program primarily upon the FEMA Post Exercise  
11 Assessment Report?

12          A       Well, I think that will be an important source  
13 of information.  I think there is relevant information from  
14 other sources.

15                   I don't think the FEMA Report gives much of an  
16 indication of how many people are being trained, or even  
17 how many people who were fielded during the exercise.

18                   So, I think the information that is given in the  
19 Report, combined with some other information, will be used.

20          Q       Do you think it is relevant to determine commenting  
21 upon the adequacy of LERO's training program how many people  
22 LILCO actually fielded on the day of the exercise?

1           A       Well, I think it is pertinent when you are  
2 looking at performance of individuals. The way the FEMA  
3 Report had to be written, they cite instances when something  
4 didn't work properly, but I think if you are going to look  
5 at the adequacy of the training, you also have to try to get  
6 some ~~feel~~<sup>feel</sup> for how many times things did work properly. *MEY*

7           Q       You are well aware that during exercises FEMA  
8 only looked at a sampling of personnel in various areas,  
9 correct?

10          A       Yes.

11          Q       And we have already discussed bus drivers. During  
12 the Shoreham exercise, FEMA choose approximately ten bus  
13 drivers for the Shoreham exercise, and looked at those  
14 ten.

15                   Do you believe that if LILCO had another one  
16 hundred, two hundred, three hundred bus drivers attend the  
17 exercise that were not evaluated by FEMA, that you could draw  
18 any conclusions about the adequacy of the training of those  
19 other bus drivers?

20          A       Well, I think you can draw some conclusions by  
21 comparing the way that LERO fielded people for this exercise  
22 compared to what happened at some other exercises where the

1 exercise was structured such that one bus may be used for  
2 simulation and one driver, and people who are organizing  
3 the exercise know what bus that is going to be, and they  
4 know who the driver is going to be. They have been through,  
5 perhaps, many FEMA evaluations. They are familiar with  
6 FEMA evaluation modules.

7 It is easier to ensure a good performance of  
8 that bus driver, but perhaps not as realistic.

9 I feel what LERO did was provide a very realistic  
10 demonstration of resources, and I think the grading that  
11 they got by FEMA has to be put somewhat in that perspective.

12 Their people were not trained to provide a FEMA  
13 response, but were trained to complete a function.

14 Q Do you have any information or knowledge about  
15 the extent of training LERO had been offering to its  
16 personnel since approximately 1983?

17 A Well, I know the training schedule. I have been  
18 told the training schedule that is used for people, and  
19 the concept of the three shifts, and the fact that they are  
20 doing quarterly training, and that individuals would expect  
21 to have training on slightly more than an annual basis.

22 Q Are you aware of the fact that prior to the



1 exercise in December and January, LERO held a number of  
2 dress rehearsal drills, utilizing the personnel that would  
3 be at the exercise?

4 A I don't really know the details about that.

5 Q I was a little confused, because you seem to be  
6 telling me that during the Shoreham exercise LERO personnel  
7 were forced to participate in a more realistic setting  
8 because they haven't had the opportunity to prepare from the  
9 standpoint of going through training drills and so forth?

10 A It wasn't exactly what I was trying to say. There  
11 were more people fielded by LERO for this exercise than I  
12 have ever seen fielded in any other exercise.

13 Q And, therefore, more persons for FEMA to choose  
14 from to make their evaluations?

15 A Yes. I think it is a more realistic demonstration  
16 than when you are able to closely control the individuals  
17 whom FEMA would be able to interview.

18 Q And you believe that at other exercises, FEMA  
19 exercises you have attended, the persons being evaluated  
20 were able to control those persons FEMA was evaluating  
21 more so than LILCO was able to do at its exercise?

22 A By virtue of the fact that not nearly as many

3-A

1 people were assigned roles. And also I think you have  
2 to remember this was the first FEMA-graded exercise for  
3 these individuals.

4 Q That is why I asked if you were aware how long  
5 LILCO had been practicing for this exercise.

6 A I am not really aware of that, but it is my  
7 impression that this was the first FEMA-graded exercise.

8 Q Let's go back to the bus driver example. If  
9 during the exercise FEMA looked at eight bus drivers, and  
10 four demonstrated some insufficiency of performance in some  
11 way, and yet there are approximately three hundred bus  
12 drivers, would you assume that the other two hundred and  
13 ninety-two bus drivers would have performed adequately if  
14 they would have been chosen by FEMA?

15 A I wouldn't necessarily make that assumption, but  
16 on the other hand, there were three staging areas for bus  
17 drivers, and I believe that FEMA's evaluation really found  
18 no problems out of two of the three staging areas.

19 Now, perhaps, there is a problem since all the  
20 bus difficulties arose from one staging area. I don't know  
21 that is a contributing factor, but maybe we have a problem  
22 at one of the staging areas. That could be one conclusion.

1           The only thing I am saying is that you can go  
2 to some exercise at another facility where you have a bus  
3 company under contract to you, and you arrange for a bus  
4 to make a demonstration during the exercise, which I feel  
5 is typical.

6           It is easier to ensure a good performance, but  
7 less sure in a real situation that you would be able to put  
8 three hundred and fifty bus drivers with similar abilities  
9 into the field. We need to keep perspective of what is the  
10 real situation.

11           The real situation in an emergency is that LERO  
12 would be putting a large number of bus drivers into the  
13 field, and I think in other exercises it is rare that you  
14 staff all the bus drivers.

15           Q       That is what I am trying to explore with you in  
16 part. Is it your understanding that at other FEMA-graded  
17 exercises, the participants have some prior knowledge as to  
18 whom would be selected for evaluation by FEMA?

19           A       Only by virtue of the fact that they have a smaller  
20 number of participants.

21           Q       So, maybe instead of calling out three hundred  
22 bus drivers, you have twenty-six bus drivers called out?



1           A       Or five bus drivers.

2           Q       But there are still some randomness to the  
3 sampling by FEMA in terms of determining who is going to be  
4 evaluated?

5           A       If you are demonstrating with a sample of two  
6 bus drivers, you are no longer worried about the randomness  
7 of the situation. Both of those bus drivers are going to be  
8 very well trained.

9           Q       And you have attended exercises where two bus  
10 drivers were the only two called out?

11          A       Well, I may be doing some comparisons like that  
12 in the future, but just from my initial involvement, I have  
13 never seen such a large force fielded at an exercise.

14          Q       That -- the problem I am having is that I am  
15 trying to understand why the numbers standing alone impress  
16 you?

17          A       Because it is more realistic.

18          Q       And that is your opinion notwithstanding the fact  
19 that far and away most of those numbers were not observed  
20 or evaluated by FEMA in any way?

21          A       Well, it is still my belief that FEMA stated that  
22 bus drivers were well trained, and performed well. So, I

1 think that is impressive when you are talking about a force  
2 of three hundred and sixty bus drivers. You are talking about  
3 a sample of somewhere in another exercise where they field  
4 two bus drivers, and those two bus drivers are very  
5 well trained. It is certainly more impressive.

6 Q I believe we had this discussion before, I feel.  
7 Are you aware that FEMA characterized bus drivers performance  
8 as a deficiency?

9 A There were -- as I recall, there were two  
10 deficiencies that related to training. Two instances. I  
11 feel the instances that were cited for training were limited  
12 in scope.

13 Q One of those training instances would have been  
14 the bus drivers?

15 A They indicated there was a need for more training  
16 of bus drivers. I don't think that a statement that bus  
17 drivers need more training is equivalent to saying that  
18 bus drivers didn't perform well.

19 Q But it is your recollection from the FEMA Report  
20 that FEMA concluded that the bus drivers performed well?

21 A Yes.

22 Q And if I ask you again, for purposes of this

1 deposition to assume with me that of the eight general  
2 population bus drivers FEMA observed, three were found to  
3 have significant problems in performing their duties. What  
4 would that tell you, if anything, about the training that  
5 had been provided to those bus drivers?

6 A Are you saying that is what FEMA said?

7 Q I am saying assume that. Assume what I am saying  
8 is, in fact, the case. FEMA looked at eight. And three of  
9 the eight just didn't perform well. What would that tell  
10 you about the training for the bus drivers?

11 A Training by its nature is an on-going activity,  
12 and even if a person performs a hundred percent of their  
13 duties perfectly during an exercise, you still going to  
14 come to the same conclusion, that all those bus drivers  
15 need training again within the next year.

16 And I think the conclusion from this exercise  
17 is that bus drivers need additional training, and they need  
18 some better procedures. I that conclusion can be made from  
19 what FEMA said in the exercise.

20 I don't think anyone is arguing that bus drivers  
21 don't need additional training, but I do feel that overall  
22 the performance of LERO bus drivers was good, and that



1 mistakes that were made, for instance, where a bus driver  
2 missed part of a route, the bus driver doesn't operate in  
3 a vacuum, and presumably in a real event if something like  
4 that happened there may be another recourse. We are talking  
5 about a very big organization.

6 Q Ms. Goodkind, I am not sure we are connecting  
7 here. I am asking a hypothetical. Something that has a lot  
8 of basis in fact from my review of the FEMA Report, but you  
9 can assume it is hypothetical. This is Mike Miller's hypo-  
10 thetical.

11 There are three hundred LERO bus drivers. Eight  
12 of those bus drivers are evaluated by FEMA at the Shoreham  
13 exercise. Three of those eight bus drivers don't perform  
14 well. They do something wrong, like they get lost, or they  
15 go to the wrong place.

16 If that is the case, in fact, that three of the  
17 eight did not perform well according to FEMA, is it nonethe-  
18 less your opinion that you would draw the conclusion that  
19 the bus drivers have performed well?

20 A Well, I would say with those conclusions, given  
21 the hypothetical things that you have asserted, it is easy  
22 to conclude that the bus drivers need more training in order

1 to do their jobs better.

2 Q Would you conclude, given my hypothetical, that  
3 the bus drivers performed well?

4 A Well, you have to look at what was their major  
5 job?

6 Q Their job was to drive their buses, and to follow  
7 particular routes to get to particular places.

8 A Well, I think one of the things that was cited  
9 by FEMA was that a bus driver didn't read his dosimetry.  
10 That bus driver probably performed well, but there is still  
11 need for some training.

12 Q Okay. I am not talking -- that is not my  
13 hypothetical though.

14 A That was one --

15 Q No, not for purposes of my hypothetical. My  
16 hypothetical was you have eight bus drivers looked at, three  
17 do not perform well, and they do not perform well you can  
18 define to be they went to the wrong place, or they drove the  
19 wrong routes, or they got lost. Something of that nature.  
20 I am not talking about not looking at dosimetry.

21 Would you draw the conclusion, under that  
22 hypothetical, that notwithstanding all that, the bus drivers

1 performed well?

2 MS. MONAGHAN: I am going to object to the  
3 hypothetical.

4 MR. MILLER: It couldn't be any more clear.

5 MS. MONAGHAN: The objection stands as to the  
6 hypothetical being vague. If Ms. Goodkind can answer the  
7 hypothetical, or respond to your question in the way it  
8 was phrased, she may do so.

9 THE WITNESS: I find it kind of confusing,  
10 because we haven't discussed what the task was for the  
11 driver and what the things were that they did wrong, and  
12 how that affected their overall assignment.

13 MR. MILLER: Ms. Goodkind, if you can't answer  
14 my question, that is fine. But we have discussed every  
15 single one of those issues.

16 We have discussed the fact that the task was to  
17 drive a bus to a particular place along a particular route,  
18 and we have discussed that what they did wrong was that they  
19 did not drive those routes correctly, or they got lost, or  
20 they went to the wrong place.

21 That is my hypothetical. If you can't answer the  
22 question, fine.



1 THE WITNESS: I think I would prefer not to.

2 MR. MILLER: Lets take a break.

3 (Whereupon, a recess was taken at 4:05 p.m., to  
4 reconvene at 4:20 p.m., this same day.)

5 BY MR. MILLER: (Continuing)

6 Q Ms. Goodkind, other than your accumulation of  
7 materials from other exercises, at this time do you anticipate  
8 performing any other kinds of research or analyses in  
9 connection with Contention 50?

10 A I don't know for sure what kind of comparisons  
11 or research I may get into. I haven't thought of anything  
12 other than the things I have mentioned at this time.

13 Q Do you have a copy of the Contentions with you?

14 A Yes.

15 Q I ask you to turn to Contention 50, which begins  
16 on page 87. I think we have established that at this time  
17 you anticipate testifying on all of Contention 50, including  
18 all the subsumed contentions within that contention,  
19 correct?

20 A Yes, I believe that is correct.

21 Q Is it possible for you at this time to tell me  
22 what you believe the thrust of your testimony will be

1 on Contention 50?

2 A Yes. I think my testimony will demonstrate that  
3 based on the materials I have reviewed that the training  
4 program was quite effective, and the training in the exercise  
5 showed many instances where activities were well executed,  
6 and it showed that there has been effective training in  
7 most instances, and I think my testimony will draw some  
8 comparisons between this exercise and other exercises.

9 Q Ms. Goodkind, let me ask you a general question  
10 in that regard. Why do you consider it relevant what has  
11 been done at other exercises from a training standpoint?

12 A Well, FEMA observers were the ones who graded  
13 this exercise, and I feel that most FEMA evaluators do  
14 a conscientious and thorough job of evaluating, and their  
15 opinions generally are valuable to me what they see and  
16 comment on training.

17 I am attempting to make some comparison to factors  
18 in this exercise and factors in other exercises that FEMA  
19 has evaluated because there are some differences in the  
20 Shoreham exercise, and I think there may be some comparisons  
21 that would be valuable between what FEMA observed here, and  
22 what FEMA has said at other exercises.

1           We are talking particularly about training, and  
2 based on my sampling of the eight exercises in which I was  
3 an evaluator, I have seen by looking back through the  
4 assessment that FEMA has recommended additional training  
5 at every one of those exercises.

6           Now, the question that I may be looking at is  
7 are the citations that have been made by FEMA at the Shoreham  
8 exercise a need for training above the norm of what FEMA has  
9 recommended at other exercises.

10           That might be, for example, one of the types of  
11 comparisons that might be made.

12           Q     Are you saying that if FEMA always recommends  
13 additional training, that the fact that at the Shoreham  
14 exercise FEMA also recommended additional training doesn't  
15 mean as much in terms of conclusions that could or should  
16 be drawn?

17           A     Well, I think there has been some interest in  
18 whether the LERO participants is better than one would  
19 expect, or worse that one would expect. It seems to me  
20 that this is one of the things that we are looking at,  
21 and in order to answer that question, it may be interesting  
22 to look at emergency personnel in general, and how do they



1 perform after training.

2           It is usual that people demonstrate that they need  
3 additional training.

4           Q       To your knowledge, there has never been an example  
5 or instance of FEMA-graded exercise where FEMA did not  
6 conclude that some additional training is needed?

7           A       Well, I went back to my experience where I was  
8 an evaluator, and based on the documents that I recited  
9 earlier that I had looked at executive summaries and so on,  
10 it is my recollection that when I looked through all of  
11 those that FEMA cited the need for more training at each  
12 of those exercises.

13          Q       Now, are you aware as to whether any of those  
14 exercises involved training issues which rose to the level  
15 as being characterized as a deficiency by FEMA?

16          A       I don't know the answer to that off hand.

17          Q       Would you agree with me that at the Shoreham  
18 exercise, at least two training related issues, that is  
19 traffic impediments and bus drivers, rose to the level  
20 of being characterized as deficiencies by FEMA?

21          A       I think that two -- if I can rephrase, I think  
22 it is the same thing you said. I believe that two of the

1 deficiencies noted by FEMA have training aspects.

2 Q If the other eight exercises you participated  
3 in as an evaluator, of those other eight, none of the  
4 training issues raised by FEMA rose to the level of being  
5 a deficiency, would that lead you to draw any conclusions  
6 about the adequacy of the LERO training program at Shoreham?  
7 Given FEMA's characterization of these two issues as  
8 deficiencies at the Shoreham exercise?

9 A I don't think it is necessarily one-to-one  
10 comparison. I feel that the deficiencies that were noted  
11 at Shoreham may have involved something other than training.  
12 And training is broad, and it is something that contributed  
13 to the deficiency. It might have been a combination of  
14 equipment and training, or a combination of procedures and  
15 training, and given the subjectiveness also of these kind  
16 of evaluations, I know for certain that something that  
17 occurs during one exercise sometimes is graded positively,  
18 and you could have the same action take place at another  
19 location, and another evaluator would grade it another  
20 way.

21 So, given the subjective nature of these things,  
22 I don't think you can compare totally numbers to numbers, and

1 letters of deficiencies to deficiencies, without looking  
2 at more detail.

3 Q If that is the case, Ms. Goodkind, why is it you  
4 are making this comparison?

5 A Well, I am not going to compare strictly on  
6 numbers at Shoreham, and numbers at other facilities. But  
7 I am saying that looking at other exercise evaluations may  
8 contribute something to my testimony.

9 Q And at this time you are just not sure what,  
10 if anything that comparison will contribute, is that  
11 correct?

12 A Well, I have not started drafting my testimony,  
13 so it is difficult for me to know right now what role that  
14 kind of comparison would play.

15 Q Do you think it is fair for one to say that  
16 in the instance of a deficiency or an area requiring  
17 corrective action, or for that matter an area requiring  
18 improvement noted by FEMA constitutes in some way a  
19 training problem?

20 A No, I don't think one could say that.

21 Q Other than your opinion that you believe you  
22 will testify as to the adequacy of the LERO training program,



1 is there anything else you can tell me about what you  
2 anticipate your testimony will be on Contention 50?

3 A I think my testimony will be discussion of the  
4 many instances in which the LERO organization demonstrated  
5 the effectiveness of their training.

6 Q And would that be based primarily again upon the  
7 FEMA Report?

8 A As one of the major inputs.

9 Q Can you give me an example?

10 A Of what?

11 Q Of an instance of where LERO performed well from  
12 a training perspective, in your opinion?

13 A Yes. I think at the LERO EOC, you see that  
14 FEMA makes numerous citations of things that work very well  
15 at the EOC. I think they use the word, 'excellent' in  
16 there. They talk about implementation of procedures.

17 I think if you look through the summary discussion  
18 you see both the words, 'excellent,' and, 'well trained.'

19 Q Is it your opinion that those areas where LERO  
20 performed well indicate that the LERO training program  
21 succeeded and is adequate?

22 A Well, as we discussed before, training is

1 on-going.

2 I think it shows that good training was done.

3 Q Are you telling me, Ms. Goodkind, that instances  
4 where LERO performed well, in your opinion, would support  
5 a conclusion about the adequacy of the LERO training program,  
6 but instances where LERO did not perform well would not  
7 necessarily support conclusions regarding the inadequacy of  
8 the training program?

9 A Well, I think the discussions we had about times  
10 when they, perhaps, didn't perform well have been so general  
11 that what I am trying to say is that the citation of things  
12 that they didn't do well on were not always related to their  
13 primary function, so it is difficult to say because there  
14 was a citation that they did something incorrectly, that  
15 it was a failure of training when they were still able to  
16 carry out the overall function.

17 And, as far as the significance of mistakes that  
18 were made, I think you also have to look at the effect the  
19 action that was taken. For instance, with the radiological  
20 dose assessment, there were a couple of mistakes that were  
21 made. There was a decimal error, and there were some other  
22 errors in managing the data.

1           It is my feeling that those kind of mistakes  
2 are typical, and perhaps even come with a guarantee from  
3 the evaluations that I have done of radiological assessments.  
4 If you in the confusion and the flow of data, if you don't  
5 get something reported as a rem, that is a mille~~i~~-rem, and *Me*  
6 vice versa at some time during the accident, then probably  
7 the simulation isn't realistic enough.

8           And that is why I feel that most plans are set  
9 up with a redundancy as this plan is, where you have people  
10 making an assessment at the onsite organization, and one at  
11 the offsite organization. But the point here I am trying to  
12 make is that some mistakes were made along the way to  
13 radiological assessment, but the radiological assessment  
14 function at the EOC was well carried out.

15           And even though mistakes were made, I don't think  
16 anyone is even making a contention that the Brookhaven  
17 organization is not well qualified and well trained.

18           I would think that most people -- I could be  
19 mistaken -- but I feel they give a very strong support, and  
20 that given their intensive training, and so on, that they  
21 are very well qualified.

22           Nevertheless, some mistakes were made. But the



1 overall assessment was effectively carried out, and the  
2 protective action was properly recommended. And, FEMA has  
3 noted all of these things as well as the fact that  
4 evacuation was well managed from the EOC.

5 Q And in your opinion, therefore, you can reach the  
6 conclusion that the training program has been adequate?

7 A I think I will be, in my testimony, citing  
8 instances that demonstrate good performance of people who  
9 have been trained.

10 Q Based upon primarily the FEMA report?

11 A Yes. I think there needs to be some perspective  
12 brought if you are going to try to answer the question of  
13 whether training is achieving some results. You need to  
14 not only look at citations of things that went wrong, but  
15 you need to look at those things and attempt to put them  
16 in perspective.

17 Did they affect overall performance? Were they  
18 due to other factors? If you are going to look at 1,200  
19 people being trained, I think you want to try to get some  
20 indication of good performance as well as mistakes.

21 Q One of the sub-parts of Contention 50, Contention  
22 27, is on Page 93 and alleges that there has been no training

1 given to school bus drivers in the areas of dosimetry and  
2 other related areas.

3 Do you believe that training in such areas as the  
4 use of dosimetry, radiation exposure, is necessary with  
5 respect to the LILCO plan for personnel such as school bus  
6 drivers?

7 A If bus drivers are going to be used, I think they  
8 should be given some training.

9 Q Would your answer be the same with respect to  
10 outside organizations such as the ambulance and the ambulette  
11 companies?

12 A If they are not sufficiently trained for the  
13 function they would provide in the emergency, then I think  
14 they should be trained.

15 Who does it might be a different question. And  
16 personnel have different training programs of their own.

17 Q Do you have any basis for disagreeing with the  
18 allegation that LERO's response to two traffic impediments  
19 demonstrated serious communications failures within LERO?

20 A Is that contention written here?

21 Q Well, this is my rough paraphrase of Contention  
22 45 which begins on Page 95. It's all kinds of detailed

1 examples of that.

2 A Well, it says here serious communications failures  
3 played a major role in LILCO's inability to remove the  
4 impediments.

5 Q Do you have any disagreement with that statement?

6 A Yes, I would disagree with that. We've talked  
7 about some things that happened with the free-play which kept  
8 it from being very realistic.

9 And I think the fact that route spotters were  
10 available and a truck was dispatched that had radio capa-  
11 bilities to call for additional equipment as needed; you  
12 know, the fact that a lot of equipment wasn't dispatched  
13 immediately is mitigated by the fact that you have someone  
14 there with equipment who can request additional assistance.

15 So, I don't know that the communication failures  
16 which, as I understand them, were mainly up the chain of  
17 command really would have affected removal of the impediment.

18 Q When you referenced just now the lack of an  
19 immediate response to the impediments, you are aware that  
20 there was in the nature of a two to three hour delay in  
21 responding to the impediments?

22 A I know there was delay. And, I think one -- I



1 think there were some contributing things to the delay  
2 which we have already discussed. One of them is where the  
3 free-play message was inserted so that a portion of the time  
4 was spent in trying to confirm in the field that this impe-  
5 diment existed, which is where a message like this in a real  
6 case would originate, from the field.

7 So, there was a period of time there. And, then  
8 due to the simulation there was some difficulties in match-  
9 ing up with the FEMA person which, I believe, contributed  
10 more to the delay.

11 And, there were some glitches, I would say, in  
12 the handling of the situation.

13 Q Which is by LERO personnel?

14 A Yes.

15 Q Does that tell you anything about the adequacy  
16 of training?

17 A Well, I think that LERO has acknowledged that if  
18 you are going to assume that a very major impediment like  
19 this really could occur, then it probably would be well to  
20 provide their people with some additional training.

21 And, it's my understanding that they have already  
22 gone ahead and conducted that kind of training. Then, in

1 fact, I'm sure that the exercise event in itself was -- it  
2 provided very significant training opportunities for the players.

3 Q I think we have discussed this before, but are  
4 you aware of the fact that there has been the same sorts of  
5 problems incurred by the LERO personnel with respect to  
6 traffic impediments simulated during post-exercise training  
7 drills?

8 A I don't know that. I haven't seen those drills.

9 Q And if, in fact, that is the case does that tell  
10 you anything about the adequacy of the LERO training pro-  
11 gram?

12 A Well, again we talked about the fact that I'm  
13 not sure everything was in place that they had intended  
14 during that drill. You know, I think one of the basic  
15 questions we had here was whether the emergency workers  
16 need to be trained extensively to respond to this kind of  
17 incident.

18 And my understanding is that LERO has decided  
19 to provide this kind of training. Whether it should receive  
20 a great deal of emphasis or not, I'm not sure. I haven't  
21 been party to all the discussions of it.

22 Q From other exercises you have been involved with,

1 Ms. Goodkind, are you aware of anywhere FEMA noted one or  
2 more deficiencies?

3 A I haven't looked at the exercises from that stand-  
4 point. I'm really not prepared now to talk about it.

5 I wouldn't want to mention a deficiency of one  
6 that had occurred at a different location. I remember a  
7 number of citations where -- since I'm particularly focusing  
8 on training, I remember reviewing certain exercises where  
9 training was strongly emphasized as an area of need.

10 Q I'm just talking about deficiencies of any kind.  
11 Are you aware of any where there was one or more deficiencies  
12 noted?

13 A I haven't really looked at that specifically.

14 Q Are you aware of any exercise, FEMA exercise,  
15 where one or more deficiencies were noted and FEMA did not  
16 require a remedial exercise thereafter?

17 A Well, you know, since I really couldn't answer the  
18 first part of the question, I can't --

19 Q I'm asking with respect to any exercise, not just  
20 the ones you have attended?

21 A I can't recall at present a specific instance when  
22



1 FEMA has ordered or not ordered a remedial exercise.

2 Q Do you understand the concept of the remedial  
3 exercise?

4 A Yes, I believe so. If FEMA feels there is enough  
5 doubt in terms of reasonable assurance, which is the term  
6 that they use, that the public can be protected and they  
7 feel there is sufficient urgency in providing that reason-  
8 able assurance, they could request a remedial exercise.

9 And, I know that one of the guidance memoranda  
10 addresses the criteria for remedial exercise.

11 Q From your perspective as one who has been involved  
12 in planning and training issues for the last 10 or 15 years,  
13 your resume says, given the fact that FEMA noted five, at  
14 least five, deficiencies at this exercise, do you believe  
15 that there should be a remedial exercise for the Shoreham  
16 plant?

17 A I'm not an expert on what constitutes the need for  
18 remedial exercise. But, based on my experience and the fact  
19 that LILCO will be required to exercise again anyway, the  
20 issue of remedial exercise almost becomes a moot question  
21 because subsequent exercises will be required anyway, at  
22 least on a bi-annual basis. So, we know that there will be

1 follow-on exercises.

2 Q Well, keep in mind, with Shoreham you have at  
3 issue now whether or not there should be an operating  
4 license issued --

5 A Yes.

6 Q -- and that there is a regulation which requires  
7 a FEMA-graded exercise to be conducted prior to the issuance  
8 of such a license. And there has now been such an exercise  
9 conducted.

10 Do you believe that there should be a remedial  
11 exercise held by FEMA and performed by LERO personnel prior  
12 to the issuance of an operating license for the Shoreham  
13 plant?

14 A I would have to say not necessarily. I know there  
15 are some issues such as siren testing which would need to  
16 be looked at.

17 I feel there are some other things that could  
18 perhaps be verified by FEMA. It's not uncommon for FEMA to  
19 grade exercise portions and special drills separate from a  
20 full exercise. I don't know enough about FEMA's procedures  
21 to know if this might be an option.

22 But I know at other exercises FEMA has graded

1 activities on a day before the exercise or a day after the  
2 exercise. And to require LERC to commit the resources as  
3 they did for this exercise again, to address a limited  
4 number of items, it appears to me from the RAC review that  
5 they found that the procedures and revisions that have been  
6 offered by LILCO have been found to adequately address the  
7 issues that were brought up by the exercise. And there are  
8 only a couple that are still outstanding items that are  
9 awaiting signed agreements.

10 Now, I know that they have said these things need  
11 to be retested. And, that is certainly the case.

12 But, the question of whether they justify a  
13 remedial exercise when we know there will be other exercises  
14 in the future, it would seem to me not necessarily required  
15 to go through a full-blown exercise to test those four or  
16 five deficiencies, one of which was evidently an equipment  
17 problem at the ENC which seems as though it has been very  
18 thoroughly resolved by LERO by their commitment to a new  
19 facility with a lot of redundant copying equipment.

20 Q Do you agree that there should be a demonstration  
21 of the ability to provide reasonable assurance of the public's  
22 health and safety prior to the issuance of a commercial



1 operating license for nuclear power plants?

2 A Yes.

3 Q Do you agree with me that FEMA makes that  
4 determination through the conduct of exercises?

5 A Yes.

6 Q Are you aware of how FEMA has defined the term  
7 "deficiency" in the context of the Shoreham exercise?

8 A Well, I'm not aware that they define it particu-  
9 larly in context of the Shoreham exercise, but I know that  
10 it has been defined by FEMA in general.

11 Q Are you aware that the definition of the term  
12 "deficiency" is that there can be no conclusions reached as  
13 to the reasonable assurance of the public's health and  
14 safety?

15 A I don't know that I would have paraphrased it  
16 exactly in that way. The definition is available here to  
17 both of us.

18 Q How would you define the term "deficiency?"

19 A I would define it the same way FEMA has. I mean,  
20 it's a FEMA term.

21 Q I'm looking for the definition in the report to  
22 make sure that we have a common understanding. Okay. On

1 Page 8 of the report, it says --

2 MS. MONAGHAN: Would you like to have Ms. Goodkind  
3 furnished with a copy of the report so that she can look at  
4 the definition also?

5 MR. MILLER: That's fine. Page 8.

6 (The witness is provided with the document.)

7 BY MR. MILLER: (Continuing)

8 Q "Deficiencies are demonstrated and observed in-  
9 adequacies that would cause a finding that off-site emergency  
10 preparedness was not adequate to provide reasonable assurance  
11 that appropriate protective measures can be taken to protect  
12 the health and safety of the public living in the vicinity  
13 of the nuclear power facility in the event of a radiologi-  
14 cal emergency."

15 And that's the definition of "deficiencies" as  
16 used by FEMA in the Shoreham exercise report. Okay?

17 A Yes.

18 Q Now, given that definition and given the fact that  
19 there were, I believe, five deficiencies noted by FEMA, is  
20 it your opinion that the Shoreham plant should be licensed  
21 without the necessity of requiring a remedial exercise before-  
22 hand?

1 MS. MONAGHAN: I'm going to object to the question  
2 on the grounds of the competency of the witness to answer  
3 whether or not FEMA ought to be making a reasonable assurance  
4 finding based on the statements made in the post-exercise  
5 assessment for Shoreham.

6 You may answer the question if you can.

7 THE WITNESS: No. I don't think that I'm in a  
8 position to make a statement on that.

9 BY MR. MILLER: (Continuing)

10 Q From a training perspective, you don't believe  
11 you are in a position to make that statement?

12 A That's true.

13 Q And that's because you agree with Ms. Monaghan  
14 that you are not competent to address this issue?

15 A Yes.

16 MR. MILLER: I think I'm through with my question-  
17 ing, but I have two matters that I will address to Ms.  
18 Monaghan.

19 First of all, we have requested numerous times  
20 about whether or not LILCO will be providing training  
21 materials since the production that was made I think around  
22 October 29th, including the drills from December of 1986?



1           Can you tell me at this time whether this material  
2 will be provided?

3           MS. MONAGHAN: Mr. Miller, LILCO is in the process  
4 and Hunton & Williams' attorneys are in the process of  
5 gathering those materials together specifically to produce  
6 them to you. At this time, there has not been a report  
7 issued for the December drills.

8           We will provide that report to you when it is  
9 issued. Due to the snow situation in the Washington and  
10 Richmond areas, we have been delayed in collecting those  
11 materials and getting them to you as soon as we had antici-  
12 pated that we would.

13           But my understanding is we are going to try to  
14 ship them out to you tomorrow. And that will be responses  
15 to the requests that were made in the depositions of Mr.  
16 Daverio, Mr. Weismantle and Mr. Behr.

17           MR. MILLER: Okay. Thank you. Now, today we  
18 had mentioned by Ms. Goodkind those materials that she has  
19 gathered, or perhaps is still in the process of gathering,  
20 from other exercises she attended. And I would, at this  
21 time, request production by counsel for LILCO of those  
22 documents that have been accumulated and are being accumulated

1 by Ms. Goodkind.

2 MS. MONAGHAN: We will take your request under  
3 advisement. Certainly, we will provide the documents that  
4 are available that indicate the exercises at which Ms.  
5 Goodkind has been an evaluator.

6 But, to the extent that the materials that she  
7 pulls together are with the evaluation and concurrence and  
8 selection of counsel, that production will be denied as  
9 work product.

10 MR. MILLER: With respect -- I didn't quite under-  
11 stand that last part.

12 MS. MONAGHAN: To the extent that materials other  
13 than materials from exercises at which she was an evaluator  
14 are selected and gathered and reviewed by Ms. Goodkind,  
15 that would be on the basis of the work product decision  
16 made between Ms. Goodkind and her counsel and those will  
17 not be provided.

18 MR. MILLER: Well, if I recall -- maybe I should  
19 go back and ask Ms. Goodkind, but I understand that the  
20 materials that she is pulling and has accumulated are  
21 materials that were from these other exercises, such as  
22 the executive summaries and the scenarios and objectives and

1 things of that nature.

2 MS. MONAGHAN: To the extent that that is the case,  
3 I will provide you with the materials that she has gathered  
4 that relate to the exercises which she observed.

5 BY MR. MILLER: (Continuing)

6 Q Ms. Goodkind, at this time are you gathering  
7 together or accumulating, or have you accumulated, any  
8 documents of any other kind?

9 A No.

10 Q Do you intend to do so?

11 A I don't know. I don't have any intention now.

12 MR. MILLER: I have no further questions.

13 MS. MONAGHAN: I have no questions.

14 MR. CUMMING: I have no questions.

15 MR. MILLER: Thank you, Ms. Goodkind.

16 THE WITNESS: You are welcome.

17 (Whereupon, the taking of the deposition was concluded  
18 at 5:00 p.m., this same date.)

19

20 Subscribed and sworn to before me  
this 19 day of February, 19 87.

Mary Goodkind  
MARY GOODKIND

21

Sally A. Birkpatrick  
Notary Public

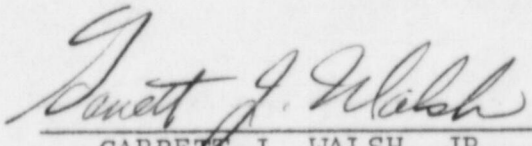
22

My Commission Expires My Commission Expires June 4, 1988



1 CERTIFICATE OF NOTARY PUBLIC AND COURT REPORTER  
2

3 I, Garrett J. Walsh, Jr., the officer before whom  
4 the foregoing deposition was taken, pages 1 through 118, do  
5 hereby certify that the witness whose testimony appears in  
6 the foregoing deposition was duly sworn by me; that the  
7 testimony of said witness was taken by me and thereafter  
8 reduced to typewriting by me or under my direction; that  
9 said deposition is a true record of the testimony given by  
10 the witness; that I am neither counsel for, related to nor  
11 employed by any of the parties to the action in which this  
12 deposition was taken; and further, that I am not a relative  
13 or employee of any attorney or counsel employed by the  
14 parties hereto, nor financially or otherwise interested in  
15 the outcome of the action.

16  
17   
18 GARRETT J. WALSH, JR.

19 Notary Public in and for the  
20 Commonwealth of Virginia at Large

21 My Commission Expires: January 9, 1989  
22

MARY E. GOODKIND

EDUCATION

M.S., Radiological Health Physics,  
Northwestern University

M.B.A., Economics,  
Northwestern University

B.S., Zoology,  
University of Michigan

PROFESSIONAL  
EXPERIENCE

Ms. Goodkind has fifteen years of consulting  
experience in environmental and safety areas.

Radiological Emergency Planning Experience

Ms. Goodkind has radiological emergency planning  
experience that includes:

- exercise evaluation as a Federal Emergency Management Agency (FEMA) observer;
- development of emergency plan procedures and training;
- exercise participation as a controller.

Ms. Goodkind has also assisted FEMA with preparation of interim findings reports, as a consultant to Argonne National Laboratories (ANL). Her emergency planning experience has included exercise evaluation, control, and training in the following areas: State and County Emergency Operation Center functions, field team activities, radiological dose assessment, prompt alerting and notification, early dismissal of school students, decontamination and relocation center operations, medical drills, and recovery and re-entry.

Ms. Goodkind is the author of a training module on radiological physics prepared for exercise evaluators at the U.S. Department of Energy (USDOE) and has presented seminars on radiological emergency planning for the USDOE and for ANL.

Ms. Goodkind has participated in ten radiological emergency exercises as an evaluator or controller.

PROFESSIONAL  
EXPERIENCE  
(cont'd)

Other Experience

Ms. Goodkind has conducted environmental radiological monitoring programs at seven nuclear power stations. She has also performed offsite dose assessment, in-plant shielding calculations, and specification of radiation detection equipment. She served on an advisory committee on low level radiological waste disposal for the Illinois Atomic Energy Commission.

Ms. Goodkind is a past president of the Midwest Chapter Health Physics Society and of the Chicago Section, American Nuclear Society.

Ms. Goodkind has been an expert witness on environmental issues in the states of Illinois and Kentucky.

CERTIFICATIONS

Ms. Goodkind is a Certified Safety Professional and a Certified Hazard Control Manager. She is also trained in management of hazardous chemicals and in hazardous waste site remediation. She is a contributing author to the National Safety Council on a hazardous material guidance manual.

PROFESSIONAL  
AFFILIATIONS

American Society of Safety Engineers  
Society for Risk Analysis  
National Coordinating Council on Emergency Management  
Health Physics Society  
American Society of Civil Engineers