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PROCEEDINGS BEFORE

NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DKT/CASE NO. 50-322-OL

TITLE LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Power Station)

PLACE Hauppauge, New York

DATE January 25, 1983

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of :
LONG ISLAND LIGHTING COMPANY : Docket No. 50-322-CL
(Shoreham Nuclear Power Station) :

- - - - -x

Third Floor, B Building
Court of Claims
State of New York
Veterans' Memorial Highway
Hauppauge, New York 11787

Tuesday, January 25, 1983

The hearing in the above-entitled matter
convened, pursuant to recess, at 9:05 a.m.

BEFORE:

- LAWRENCE BRENNER, Chairman
Administrative Judge
- JAMES CARPENTER, Member
Administrative Judge
- PETER A. MORRIS, Member
Administrative Judge

1 APPEARANCES:

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		<u>C O N T E N T S</u>				
		<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>	<u>CROSS BOARD ON BOARD</u>
1						
2	<u>WITNESSES:</u>					
3						
4	Louis D. Johnson and Joseph P. Novarro (Resumed)					
	By Judge Carpenter					18,968
5	By Mr. Dynner				18,976	
	By Mr. Miller				18,985	
6	By Mr. Ellis					19,004
7						
8	Richard B. Hubbard and Francisco J. Samaniego (Recalled)					
	By Mr. Dynner	19,062				
9	By Mr. Earley		19,069			
10						
	(Afternoon Session...19,081)					
11						
12	Richard B. Hubbard and Francisco J. Samaniego (Resumed)					
	By Mr. Earley		19,098			
13	By Judge Carpenter					19,140
	By Judge Morris					19,165
14	By Mr. Earley		19,171			
15						
		<u>E X H I B I T S</u>				
16	<u>NUMBER</u>	<u>IDENTIFIED</u>	<u>RECEIVED</u>	<u>BOUND IN TRANSCRIPT REJECTED</u>		
17	Suffolk County 112	19,064	19,064			
18	Suffolk County 112A	19,066	19,067	19,066		
	LILCO 61	19,180		19,181	19,190	
19	LILCO 62	19,184		19,185	19,190	
20	Motion for Partial Summary Disposition of SC Contention					
21	8/SOC Contention 19(h) -- Environmental Qualification; SC Opposition to LILCO Motion for Partial Summary					
22	Disposition of SC Contention 8/SOC Contention 19(h) -- Environmental Qualification and NRC Staff Support of					
23	Applicant's Motion for Summary Disposition of Issue SC 8(d) and SOC 19(h)(4).....				page 19,036	
24	Prefiled Testimony of Richard B. Hubbard and Francisco					
25	J. Samaniego.....				page 19,068	
	RECESSES: Morning - 19,021 Noon - 19,080 Afternoon - 19,135					

1 MR. DYNNER: We have no reproduction
2 facilities and it is out being copied right now, so we
3 will have more copies.

4 JUDGE BRENNER: We have looked at it but we
5 would all like it in front of us.

6 MR. DYNNER: Yes, I apologize. We just had no
7 place to get it copied.

8 JUDGE BRENNER: We will discuss that after we
9 finish the panel. In addition, we will hear arguments
10 on the motion for summary disposition of one subpart of
11 the environmental qualification contention. The
12 particular sequence of those items is not important to
13 us. We will do them one after the other.

14 Whereupon,

15 LOUIS D. JOHNSON and

16 JOSEPH P. NOVARRO,

17 witnesses previously on the stand, having been sworn,
18 resumed the stand and were examined and testified
19 further as follows:

20 EXAMINATION BY THE BOARD

21 BY JUDGE CARPENTER:

22 Q I would like to ask the panel to look at
23 Potential Finding Report 001 for a moment. If you turn
24 to page 7, which is some pages of photographs, and also
25 page 8, this report involves an observation that the

1 system that leads to the hydrogen recombiner had been
2 disassembled and the inspector was finding that the
3 condition was not in conformance with the required
4 condition, for the obvious reason that it had been
5 disassembled.

6 On page 6 the inspector notes that open
7 flanges were found. That is shown very clearly in the
8 photographs. We have heard a lot of testimony since
9 September having to do with field quality control
10 inspection reports, observations of piping which was not
11 properly covered.

12 Now, I would like to ask a couple of
13 questions. I note in the photograph on the top of page
14 8 there is one instance where there is a covering to
15 keep dust and dirt out of the system over a flange. In
16 the other photographs, there are a number of pipe bends
17 with flanges which are not covered. This appears to be
18 an example of this continuing theme that we have
19 listened to of an inability of field quality control to
20 get the announced construction practice of covering
21 these openings enforced.

22 Mr. Novarro, I would like to explore this just
23 a little bit in the sense of at what point does LILCO
24 management feel that some substantial remedial action is
25 necessary. Clearly, human beings will make mistakes, as

1 we have heard testimony, but when the mistakes are
2 repetitive and easily observed, how extreme does it have
3 to get before it triggers some response, some management
4 attention? Could you give me a feel for that?

5 This is a thing, as I have said, we have got
6 to resolve our minds some way. We have listened to a
7 lot of testimony about it and it is inconclusive in my
8 mind. That is why I bring it up this morning. Could
9 you help me a little bit about the LILCO attitude? Then
10 I would like to ask for the Torrey Pines attitude.

11 JUDGE BRENNER: Let's go off the record.

12 [Off the record]

13 JUDGE BRENNER: All right, let's go back on
14 the record.

15 WITNESS NOVARRO: Judge Carpenter, we take a
16 look at the repair rework requests, which is the next
17 two pages after the pictures that we were just looking
18 at, and by the pictures I have to say that when I look
19 at them, they look like they have covers over the
20 flanges, although it isn't absolutely clear, but to me
21 that looks like some sort of a taped covering over some
22 of the flanges. But in reading the repair rework
23 requests --

24 BY JUDGE CARPENTER: (Resuming)

25 Q Well, if you look at page 8, the top picture,

1 what I see, and that is what I wanted to chat with you
2 about, what I think I see is one flange that is covered
3 and one flange that is not covered. Do you see
4 something that I don't see?

5 A (WITNESS NOVARRO) It is hard to tell
6 completely.

7 A (WITNESS JOHNSON) I think if you look at the
8 pictures on page 7, Judge Carpenter, and look at the
9 surface of the flange in both of those flanges, that
10 possibly you might not have a covering. There is a
11 diagonal light line across the face of those flanges
12 that is visible in the photograph that might indicate
13 that it has a tape-type covering on it also, even though
14 it doesn't have any thickness and wouldn't show in the
15 other photograph.

16 A (WITNESS NOVARRO) In addition to that, Judge
17 Carpenter, the repair rework request describes a process
18 on removing a suction line break, the bolted connections
19 where the flange is located and rotate the elbow and
20 remate. It also talks about reflushing the system using
21 the filter that was described earlier in the pictures,
22 and then when the reflush is completed and to cover
23 everything, which would make sense if you were in a
24 cleaning operation.

25 So it seems to me by reading this that we were

1 aware that when we open the system like this for rework
2 or repair as the repair rework request describes, that
3 we are cognizant of the fact that we are opening a clean
4 system and that, in this case, the clean system had to
5 be recleaned before it was closed. And I think the
6 words below to me explain that.

7 Now, in the overview I think this repair -- or
8 this PFR points out that over the course of completing
9 systems and operating them, and this one was a system
10 that was in test, that there is usually need to do some
11 maintenance or repair on the system over the course of
12 the test program, and we have this repair rework
13 procedure that governs that work. And in this case, at
14 least to me reading these words, we were aware of the
15 cleanliness requirement and perhaps the pictures were
16 taken in the course of doing the cleaning prior to the
17 final flush that is required in the words that are
18 described here.

19 Now again, in an overview, management of our
20 company is certainly concerned about cleanliness of our
21 plant, and we are very much aware that as the plant
22 nears completion -- right now there is a great deal of
23 work going on to get it ready for fuel load -- we
24 certainly intend to do the required housekeeping and we
25 are aware of the NRC's letter that addresses that issue,

1 and we are going to do whatever is necessary to satisfy
2 the NRC Staff.

3 I don't think Shoreham at this stage of its
4 life is any different than any other nuclear plant. I
5 visited many plants, and in a large construction job
6 there is always a need for housekeeping, but I don't
7 think what we have seen here is anything unusual.

8 Q Well, Mr. Johnson, you do feel that the
9 statement on page 6, which says open flanges, doesn't
10 imply that they were not covered, and that in some way
11 there is some covering over those openings? I agree I
12 see the faint diagonal line, but when I compare it with
13 what looks like duct tape or something on the right-hand
14 photograph over that flange, is it your notion that
15 these people were using different ways of covering
16 flanges, duct tape in one case and three feet away in
17 another, and that kind of performance?

18 A (WITNESS JOHNSON) I really can't tell from
19 the pictures either, Judge Carpenter, and I don't know
20 at this point in time whether the open flange
21 terminology was meant to mean in fact open or whether it
22 was meant to mean disconnected. So I really can't
23 provide you with proof one way or another here other
24 than observing that faint diagonal line which wouldn't
25 probably not be the case if there were an inside opening

1 of the pipe at that point.

2 I just quickly leafed through some others
3 here. PFR 2 shows some disconnected pipes, and the
4 pictures show that those flanges are covered, and
5 similarly with PFR 005 where some relief valves were not
6 in place and those flanges -- or those flanges had
7 covers on them. I don't believe that we saw an
8 excessive amount of uncovered flanges or it would have
9 shown up in the DRs. It is conceivable that the
10 specific flanges were uncovered if they were in the
11 process of running these tests at the time, but I can't
12 provide conclusive evidence either way from what is here.

13 Q You anticipate my next question. I was going
14 to ask whether your inspectors would have paid attention
15 to such conditions. You used the expression "excessive
16 amount of uncovered flanges." What in your mind is
17 excessive?

18 A (WITNESS JOHNSON) I think any uncovered
19 flanges that were in a location where activity was not
20 in process in terms of flushing the system or something
21 like that would be excessive, and I don't believe our
22 people noted a number of uncovered flanges, first of
23 all; and secondly, they would have noted them had they
24 seen uncovered flanges like the missing relief valves,
25 for example.

1 Q Yes, we have had a lot of trouble with these
2 inspection reports not clearly stating what equipment
3 was being actively worked on. These are the Stone &
4 Webster and LILCO audits where they do find you never
5 know whether the workmen just left that area for a
6 half-hour or not. The bald record keeps showing repeated
7 observations of this kind of condition, and this is what
8 I was trying to get some feel for, at what point one
9 would make the judgment that things are getting
10 excessive and it was time to tighten up the performance
11 standards a little bit.

12 A (WITNESS JOHNSON) I think obviously if you
13 are in the final phases of construction, you are very
14 concerned about open joints because of the contamination
15 aspect, and especially after you run pre-operational
16 tests and you are doing repair work or something like
17 that. And I guess in my evaluation I would disagree
18 with you on the specific case that they were uncovered,
19 but I wouldn't argue that too strongly.

20 Q Well, let's be sure I understand. It is your
21 impression that your inspectors would have noted cases
22 where they felt there was failure to protect equipment,
23 equipment lines, without leaving them open.

24 A (WITNESS JOHNSON) Yes, they would.

25 JUDGE CARPENTER: Thank you.

1 JUDGE BRENNER: Okay, Mr. Dynner, we will go
2 to you or Mr. Miller for the follow-up. I would
3 appreciate it if you would -- certainly ask what you
4 have to ask, but try to keep a good pace and not digress
5 from what you think you need.

6 REXCROSS EXAMINATION

7 BY MR. DYNNER:

8 Q Mr. Johnson, do you have the transcript from
9 yesterday? If you would turn for a moment to page
10 18,896, I wanted to get a clarification of your answer
11 to Mr. Ellis' question when he asked on line 7 of that
12 page whether the evidence that you described in the
13 various tasks is adequate to enable you to form a
14 conclusion as to whether the subcontractor QA programs,
15 where they had their own QA programs, were being
16 adequately implemented. You answered yes and then went
17 on to explain your answer.

18 Is it correct, as I read your answer, that you
19 are unable to form a conclusion that the subcontractor
20 QA programs were being adequately implemented but rather
21 you were able only to say that the evidence indicated
22 that they were implementing a QA program?

23 I am getting to, by way of explanation -- Mr.
24 Johnson, you may recall that in your deposition we had a
25 discussion concerning this matter on page 231, and in

1 your deposition you, I believe --if you want to review
2 that also -- you came to testify that you could not
3 reach a conclusion that the subcontractors had
4 effectively implemented their QA programs but rather
5 that, based on the evidence that you saw, you could not
6 say that they had not implemented their program. There
7 is quite a difference between those two conclusions.

8 MR. ELLIS: Judge Brenner, I object to these
9 lengthy -- he ought to ask a question and get an answer,
10 but in essence he is testifying, and he ought to get an
11 answer.

12 JUDGE BRENNER: All right, you are both right.
13 I think it was proper of Mr. Dynner to assist by
14 recalling the deposition. However, your summary of it
15 is not necessarily accurate, Mr. Dynner, so why don't
16 you just draw his attention to the portion of it.

17 BY MR. DYNNER: (Resuming)

18 Q Is there a conflict between what you testified
19 to in your deposition and what you testified to in
20 answer to Mr. Ellis' question yesterday?

21 A (WITNESS JOHNSON) No, sir.

22 Q And is it fair to say that your testimony in
23 the deposition is a more complete statement of your
24 views in this matter?

25 A (WITNESS JOHNSON) No, I don't think that is

1 fair to say. I think the testimony in the two places is
2 consistent. As I indicated in both places, both in this
3 hearing and in the deposition, we did not review the
4 complete subcontractors' QA programs for adequacy
5 because that was covered by the Stone & Webster QA
6 program. That stated what the requirements for
7 subcontractor programs were.

8 We did see evidence of implementation of the
9 Courter program in Task B in the reviews that we did
10 there, and also to some extent Task C.

11 Q And was that evidence sufficient for you to
12 form a conclusion that Courter was satisfactorily
13 implementing its QA program under the general S&W QA
14 program requirements?

15 A (WITNESS JOHNSON) Yes, it was.

16 Q Would you specify what evidence that you saw
17 to enable you to reach that conclusion?

18 A (WITNESS JOHNSON) I can generally tell you
19 that we saw a number greater than 10, but I don't
20 remember precisely of documents in the Task B
21 investigation that we compared to the specific
22 procedures in Courter's QA program and confirmed that
23 the documentation that we had reviewed met the
24 requirements of those procedures. We in Task B also
25 reviewed an audit of Courter's QA program that was done

1 in 1977, and I don't know the precise evidence that was
2 available in Task C related to the Courter program other
3 than that we were looking at the product of their
4 program and comparing it to the design requirement.

5 Q You base your conclusion on evidence of ten
6 documents? That was ten documents out of how many total
7 documents generated by Courter?

8 A (WITNESS JOHNSON) It was greater than ten. I
9 don't know how many total documents.

10 Q Is it fair to say that there were thousands of
11 documents generated by Courter?

12 A (WITNESS JOHNSON) I don't know.

13 Q Was the number of total documents that you
14 looked at as a ratio to the number of total documents
15 that existed irrelevant to your conclusion?

16 A (WITNESS JOHNSON) The number of documents
17 that we looked at was sufficient to provide us a basis
18 to say that the Courter program had been implemented and
19 was functioning.

20 Q And you say you compared these ten or so
21 documents to Courter procedures. How many procedures
22 did you compare them to?

23 A (WITNESS JOHNSON) Roughly the same number.

24 Q And do you know how many procedures that
25 Courter had?

1 A (WITNESS JOHNSON) No, sir.

2 Q And what specific evidence do you base your
3 conclusion on with respect to the QA program
4 implementation by Reactor Controls Company?

5 A (WITNESS JOHNSON) We did not see anything by
6 Reactor Controls in the things we looked at. Again, it
7 is a process control, and we confirmed that the process
8 was working and we would expect it to also work in the
9 Reactor Controls area.

10 Q So you saw no specific evidence to support
11 your conclusion concerning Reactor Controls; is that
12 correct?

13 A (WITNESS JOHNSON) We saw the product of some
14 of their work in Task C in terms of the control rod
15 drive piping, but we did not review documents that had
16 been prepared under the Reactor Controls program.

17 Q And what percentage of the total products
18 produced by Reactor Controls did you see to enable you
19 to reach the conclusion that their QA program had been
20 properly implemented?

21 A (WITNESS JOHNSON) I do not know the
22 percentage.

23 Q Are there any other subcontractors having
24 their own QA programs which are covered by your general
25 conclusion as to adequacy?

1 A (WITNESS JOHNSON) I believe we discussed the
2 other day that Nuclear Engineering Services has their
3 own program, and we saw evidence of some of that program
4 in what we looked at in Task D-1 under the preservice
5 inspection weld and reexamination.

6 Q Specifically what was that evidence?

7 A (WITNESS JOHNSON) The procedures that they
8 used for ultrasonic examinations and the forms that they
9 filled out in response to those procedures.

10 Q Do you know how many procedures and how many
11 forms were involved to constitute the evidence that you
12 base your conclusion upon?

13 A (WITNESS JOHNSON) I believe the procedures
14 are listed in the report under Task D, and I believe
15 there is on the order of four to six procedures that we
16 were using.

17 Q Do you know how many total procedures that
18 that company had?

19 A (WITNESS JOHNSON) No, sir.

20 Q I would like to move on, Mr. Johnson. Just to
21 briefly follow up on a matter that you discussed
22 yesterday with Judge Morris concerning Criterion 10 of
23 Appendix B on testing, is it a correct summary of your
24 testimony that you believe that the requirements of
25 Criterion 10 could be fulfilled if, for example, you had

1 ten items that were from the same manufacturer, the same
2 type of item, the same purpose, et cetera, that you
3 could fulfill the requirements by, as I recall your
4 testimony, taking a sample and testing a sample of those
5 ten on a statistical basis?

6 A (WITNESS JOHNSON) Yes.

7 Q Was that the method that is followed by Torrey
8 Pines in its inspections in connection with the report?

9 A (WITNESS JOHNSON) You know very well by now
10 that it was not, and I think you also know that we did
11 not have the same thing with the same characteristics
12 used for the same purpose.

13 JUDGE BRENNER: Don't you think we had the
14 answer to that question in the record a couple times, a
15 statistically significant number of times?

16 [Laughter]

17 Let's just go after new clarifying points, Mr.
18 Dynner.

19 BY MR. DYNNER: (Resuming)

20 Q Mr. Johnson, if you will turn to page 18,899
21 of the transcript.

22 JUDGE BRENNER: Give us a moment, please.

23 [Pause]

24 BY MR. DYNNER: (Resuming)

25 Q Mr. Johnson, in your answer which begins

1 actually on the preceding page, 18,898, you stated,
2 "With respect to adequacy, I am confident that today's
3 program is more stringent than the previous program
4 simply because procedures and manuals never get
5 simpler." And then you went on to talk about the
6 standard.

7 What is the evidence upon which you base your
8 statement that procedures and manuals never get simpler?

9 A (WITNESS JOHNSON) Many years of experience,
10 Mr. Dynner.

11 Q You have no specific evidence with regard to
12 the LILCO or Stone & Webster QA program procedures and
13 manuals that they in particular never got simpler, do
14 you?

15 A (WITNESS JOHNSON) I personally do not, but
16 the project records would have a comparison of the
17 previous procedures that we looked at versus today's
18 procedures.

19 Q I'm sorry. You said who would have that?

20 A (WITNESS JOHNSON) The project records from
21 what we did.

22 Q Did you base your statement on a review of the
23 project records?

24 A (WITNESS JOHNSON) No, I indicated I base my
25 statement on many years of experience.

1 Q Mr. Johnson, if you will turn now to page
2 18,915 of the transcript, in an answer in the middle of
3 that page you referred to how you selected the
4 mechanical and electrical -- I think you called them
5 active elements on a 2:1 ratio, which was in some
6 apparenat relationship to the numbers of those systems;
7 is that correct?

8 A (WITNESS JOHNSON) That is correct.

9 Q As I understood your testimony to date on the
10 Torrey Pines methodology, you place a great deal of
11 priority on the significance of items rather than on
12 their numbers, don't you?

13 A (WITNESS JOHNSON) Yes, we do.

14 Q Why did you choose to conduct your inspection
15 of these two systems as you explained here on the basis
16 of their relative numbers of items in the plant?

17 A (WITNESS JOHNSON) I did not state here that
18 we conducted our investigation based upon the relative
19 numbers of systems in the plant. Your questions
20 previously had questioned the number of electrical
21 components that we looked at, and so I was simply
22 putting into your framework the numbers. It made sense
23 even on a numbers basis even though we select them on a
24 significance basis.

25 Q You don't feel that the electrical systems in

1 the plant are less important than the mechanical
2 systems, do you?

3 A (WITNESS JOHNSON) I don't believe I stated
4 that.

5 Q You don't feel that is true, do you?

6 A (WITNESS JOHNSON) No, I do not.

7 MR. ELLIS: Judge Brenner, for the record, I
8 had an objection because I think the question is
9 excessively broad without specifying which electrical
10 systems or which mechanical systems.

11 JUDGE BRENNER: Well, you were a little slow.

12 MR. ELLIS: And in addition, it was beyond the
13 scope.

14 JUDGE BRENNER: But the question was asked and
15 answered already, Mr. Ellis. It is your time as well as
16 my time.

17 MR. DYNNER: I have no further questions. Mr.
18 Miller will have some questions.

19 BY MR. MILLER:

20 Q Mr. Johnson, yesterday you indicated that at
21 the time of the Torrey Pines review, the precise
22 location of pipe supports was not yet specified because
23 of the plant status. Do you recall that testimony?

24 A (WITNESS JOHNSON) No, I don't.

25 Q To your knowledge, were pipe supports at the

1 Shoreham plant generally specified at the time of the
2 Torrey Pines inspection?

3 A (WITNESS JOHNSON) In one phase or another of
4 the pipe support program that was described yesterday,
5 yes. And where they would not specify, they were
6 written up on discrepancy reports.

7 JUDGE BRENNER: What pipe supports are we
8 talking about, Mr. Miller?

9 MR. MILLER: I believe we were talking, Judge
10 Brenner, about the secondary supports that you asked
11 about in relation to Group 4(f) of Suffolk County
12 Exhibit 111.

13 JUDGE BRENNER: You didn't specify that.

14 Mr. Johnson, did you understand he was asking
15 about the secondary supports?

16 WITNESS JOHNSON: No, I did not.

17 JUDGE BRENNER: Does that change your answer?

18 WITNESS JOHNSON: I believe I testified
19 yesterday that the secondary supports are usually the
20 last type of support to go in because of their smaller
21 character and their less significance in terms of the
22 effect on other equipment. The context of the review
23 was that we were using isometric drawings to check the
24 large-bore supports, and in that context the precise
25 location of the secondary supports is not specified on

1 those drawings; it is rather specified on a set of
2 E&DCRs, and maybe that is what Mr. Miller had reference
3 to.

4 MR. MILLER: Thank you, Mr. Johnson.

5 BY MR. MILLER: (Resuming)

6 Q Mr. Johnson, isn't it true that at the time of
7 the Torrey Pines inspection, the pipe support locations
8 were specified to be within a certain construction
9 tolerance?

10 A (WITNESS JOHNSON) The ones that were
11 installed were specified within a certain tolerance,
12 that is correct.

13 JUDGE BRENNER: Do you mean locational
14 tolerance?

15 MR. MILLER: Yes, Judge Brenner.

16 JUDGE BRENNER: All right. You are being very
17 broad in some of these questions, and then we go back
18 and read the record afterward and it makes it harder.

19 MR. ELLIS: Can we also be clear what supports
20 we were talking about that time?

21 JUDGE BRENNER: Secondary supports still, I
22 guess.

23 MR. MILLER: Judge Brenner, we are still
24 talking about the secondary supports.

25 BY MR. MILLER: (Resuming)

1 Q Mr. Johnson, did you draw any general
2 conclusions with respect to the secondary supports at
3 Shoreham and with respect to the QA/QC program at
4 Shoreham regarding those supports?

5 A (WITNESS JOHNSON) I think we stated in the
6 report in the pipe support area it was in a state of
7 flux and final construction and we took that into
8 account in making our general conclusion that the
9 construction control was adequate and that the
10 safety-related hardware that was produced was
11 satisfactory.

12 Q Mr. Johnson, how could you conclude that the
13 construction control program was generally adequate if
14 the secondary supports were, as you say, in a state of
15 flux?

16 A (WITNESS JOHNSON) The construction is a state
17 of flux, Mr. Miller, and the reason you have a
18 construction control program is to control that
19 activity. I don't understand your question.

20 Q Well, with respect to the precise location of
21 the supports, did Torrey Pines draw any conclusions with
22 respect to the QA/QC program?

23 A (WITNESS JOHNSON) We concluded that the
24 program was operating, yes. If you can make your
25 question more precise, I will try to answer it more

1 precisely.

2 JUDGE BRENNER: How did you know they were
3 going to put it in the right place eventually?

4 WITNESS JOHNSON: We knew they were going to
5 put it in the right place eventually because we had
6 significant evidence from other areas where the program
7 had operated in pipe supports and in secondary pipe
8 supports; in fact, if we want to be that specific, that
9 the program worked and the supports were installed where
10 they were supposed to be.

11 BY MR. MILLER: (Resuming)

12 Q Then, Mr. Johnson, you drew upon evidence in
13 other areas of the plant to conclude with respect to
14 this particular area that the secondary supports would
15 also be installed correctly; is that correct, then?

16 A (WITNESS JOHNSON) Yes, we used evidence from
17 other secondary supports to draw that conclusion that
18 the secondary supports would also be installed correctly.

19 Q Mr. Johnson, yesterday in response to a
20 question from Mr. Ellis respecting the missed gates, you
21 stated that Torrey Pines concluded that the errors
22 discovered were people mistakes, I think to use your
23 word, and did not reflect upon the QA/QC program. Do
24 you recall that testimony?

25 A (WITNESS JOHNSON) Yes, I believe we said they

1 were people mistakes.

2 Q Well, Mr. Johnson, isn't the purpose of a
3 QA/QC program to detect and correct people mistakes?

4 A (WITNESS JOHNSON) That is one of the purposes
5 of a QA program, yes.

6 Q Doesn't the fact that Torrey Pines found
7 instances where people mistakes were not detected or
8 corrected, didn't that say something about the QA/QC
9 program to Torrey Pines?

10 A (WITNESS JOHNSON) The function of the QA
11 program is not to produce zero defects, and I have to
12 put the significance of what those people mistakes were
13 into the judgment relating to whether the QA program is
14 functioning properly, which was not involved in your
15 question. The fact that people make mistakes is no big
16 surprise. The fact that a program may or may not have
17 identified those mistakes -- I mean it is not clear to
18 me since the construction is not complete that the
19 mistakes were not identified if we are speaking in a
20 general sense. And the significance of those mistakes
21 must be taken into account, too.

22 Q Well, Mr. Johnson, then I gather Torrey Pines
23 used its judgment to determine whether or not a certain
24 frequency of people mistakes was acceptable, and if zero
25 mistakes is not possible, as you say, what would be

1 Torrey Pines' opinion as to the level of frequency of
2 people mistakes which would not be acceptable?

3 A (WITNESS JOHNSON) This is familiar ground,
4 Mr. Miller. I will say it again. The numbers do not
5 have significance unless you look at what the numbers
6 mean, and I cannot give you a number because you must
7 relate the significance of what is going on before you
8 can draw any kind of conclusion.

9 Q Mr. Novarro, yesterday in response to a
10 question from Judge Brenner, I believe Mr. Johnson
11 stated that the secondary supports identified by the
12 County in Group 4-F of Exhibit 111 were safety-related
13 supports but that those supports were considered by
14 Torrey Pines to have no effect on the integrity of the
15 drain lines or the vent lines. Do you recall that
16 testimony, sir?

17 JUDGE BRENNER: That is not right, Mr. Miller.

18 WITNESS JOHNSON: That is incorrect, Mr.
19 Miller.

20 JUDGE BRENNER: We have all testified to that.

21 BY MR. MILLER: (Resuming)

22 Q Why don't you clarify it then, Mr. Johnson.

23 JUDGE BRENNER: Wait a minute. I don't want
24 to go over it again. The testimony by Mr. Johnson, as I
25 recall it, perhaps incorrectly, was that in Torrey

1 Pines' view they would have no effect on the integrity
2 of the primary lines. The purpose is, in fact, to
3 support the line supporting the drains and vents. We
4 also established, however, that they were
5 safety-related, and I explored that a little bit, too.

6 MR. MILLER: Okay. I stand corrected, Judge
7 Brenner.

8 BY MR. MILLER: (Resuming)

9 Q Mr. Novarro, let me continue, then, with that
10 clarification. Are you generally familiar with LILCO's
11 technical specifications?

12 A (WITNESS NOVARRO) I know that we technical
13 specifications, but I am not familiar with what is in
14 them.

15 Q Do you know whether vents and drain line
16 requirements are set forth in LILCO's technical
17 specifications?

18 A (WITNESS NOVARRO) I think you have to be more
19 specific about tech specs. I answered the question in
20 the capital, Technical Specifications, the procedures
21 that are required by the NRC as part of a plant
22 operating process. Is that what you are asking me about?

23 Q Well, Mr. Novarro, would you agree that if an
24 item or component, in this case a pipe support, would be
25 included within LILCO's technical specifications, that

1 these pipe supports would therefore have safety
2 significance?

3 MR. ELLIS: I object to the question. It is
4 clear that he is using the term "technical
5 specifications." I am not sure Mr. Miller knows what he
6 is talking about, specifications, and I think he ought
7 to be specific so that the witness is not misled.

8 JUDGE BRENNER: The witness said he had a
9 problem with the term and you didn't help him on it.
10 Why don't you go more directly the way you are going,
11 because you are starting out very broadly. I hope you
12 are going somewhere with it.

13 MR. MILLER: Judge Brenner, I am trying to get
14 a clarification.

15 JUDGE BRENNER: Well, don't tell me. Just ask
16 your question. But I am pointing out that you are kind
17 of approaching it very gingerly.

18 BY MR. MILLER: (Resuming)

19 Q Mr. Novarro, would you agree -- I'm sorry,
20 Judge Morris. Go ahead.

21 JUDGE MORRIS: Mr. Miller, I will be
22 hopelessly confused if we don't agree that the technical
23 specifications that we are talking about are contained
24 in a document that becomes a part of the operating
25 license, no more, no less.

1 MR. MILLER: That is correct, Judge Morris.

2 BY MR. MILLER: (Resuming)

3 Q Mr. Novarro, is that your understanding?

4 A (WITNESS NOVARRO) That is what I understand
5 capital Technical Specifications are, yes. But I think
6 I mentioned earlier that I don't know what the details
7 of those documents are.

8 Q Mr. Novarro, you might recall that yesterday
9 Judge Morris asked certain questions with respect to
10 LILCO's pipe support reanalysis. Do you recall that
11 from yesterday, Mr. Novarro?

12 MR. ELLIS: I object to the question. I don't
13 see what his recalling, unless he is asking a specific
14 question, where that gets us to.

15 JUDGE BRENNER: All right. Well, it helps as
16 the foundation to get the recollection, and we all do it
17 when questioning and there is nothing wrong with it.
18 However, your area of recall was too broad, Mr. Miller.
19 Focus it on the particulars.

20 MR. MILLER: Judge Brenner, unfortunately we
21 didn't have access to the transcript until this morning,
22 so I'm trying to draw his attention to the area by
23 connecting it to Judge Morris' questions.

24 JUDGE BRENNER: I didn't require a page, but
25 your citation of that area is too broad because we have

1 been over a lot about that area and a lot about pipe
2 supports. I sat here listening to the testimony also,
3 and subjectively your reference as broadly as you gave
4 it did not help key me in, and I have even got notes on
5 yesterday. So just be a little more specific, that's
6 all. But I think your drawing his attention to
7 something as a foundation is perfectly proper.

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1 BY MR. MILLER (Resuming):

2 Q Mr. Novarro, let me ask you with respect to
3 the LILCO piping reanalysis you discussed with Judge
4 Morris yesterday, did that reanalysis include a
5 reanalysis of the pipe supports' seismic condition?

6 JUDGE MORRIS: Let me draw your attention to
7 transcript page 18,944.

8 MR. MILLER: Thank you, Judge Morris.

9 BY MR. MILLER (Resuming):

10 Q Mr. Novarro, did you see that reference in the
11 transcript?

12 A (WITNESS NOVARRO) Yes.

13 Q My question was did the LILCO reanalysis
14 include a reanalysis of the seismic condition of the
15 pipe supports?

16 A (WITNESS NOVARRO) And I answered yes in that
17 respect yesterday.

18 Q Mr. Novarro, are you generally familiar with
19 Stone & Webster's GHO/SH program?

20 A (WITNESS NOVARRO) I'm afraid not.

21 Q You are not? Do you know what the GHO, 'SH
22 stands for?

23 A (WITNESS NOVARRO) No.

24 JUDGE BRENNER: Do you know how to pronounce
25 it?

1 (Laughter.)

2 MR. MILLER: They're all caps, Judge Brenner.

3 I assume that it stands for something.

4 I would like to hand out a document, Judge
5 Brenner, which maybe could refresh --

6 JUDGE BRENNER: Well, tell me why it is
7 important to go into this.

8 MR. MILLER: It relates to the seismic
9 condition of the pipe supports and the reanalysis.

10 JUDGE BRENNER: Tell me why it is important in
11 terms of what Torrey Pines did, because this isn't a
12 contention exploring the seismic analysis of the pipe
13 supports.

14 MR. MILLER: Well, if I understand correctly,
15 Judge Brenner, Mr. Novarro's testimony will be that
16 reanalysis showed that the condition of the pipe
17 supports was acceptable.

18 JUDGE BRENNER: No. We are not writing a
19 finding on whether or not the pipe supports were
20 correctly seismically analyzed. The testimony only came
21 up as one of the things that had been going on at the
22 plant in terms of overall analysis of the pipe supports,
23 and it goes to the state of completion of location. And
24 I don't want any inquiry into whether they did a proper
25 seismic analysis. We're not going to write a finding

1 that they did a proper seismic analysis as part of this
2 contention.

3 MR. MILLER. Then, Judge Brenner, I will move
4 on to the last question, hopefully.

5 BY MR. MILLER (Resuming):

6 Q Mr. Johnson, a quick point, if you would.
7 Yesterday in clarifying for us the count in number of
8 DRs set forth in the executive summary, it is my
9 recollection that you stated that task E2 had 35 total
10 discrepancy reports; is that correct?

11 A (WITNESS JOHNSON) Yes, I believe it is.

12 Q Is the information set forth in the executive
13 summary at page 3-8 and in Volume 2 at page 6-9 and
14 3-89, which states that there were 37 discrepancy
15 reports, is that incorrect, Mr. Johnson?

16 A (WITNESS JOHNSON) Based upon the tables that
17 we reviewed and a review of all of the discrepancy
18 reports, yes. Some of those reports -- two of them
19 specifically -- were misappropriately identified as E2
20 rather than Task C.

21 (Counsel for Suffolk County conferring.)

22 MR. MILLER: Judge Brenner, that would
23 complete the County's recross examination.

24 (Board conferring.)

25 JUDGE CARPENTER: Mr. Johnson, what was your

1 purpose in enumerating these reports, and in counting
2 them? Why did you add them up? What did you think you
3 were going to learn? Does it make a difference whether
4 there were 37 or 35?

5 WITNESS JOHNSON: No, it doesn't. We presumed
6 that people would want to know how many discrepancies
7 were identified in each task associated with the
8 activity, and so we put those numbers in there. There
9 are a lot of numbers in the report. We put in numbers
10 that we were aware of so that if people wanted to look
11 at numbers, they had numbers to look at without having
12 to derive them from the basic data in Volume 3. And we
13 had done that in our trending analysis, and we had the
14 information so we presented the information.

15 No, there is no difference between 35 and 37
16 in the numerical sense. The total number is correct;
17 there were 371 discrepancy reports initiated, and there
18 were 268 left valid. And if you don't include the DR
19 process, that in turn invalidated some of those.

20 JUDGE CARPENTER: I believe you said you did
21 this because some people might like to know what the
22 numbers were. Could you anticipate why people would
23 want to know what the numbers were?

24 WITNESS JOHNSON: Well, if we had presented no
25 numbers with respect to the tasks, one would not know

1 whether 200 of the discrepancies were on the program
2 definition in Task A, or whether they were grouped
3 somewhere that was inappropriate, in the total context.
4 And the reason for presenting the numbers was to show
5 where the discrepancies had been identified, and the
6 relative magnitude of discrepancies that had been
7 identified in that activity.

8 We were trying to aid people in deriving their
9 own judgments with respect to what we had judged.

10 JUDGE CARPENTER: Yes, I believe you testified
11 several times that the extensive inspection of pipe
12 supports, then, makes any sort of simple percentage of
13 the total effort sort of unbalanced.

14 WITNESS JOHNSON: That's true.

15 JUDGE CARPENTER: I think you directed our
16 attention to taking that out and then looking at the
17 part of the program that looked at, as you call it,
18 active components. Would you agree the report perhaps
19 doesn't make that as clear as it might? If you were to
20 think again, you might express that differently?

21 WITNESS JOHNSON: Yes, we might make that more
22 clear. We tried to indicate that -- when we stated that
23 the pipe support activity was in addition to the basic
24 logic we were using, we tried to indicate the numbers of
25 discrepancies identified in the pipe support area and

1 provide data to allow someone else to do that. We
2 didn't go through the explanation that we have in this
3 form.

4 JUDGE CARPENTER: But then when you went into
5 the description in terms of the numerical values used,
6 percentages, and that does produce in my mind that if
7 one doesn't pay careful attention to what those
8 percentages represent, it does produce a different feel,
9 if you will, absent any numerical standards. And the
10 best one you come to is a numerical feel about where the
11 discrepancies are bunched, depending upon how you form
12 those statistics.

13 And I just want to be sure that I am on the
14 same wavelength that you now feel, that that might be a
15 useful view which wasn't in the report, to look at the
16 relative frequency of deficiency reports just in the
17 areas where active components were being inspected, if
18 one is interested, and which category of active
19 component had the most deficiencies.

20 WITNESS JOHNSON: I think part of our problem,
21 too, Judge Carpenter, was we didn't know how someone
22 else would want to come into this activity. To answer
23 your question, yes. If we were going to emphasize
24 active components, the data we presented in the report
25 is not easily relatable to active components.

1 That is not to suggest that the inactive
2 components are not also important, however. And we
3 didn't know at the time we were writing the report what
4 comparisons would be made in looking at the report. And
5 that is one reason we tried to provide all the raw data
6 and all the numerical data that we had generated along
7 the way to assist someone else in deriving some other
8 approach or some other comparison, if they chose to do
9 that.

10 JUDGE CARPENTER: Well, that's the reason I
11 was exploring this, because it does imply that drawing
12 numerical standards, numerical guidelines, that might be
13 appropriate. And against that, as you've said
14 repeatedly, your notion that because each of these
15 deficiency reports really is an item unto itself, I
16 don't know what 10 deficiency reports means when each
17 one of them is qualitatively different. They are not 10
18 of something; they are 10 separate deficiency reports
19 which have to be looked at in evaluating the quality of
20 a program. And this notion that one can sum up the
21 number and can get some information is what I am trying
22 to understand better.

23 That is why I wanted to explore it a little
24 bit in the context of you did, in the report, provide
25 some numerical summaries. And then you implied that

1 well, maybe they would be useful to somebody else who
2 understood how to interpret this better than you did,
3 and I question that.

4 WITNESS JOHNSON: I agree with your comments.
5 I guess the way I would say it is that I believe the
6 numbers may have qualitative significance if they are
7 used in the right context.

8 JUDGE CARPENTER: Well, that is why I said
9 feel.

10 WITNESS JOHNSON: Feel is a good word, and I
11 think that we did consider the numbers in the terms of a
12 feel or in terms of a qualitative valuation. But I
13 agree with you wholeheartedly that each discrepancy
14 report is unique. And in truth, I am not aware of any
15 discrepancy reports other than the ones with the same
16 types and the same report that deal with exactly the
17 same thing.

18 JUDGE CARPENTER: Well, that is the thing
19 about the group of pipe supports. That bundle of six or
20 seven, I forget the exact number -- is a group that one
21 could try to understand in some way, because that is a
22 group --

23 WITNESS JOHNSON: But even they are not
24 precisely the same. There are differences.

25 JUDGE CARPENTER: Thank you. I just wanted to

1 be sure that I understood. And all the admittedly
2 repetitive references to this that that was the bottom
3 line, that really while the numbers, numerical
4 statements were made in the report, that is really not
5 the basis for your judgment vis a vis the satisfaction
6 of the program absent any numerical standard. And I
7 don't see how one could ever create one, frankly.

8 WITNESS JOHNSON: I think we are in agreement,
9 Judge.

10 JUDGE CARPENTER: Thank you.

11 JUDGE BRENNER: Mr. Ellis?

12 MR. ELLIS: I have no questions on redirect.
13 I do have one question that was prompted by a Board
14 question yesterday, if I may.

15 EXAMINATION ON BOARD EXAMINATION

16 BY MR. ELLIS:

17 Q Mr. Johnson, yesterday I believe Judge Morris
18 asked you some questions concerning the application of
19 Appendix B to safety-related set. In your experience,
20 do you do the same thing under Appendix B for every
21 safety-related component, regardless of its importance
22 to the safety of the plant?

23 A (WITNESS JOHNSON) No, I didn't mean to give
24 that impression. I believe that the discussion with
25 Judge Morris yesterday related to the program that

1 responds to Appendix B. And in the program
2 requirements, procedures and that kind of thing, I don't
3 think there is any differentiation as to what the
4 requirements are.

5 In the application of those requirements, the
6 relative significance of the activity and/or the
7 components you are dealing with dictates what degree of
8 inspections or what degree of controls you apply in that
9 specific item.

10 MR. ELLIS: No further questions, Judge
11 Brenner.

12 JUDGE BRENNER: I think the time has finally
13 arrived and subject to whatever we may decide on the
14 County's motion which we are going to discuss very
15 shortly -- in fact, sometime this morning -- we would
16 like to thank you both very much for all of your time
17 here. It is always difficult to testify and it gets
18 more difficult as time goes on in a particular day and
19 in a particular week. And this is all information that
20 we now have before us that we didn't have before, and we
21 thank you for that. So thank you both very much.

22 (Witnesses Novarro and Johnson were excused.)

23 JUDGE BRENNER: All right. Did the County
24 give LILCO a copy of the cross plan or some copy of the
25 points they hope to prove by the RAT inspection?

1 MR. MILLER: Judge Brenner, yesterday after we
2 broke for the day we orally advised LILCO of the main
3 points of our cross plan. This morning, we met with Mr.
4 Bordenick and again went through the main points of the
5 cross plan. We did not provide copies of the cross plan
6 to the parties.

7 JUDGE BRENNER: All right. But I want to know
8 what they know so we can discuss it.

9 MR. EARLEY: We don't have a copy, Judge.

10 MR. ELLIS: Judge Brenner, that is what we
11 were given. Now, at the bottom of the page is a
12 handwritten notation of mine in my handwriting. That is
13 based upon a message I received from Mr. Powell who
14 received communication from Mr. Miller.

15 JUDGE BRENNER: All right. I think this is a
16 fair summary of the main points. I just want to be able
17 to discuss it without going into too much, although I
18 don't think any of it is a big secret. But
19 nevertheless, I certainly want to respect the confidence
20 of the cross plan.

21 This is your only copy?

22 MR. ELLIS: Yes. Actually, we have another
23 one here.

24 JUDGE BRENNER: Can I keep this one up here?

25 MR. ELLIS: Yes.

1 JUDGE BRENNER: All right. Then I will return
2 it to you after or get some copies.

3 All right. Why don't we discuss that subject
4 now, then. That is, whether or not these witnesses, Mr.
5 Johnson and Mr. Novarro, should be cross examined by the
6 County on the IE inspection report 33-02, which we have
7 been calling the RAT inspection, which report was
8 received only very recently, on Thursday I believe it
9 was, by the County and by everybody else except LILCO, I
10 guess, received it the day before on the 19th.

11 MR. ELLIS: Judge Brenner, the position of
12 LILCO on this is as follows. We would object to any
13 examination of these witnesses on this I&E report on a
14 number of grounds. It is unfair to these witnesses, it
15 is unfair to LILCO, it is unwarranted --

16 JUDGE BRENNER: I'm going to save you the
17 trouble. We're not going to allow it, and I will tell
18 you why.

19 We have looked at the points and as I say, the
20 outline given by the County I think fairly describes the
21 main headings, although it does not give you the full
22 flavor of the full detail.

23 The points are that according to the County,
24 the inspection report shows, in the staff's view, an
25 alleged over-reliance on final inspection, and that

1 there are some things pertinent to final inspection in
2 the Torrey Pines report in terms of describing that
3 there were still inspections to come with respect to
4 some of the findings and so on. So the County wanted to
5 explore that relationship.

6 In addition, housekeeping, which was
7 highlighted in this report or mentioned in this report
8 and the accompanying letter, or related letter, and
9 there were housekeeping things involved in Torrey Pines
10 -- for example, the debris in the HVAC duct.

11 In addition and more generally, the report
12 deals with alleged failure to control and document
13 changes to items already finally inspected, and this, of
14 course, in the County's view, relates to reliance on the
15 final inspection and, I suppose, efficacy of the
16 construction control program.

17 These are not the right witnesses to suddenly
18 bring this report up. Well, not suddenly bring it up.
19 The report was only available, but to come back at with
20 this report. The subjects of what Torrey Pines looked
21 at and what they based their conclusions on has been
22 gone into, I think it is fair to say, in great detail
23 through the report being in evidence and through the
24 cross examination.

25 We know what Torrey Pines did, we know their

1 arguments as to how they reached their judgments. We
2 have the cross examination probing. There is argument,
3 and it is all before us on this record.

4 To then go back and say well, what about this
5 and what about that in terms of the findings is not
6 productive. We are the final judges at this initial
7 stage of putting the facts together. We are as capable
8 of putting it together for ourselves as to have a
9 witness testify about it, even assuming they knew the
10 facts.

11 We accept the representation of LILCO that
12 Torrey Pines is not familiar with the details of this
13 inspection. It would surprise us if they were. I mean
14 yes, he had time perhaps to read it since yesterday, but
15 that is not the same, as we have seen time and time
16 again on cross examination of these reports, as being
17 familiar with them.

18 In addition, while the report, the inspection
19 report, has some new violations and discrepancies, the
20 subject area was available for cross examination of
21 Torrey Pines in terms of general challenge to them, and
22 they were asked questions about it, about housekeeping,
23 about reliance on final inspections, and the whole area
24 deals with the control of construction practices.

25 So it is just not going to be productive or

1 helpful, in our view, to have these witnesses, based
2 upon their involvement with Torrey Pines, testify about
3 the inspection report.

4 Now for all I know, Mr. Novarro has other
5 knowledge that has nothing to do with his purpose in
6 testifying here on Torrey Pines, but that is a different
7 matter. So the request to cross examine this panel on
8 that inspection report is denied.

9 Now going beyond this panel, the question is
10 what use should be made of this report at all in the
11 record opinion. We have an admittedly very preliminary
12 outline of what the County would like to cross examine
13 the proper witnesses on. LILCO and staff witnesses.
14 And the County notes it's preliminary, being done on
15 short notice and before the exit interview, and we agree
16 with that. And that is what we wanted as a preliminary
17 indication so we could put the picture together.

18 We have problems with the scope as we
19 understand it based upon this preliminary indication of
20 what the County thinks is proper to cross examine
21 anybody assuming the proper witness on this report.
22 That is, the County wants to go through each and every
23 finding and discrepancy and violation and ask about it,
24 and ask the same types of questions that we have had
25 about each and every other finding; how did it happen,

1 what inspections were missed, what is the significance
2 and so on.

3 We are not going to permit that. We can't do
4 that with each and every report that is going to keep
5 coming out, and we have had plenty of examples of all of
6 the audit reports and everything else.

7 However, this report does focus with respect to
8 some of the violations on the construction control
9 process. We have certainly had a lot of examples that
10 involved that, and broadly stated, almost anything can
11 be tied to that.

12 We would be willing to consider allowing the
13 County to cross examine -- within the set time limit
14 that we will discuss among ourselves and get back to you
15 shortly -- the LILCO and staff witnesses with cognizance
16 of the knowledge of this inspection report. But the
17 cross examination would not go through each and every
18 item. That is not going to be helpful. We have had
19 weeks upon weeks upon weeks upon weeks literally -- that
20 is no exaggeration -- of that kind of examination.

21 However, we think it would be helpful to
22 explore the reliance on final inspection not by going
23 example after example, but in broad brush form to find
24 out what it is the staff had in mind, whether it was a
25 general cautionary indication on the part of the staff,

1 or whether they saw something in the treble dam and then
2 as a subpart of that, to explore any pressures on the
3 FQC organization in terms of overtime and so on, as
4 alluded to in the cover letter.

5 In addition, we would be willing to receive a
6 cross plan focused only on the violations. We have to
7 draw the line somewhere, and we would draw the line on
8 the basis of the staff's preliminary screening, if you
9 will, about which they thought was more important, and
10 that would be the violations. Not each and every
11 discrepancy in the report, but only the violations and
12 only the ones related to possible lack of control on the
13 construction or design control program, and they overlap
14 in some of the violations.

15 Now, that is a good deal -- it is a large
16 percentage of the violations. I hadn't thought about
17 what the number is.

18 Now, there are some things, though, that deal
19 with the OQA area that are on this preliminary plan, and
20 I don't understand that at all since that is still a
21 subject of discussion and we are not allowing any cross
22 examination now on OQA.

23 MR. ELLIS: Judge Brenner, I take it that is
24 something that is not reflected on the single sheet that
25 we have.

1 JUDGE BRENNER: That's right. On the single
2 sheet you have, and properly so, was the immediate areas
3 that they would ask this panel, and in response to our
4 request, the County also supplied a preliminary outline
5 of what they would ask of the witnesses.

6 MR. MILLER: Judge Brenner, if I might just
7 have a quick clarification with respect to the
8 inspection report. As you know, housekeeping conditions
9 was not made a violation in the report. We think it
10 very significant in the context of things that have gone
11 before this Board.

12 We would assume that we could include
13 housekeeping within the cost plan to be submitted to the
14 Board.

15 JUDGE BRENNER: Yes. I left it out. Yes, I
16 meant to include it, but that doesn't mean suddenly
17 let's hear all about housekeeping again. There has been
18 a lot about it. It is no surprise to us at least, nor
19 should it be to anybody else who has followed this
20 proceeding, that there have been housekeeping
21 discrepancies at the site. We have had a lot of
22 testimony about it through the audit reports and later.
23 Now the timeframe is somewhat different and you may want
24 to explore it in terms of the timeframe.

25 And with those subjects that I have just

1 highlighted, you may even want to ask the staff whether
2 -- if that is some of the conclusions we have already
3 heard on the record and why or why not. I presume some
4 one of the -- some of the cognizant staff witnesses of
5 this report, just from reading the names of the previous
6 staff panel. I don't know if you are prepared to say
7 that, Mr. Bordenick.

8 MR. BORDENICK: I'm not really prepared to say
9 that, Judge Brenner. Of course, Mr. Higgins was present
10 during the RAT inspection and he was a previous witness.

11 JUDGE BRENNER: I think it would be helpful to
12 have at least some continuity, and I'm not saying you
13 need total continuity. And, for example, Mr. Higgins
14 would supply that continuity. We will leave it up to
15 the staff as to who else would be appropriate, but we
16 suggest that he would be appropriate.

17 MR. BORDENICK: I would agree. Just sitting
18 here, in my mind I was mulling it over --- and this is
19 without, of course, talking to the region -- but I was
20 just mulling it over in my mind and the witnesses would
21 probably be Mr. Greenman and Mr. Higgins.

22 JUDGE BRENNER: Okay. What we want is a cross
23 plan. We will come back to you tomorrow on the timing
24 and you can think about the timing, also. It should be
25 sooner rather than later. I don't know that it has to

1 be this week, and the parties can talk about that,
2 also. And in terms of when we would schedule it,
3 whether it would be right after Environmental
4 Qualifications or whether it would be after Containment
5 Isolation.

6 In addition, we want a time period set. We
7 haven't fully discussed it among ourselves, but we want
8 a time limit, an absolute time limit, and we will
9 solicit the County's view on what it thinks is
10 reasonable. And we will also solicit the views of the
11 parties as to whether the panel should be combined or
12 separate. That is, the staff and LILCO panel.

13 We will also solicit the parties' views on
14 whether there are any follow-up materials in writing to
15 the inspection report that exist or which we should
16 await. We're not saying that's required. Again, we'd
17 just solicit the views of the parties.

18 And now we want the parties to have very
19 detailed, written receipt of what the County would seek
20 to inquire into, something very close to the cross
21 plan. And in fact, I think in this instance it might be
22 the easiest thing to just give them the same cross plan
23 you're going to give us.

24 If you have a problem with that, you can tell
25 us and we can reach some accommodation. But we would

1 certainly want it very close. And then we want to
2 discuss the cross plan among the parties together before
3 the witnesses are here so we can see if this general
4 guidance that we are giving now is being properly
5 implemented.

6 MR. BORDENICK: Judge Brenner?

7 JUDGE BRENNER: Let me just add what has
8 stimulated all of the caution, Mr. Miller, is the note
9 that the County would cross examine on each and every
10 discrepancy and violation if left to its own devices.
11 And I just can't believe that the County itself would
12 consider that a productive use of its time, and in any
13 event, that is not the way it's going to be.

14 So come back to us after you've all talked
15 among yourselves, and let's discuss it again. I guess
16 tomorrow would be a good time to discuss it again.

17 Mr. Bordenick?

18 MR. BORDENICK: I was just curious, Judge
19 Brenner, as to whether the Board, in its preliminary
20 deliberations, had taken into account the fact that
21 LILCO will be filing a response to the report and,
22 ostensibly, the staff would be responding to that.

23 JUDGE BRENNER: We did not take into account,
24 specifically, on timing. We guessed that that might be
25 the situation, and that is why I vaguely referred to the

1 parties giving us advice on other written materials that
2 are either in existence or may come into existence, and
3 how the timing would affect things.

4 But I don't want to automatically assume that
5 we have to wait for the existence of those materials if
6 the information is known by the right witnesses.

7 MR. BORDENICK: Also, of course, there is an
8 exit meeting which I think is taking place right now.
9 Obviously, the parties have representatives, and there
10 are representatives present at the meeting, but
11 obviously, no one in this room is present at that
12 meeting.

13 (Laughter.)

14 JUDGE BRENNER: We will take judicial notice
15 of that.

16 (Laughter.)

17 MR. BORDENICK: My point is we will have to
18 find out from those who have attended the meeting as to
19 what, if anything, transpired there that might affect
20 what the Board has discussed here.

21 JUDGE BRENNER: Well, I suspect the substance
22 of what transpired there would have less effect than the
23 timing of things in terms of our immediate procedural
24 needs of getting a very detailed cross plan.

25 And when the County prepares the cross plan on

1 the examples of the violations, don't forget what the
2 main theme is; it is a follow-up to the breakdown, or
3 lack of breakdown, in the construction and/or design
4 control program. I don't want to hear how somebody
5 screwed up on a particular incident. That is not
6 important. What is important is what it says for the
7 program.

8 And we are interested in the views of the
9 cognizant witnesses as to what was found means, given
10 the timing -- that is, finding those things wrong at
11 this date. And whether that makes it somewhat different
12 than finding the same thing wrong in an audit that was
13 done three years ago. And now, the particular focus
14 would be housekeeping; not just that there were
15 housekeeping problems of the same time that occurred.

16 So we're interested in the subject but you're
17 going to have to help us by staying keyed on what is
18 important. In addition, in terms of timing, you might
19 consider that I have some pending questions on the
20 matters that I mentioned earlier. It might be good just
21 to combine both things if there is a witness overlap,
22 and you can advise us on that, too. You don't have to,
23 but whatever is convenient.

24 MR. ELLIS: We will consider that, Judge.

25 JUDGE BRENNER: We will take a break in a

1 moment and then come back and hear the argument on the
2 motion for summary disposition of one subpart of the
3 Environmental Qualification contention. I don't know if
4 this hearing was environmentally qualified, but we can
5 hear about that, also.

6 (Laughter.)

7 I'm interestd in the timing for the rest of
8 this week. I mentioned in passing yesterday that we
9 would be willing to discuss the timing because we know
10 you all have a lot of witnesses coming in on the next
11 subject, and Mr. Irwin wanted to discuss that last week
12 and I said let's wait until this week when we know
13 more. And maybe we should briefly discuss that now, in
14 case we have to think about anything over the break.

15 How much do you have for the County, Mr. Ellis?

16 MR. ELLIS: I think our cross examination of
17 the County will be brief.

18 JUDGE BRENNER: Tell me a little more.

19 MR. EARLEY: Judge, I will be doing the cross
20 examination. I will give you a revised cross
21 examination plan and you can see we're going to focus on
22 very limited areas, and I would be very surprised if we
23 did not finish today.

24 I think two hours if we keep the questioning
25 and answering focused. Two to three hours should be all

1 we have.

2 JUDGE BRENNER: All right. Today is Tuesday,
3 if I remember right, and given that, we would be
4 prepared to start Environmental Qualifications this
5 week, I take it.

6 MR. IRWIN: Judge Brenner, our witnesses are
7 here and we're prepared to start today.

8 JUDGE BRENNER: All right. And I saw the
9 staff witnesses in the audience.

10 MR. BORDENICK: I was going to say the staff
11 witnesses are also present, Judge Brenner.

12 (Laughter.)

13 JUDGE BRENNER: Did I miss something?

14 MR. DYNNER: You missed my note of surprise
15 because the County's counsel is not present and prepared
16 to start cross examination. We assumed that based upon
17 Mr. Ellis's past predictions of the amount of time that
18 he is going to take on the cross examination of the
19 County's panel, that I think he said last time it would
20 be about a day.

21 JUDGE BRENNER: Who is going to do the cross
22 for the County?

23 MR. DYNNER: Ms. Letsche was planning on it.

24 JUDGE BRENNER: I guess you had better give
25 her a call.

1 MR. DYNNER: We have got a problem, obviously,
2 in getting her up here today, if the intention is to
3 start today.

4 JUDGE BRENNER: We are going to start with the
5 County's Torrey Pines panel right after lunch at the
6 latest, and maybe even before lunch. Probably before
7 lunch. I think you had better give her a call and see
8 if she can get up here. If she can't, I'm not going to
9 hold you in default. If she can't, I understand the
10 circumstance, but I don't want to just lose the
11 afternoon by inertia, so see what you can do.

12 MR. DYNNER: Okay, I will give her a call,
13 Judge.

14 JUDGE BRENNER: I also want to hear sometime
15 soon when we can finish up the Budnitz matter after the
16 County's findings are filed, and hopefully we can take
17 care of that at some point next week. Keep in mind we
18 will accomodate the schedule, but remember, you have to
19 accomodate the schedule of the cognizant LIICO and staff
20 counsel, too. So work it out in advance as to when we
21 will do that.

22 All right, we will come back at 10:45.

23 (A short recess was taken.)

24

25

1 JUDGE BRENNER: We are ready.

2 MR. IRWIN: Judge Brenner, LILCO is willing to
3 proceed, but we are obviously willing to wait until the
4 Suffolk County representatives are here.

5 JUDGE BRENNER: Can somebody see where they
6 are? I would appreciate it.

7 (Pause.)

8 Back on the record. I guess I was somewhat
9 surprised and didn't react at the time, that the Suffolk
10 County counsel handling Environmental Qualifications is
11 not here because we're going to argue the motion and we
12 need some details that I hope the counsel here have,
13 because in the past, anytime I've asked a question about
14 the subject you always had to make a phone call, Mr.
15 Dynner, or Mr. Miller.

16 MR. DYNNER: Well, Judge Brenner, I was
17 prepared to argue the motion.

18 JUDGE BRENNER: Okay, that answers the
19 question.

20 MR. DYNNER: However, I think before we get to
21 that, we ought to talk a little bit about the entire
22 issue of environmental qualification as it relates to
23 this litigation. Frankly, as you might have expected
24 from my initial reaction, the timing of the now
25 anticipated bend of this Torrey Pines matter came as

1 quite a surprise to us.

2 JUDGE BRENNER: Do you mean it ended too soon?

3 MR. DYNNER: That's right.

4 JUDGE BRENNER: I thought we would have been
5 done with Torrey Pines last week.

6 MR. DYNNER: Well, that may have been your
7 estimate, but based upon the estimates that we heard
8 from LILCO and based upon our own estimates, which have
9 turned out not to be correct, we did not anticipate that
10 it would end today, certainly.

11 As you know, Ms. Letsche is handling this
12 matter, and as everybody knows, all the parties are
13 aware, we have a Thursday deadline to meet with regard
14 to the filing of the findings. And Ms. Letsche and
15 other of my colleagues in Washington have been working
16 days and nights to meet that very important and
17 significant deadline.

18 As a result, Ms. Letsche is still involved in
19 that process. Mr. Minor, the County's consultant with
20 respect to environmental qualification, is currently in
21 Albuquerque attending a standards meeting there. And
22 the long and short of it is that the County will not,
23 unfortunately, be able to proceed with environmental
24 qualification given the press of, in particular, the
25 deadline on the findings.

1 JUDGE BRENNER: You'd better put a timeframe
2 into your last sentence.

3 MR. DYNNER: I beg your pardon?

4 JUDGE BRENNER: You'd better put a timeframe
5 in your last sentence. You left it openended.

6 MR. DYNNER: In our discussions, we certainly
7 -- not today or tomorrow. We discussed the possibility
8 of starting on Thursday morning for the half a day, and
9 concluded that our attorney handling the matter, Ms.
10 Letsche, would not have an opportunity to prepare with
11 Mr. Minor who would be coming back from Albuquerque.
12 And conclude that notwithstanding the generally prompt
13 schedule that the Board has been following in this
14 proceeding that it really, in consideration of
15 attempting to give Environmental Qualification a proper
16 hearing, it would be the County's position to request
17 that the hearing on that matter be deferred until Monday.

18 That would give -- I think there is an element
19 here of (a) miscalculation on the part of those that
20 were trying to see when this would start, and (b) maybe
21 a little bit of lawyers' maneuvering, (c) the fact that
22 it was common knowledge that the individuals concerned
23 were working very, very hard on completing the findings,
24 and taking all of those things together, we would make
25 this request even though we understand that from a

1 purely objective standpoint, we can see why the Board
2 would be very upset with our --

3 JUDGE BRENNER: You've got seven witnesses
4 sitting here; seven, if I counted right. Approximately
5 that number were sitting here. Environmental
6 Qualifications was supposed to start on January 24th, so
7 I don't understand the miscalculation. The findings
8 date was an extension, and I'm not going to allow an
9 extension to, in turn, bootstrap a problem with another
10 matter that was long scheduled.

11 We realize that there are scheduling concerns
12 in a proceeding with this many issues and this many
13 parties and this many attorneys, and it was for that
14 reason that we insisted that the parties adopt a
15 schedule for January well in advance, in December, so
16 that it would know what we would do as close as possible.

17 I don't understand your rather cryptic
18 references to lawyers' maneuvering, but if you mean the
19 fact that LILCO is going to complete their cross
20 examination of the County in a half a day, I don't
21 consider that maneuvering. And even if they had taken a
22 little longer, we would have been ready for
23 Environmental Qualifications tomorrow.

24 In terms of miscalculation of the time, if you
25 had not planned to start today, that should have been

1 discussed certainly among the parties and certainly
2 before us yesterday. You knew or should have known that
3 silence on the part of the County would result in the
4 inertia of witnesses being brought here, and I was
5 concerned with that myself and that is why I raised the
6 timing yesterday, or the day before. I guess it was
7 yesterday, to tell you to think about it, and then
8 raised it anew today.

9 I have had problems with timing with
10 Environmental Qualification on a number of sub-items, no
11 one of which taken by itself has been highly important.
12 However, for the first time in this proceeding, dealing
13 with parties represented by professional, competent
14 lawyers, we have had timeframes ignored in Environmental
15 Qualifications. We have had difficulty and I have had
16 to reiterate the due dates for responses to motions, and
17 I understand there was some possible confusion. I had
18 to reiterate the fact that we have been ready to argue
19 the motion, and that is happening a day or so later than
20 we would have liked.

21 And now, to top it off, we hear you are not
22 ready to begin. It is just unacceptable. It is not
23 very acceptable that the County is not ready today. We
24 would be willing to excuse that. You depended and
25 thought incorrectly that the cross of the County's panel

1 would take at least the entire day today. It is not
2 very excusable because it should have been discussed,
3 but we're not talking about a lot of hours, and we can
4 see how that would occur.

5 But, we are starting Environmental
6 Qualifications tomorrow. You stated that the Board knew
7 Ms. Letsche was handling it. I did not know that, and
8 that is why I asked earlier. I know you weren't
9 handling it because every time I asked a question you
10 didn't know anything about it.

11 MR. DYNNER: Well, I thought I had indicated
12 the other day that Ms. Letsche was handling it, when I
13 said I was going to give her a telephone call. But
14 putting that to one side, I really have to just express
15 the hope that the Board will understand that this is a
16 complicated piece of litigation; there are many facets
17 to it, and various people are doing the best they can on
18 both sides with all parties, to try to get those people
19 to fit into the timeframe that the Board has set.

20 I think there comes a time when -- we are not
21 sitting here saying the Board should excuse what has
22 happened, because I don't think that is the issue. What
23 I am framing it in terms of is a request that the Board
24 consider moving the hearing back to next Monday to
25 commence, assuming that we finish today. What we're

1 asking for, to put it in proper context, is a day and a
2 half leeway, and it is not -- the issue I don't think is
3 whether we ought to be excused for having gotten into a
4 situation that it is extremely difficult for the County
5 to handle.

6 The issue is if a day and a half is so
7 important to moving these proceedings forward, and it is
8 worth sacrificing a hearing on this contention in order
9 to hold the parties' feet to the fire for a day and a
10 half. And that is why we are making the request in the
11 context of that issue, rather than the issue of
12 chastising one side or one party or another for a
13 miscalculation or other things.

14 MR. IRWIN: Judge Brenner, may LILCO be heard
15 on this at some point?

16 JUDGE BRENNER: Yes, in a moment.

17 (Board conferring.)

18 Make it brief, Mr. Irwin.

19 MR. IRWIN: Judge Brenner, there is no
20 surprise about this schedule. It has been set for a
21 long time by agreement of the County at the Board's
22 urging after Suffolk County requested itself a deferral
23 of an earlier set of filing dates.

24 The Board required the parties to come to
25 terms on the schedule, and LILCO agreed, in fact, to a

1 number of specific requests from the County, including a
2 very short lapse between the filing of testimony and the
3 onset of cross examination, because the County wouldn't
4 agree to any other conditions.

5 LILCO also has filed findings. We wrote
6 testimony while we were finding and filing findings. We
7 did our job on time and we didn't ask for extensions.
8 The one time LILCO has ever asked for an extension, it
9 was violently opposed on the issue of 7B and the Board
10 refused it.

11 The fact that Mr. Minor is in Albuquerque
12 today, one day after this hearing was scheduled to
13 commence on this issue, is just the most blatant
14 evidence of the County's defiance of the schedule that
15 they themselves agreed to. This action by the County,
16 it seems to me, is simply a further example of what our
17 motion as about -- default.

18 JUDGE BRENNER: Did LILCO discuss with the
19 County that -- at sometime between yesterday and this
20 morning -- that it looked like that we could be ready
21 for Environmental Qualifications today, as distinguished
22 from tomorrow?

23 MR. IRWIN: Judge Brenner, I called Ms.
24 Letsche yesterday afternoon. She did not return my
25 phone call. I knew, by the way, that she was the

1 attorney handling the matter for the County and,
2 therefore, the one to deal with.

3 JUDGE BRENNER: I'm not sure that answered my
4 question. Was that the purpose of your call; to tell
5 her that?

6 MR. IRWIN: That was one of the purposes. In
7 addition, I believe the transcript, if closely examined
8 as to Mr. Ellis's response to Mr. Dynner's question,
9 would indicate that he said that he did not expect to
10 exceed one day, which obviously includes lesser
11 timeframes. At the very least, as you noted, as the
12 Board noted, that would put off the start of questioning
13 until tomorrow.

14 This schedule has been set for a long time.
15 No surprises.

16 JUDGE BRENNER: What is Mr. Minor doing
17 Albuquerque when we had this issue scheduled for
18 yesterday? Did he expect to finish in one day?

19 MR. DYNNER: Do you want Mr. Hubbard to
20 explain? He's more familiar with it.

21 JUDGE BRENNER: Not why he is there, but what
22 he's doing there when we had it scheduled yesterday. I
23 don't want to hear how important it is. I want to hear
24 how he could plan to be there when we had it scheduled.

25 MR. DYNNER: Well, his plan was based upon

1 incorrect estimates, as it turns out, about how long the
2 Torrey Pines matter would continue.

3 JUDGE BRENNER: We are starting the issue
4 tomorrow. We put more time and effort into this
5 schedule by letting the parties work it out themselves
6 instead of just ordering the schedule than it was
7 worth. We did that, knowing the parties would have
8 considerations to accomodate among themselves, and we
9 expected that that would be done.

10 We will excuse the mis-estimate as to this
11 afternoon, but tomorrow morning we will start. You
12 alluded in rather broad brush, Mr. Dynner, to balancing
13 the day and a half of hearing as against the importance
14 of the substance of the contention, to paraphrase what
15 you said. We reject that that is the factually accurate
16 comparison here.

17 The parties should be ready for litigation on
18 this issue by now. It is not a matter of coming to
19 issue too soon. If anything, we had wanted this matter
20 scheduled, as Mr. Irwin properly suggested, before the
21 time it was scheduled. There have been discussions of
22 this matter, testimony has been filed, we're going to
23 argue the motion in a moment, and we're going to be
24 ready to start tomorrow.

25 We want to be assured reasonably that the

1 issue is completed in time to start Containment
2 Isolation if that is litigated, and as far as we now
3 know, we are assuming that it will be litigated. And
4 that is going to start on February 7th. We won't finish
5 Environmental Qualifications this week, it appears.
6 Whether or not you want Mr. Minor to be here is up to
7 you.

8 However, we will do this much. If we complete
9 the staff and applicant LILCO testimony and got to Mr.
10 Minor this week -- a fact that I doubt highly will
11 happen -- but if that happened, you won't have to bring
12 Mr. Minor here; just out of a precaution that he might
13 get on. And then we will yell at you if he is not
14 here. We will give you that. So you don't have to
15 bring him here to testify. If you want him here to work
16 with the cross examiner, that is up to you, knowing the
17 way you manage your experts' and counsel schedules.

18 You have given me no good reason why Ms.
19 Letsche could not get on a shuttle and be here as early
20 as this afternoon. However, given the short notice and
21 everything, we will not start the issue until tomorrow
22 morning.

23 MR. DYNNER: Well, I think I've tried to
24 explain to you, Judge Brenner, that the issue -- that
25 is, her involvement in the findings, and we're not going

1 to be able to sacrifice her findings for beginning this
2 litigation on this contention tomorrow.

3 JUDGE BRENNER: I don't want to go into
4 everything we said about the findings. We have parties
5 on notice.

6 MR. DYNNER: Well, I'm trying to explain to
7 you what the human reason is why we can't proceed on
8 that basis, and I was hoping that you would take that
9 into consideration rather than to make this, what
10 appears to be, a punitive issue. Because I think that --

11 JUDGE BRENNER: Let me cut you off, Mr.
12 Dynner, because we are wasting time. It is not a
13 punitive issue; it is a matter of balancing the
14 equities, and we have got seven witnesses -- I guess I
15 should get the right count. How many LILCO witnesses
16 are there?

17 MR. IRWIN: Six LILCO, two staff.

18 JUDGE BRENNER: Eight witnesses sitting around
19 waiting to go, the Board is sitting around waiting to
20 go. It is a matter of balancing the equities; it is a
21 matter of keeping the schedule on the assumed schedule.
22 We are already behind just as to January, and I won't
23 discuss being behind overall. And the findings date was
24 extended.

25 Without any problem on our part, we granted

1 that extension rapidly when we received it, knowing
2 that, as the County pointed out in its motion to extend
3 that date, that they had been on notice, but the other
4 week would be helpful. We agreed the findings are very
5 important. But the to use that extension as a bootstrap
6 for another problem is not to be tolerated, and it is
7 just plain bad form.

8 So we are going to start the issue tomorrow
9 morning. You have given me no substantive reason why
10 the County cannot begin its cross examination. With
11 respect to Mr. Minor being somewhere else, he shouldn't
12 have been, but nevertheless, he is not an essential
13 element to start the cross if the case has been prepared
14 like it should have been.

15 MR. DYNNER: Judge Brenner, are you suggesting
16 that if we are unable to start tomorrow, that you would
17 default the County and dismiss the contention?

18 JUDGE BRENNER: Well, I didn't get to that
19 point. I had not doubt that you would be starting
20 tomorrow given our ruling, and I will cross that bridge
21 if and when we come to it.

22 MR. DYNNER: Well, I think then that perhaps I
23 would like to request a short recess before we start the
24 other matter so that I can communicate back to the
25 client and to the people back in Washington.

1 JUDGE BRENNER: We will be breaking for lunch
2 scon. Let's get to this matter.

3 MR. DYNNER: Okay, but it might be moot.

4 JUDGE BRENNER: What might be moot?

5 MR. DYNNER: Well, I mean if we are unable to
6 start the litigation of this contention tomorrow and as
7 a result, the Board dismisses the contention, it will
8 presumably also dismiss Subsection (d).

9 JUDGE BRENNER: Well, I just can't believe
10 that that is going to be the County's reaction, but if
11 it is, that will be your problem and we will deal with
12 it, and we will argue the motion. Because for you to
13 assert that you are unable to have counsel here to cross
14 examine on that issue, given all of the circumstances,
15 is just preposterous. And I think that would have to be
16 the County's own view in assessing its possible
17 argument. But we will leave that up to you.

18 All right. We have before us LILCO's Motion
19 for Partial Summary Disposition of SC Contention 8/SOC
20 Contention 19(h), Environmental Qualification. The
21 motion is dated January 20th, 1983. We also have the
22 NRC staff's Support of Applicant's Motion dated January
23 21st, 1983, and we also have the Suffolk County
24 Opposition to LILCO's Motion for Partial Summary
25 Disposition, dated January 24th, 1983.

1 If we could, I'd like to bind those three
2 motions in at this point.

3 (The three motions discussed above follows)
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

MOTION FOR PARTIAL SUMMARY DISPOSITION
OF SC CONTENTION 8/SOC CONTENTION 19(h) --
ENVIRONMENTAL QUALIFICATION

Long Island Lighting Company (LILCO) hereby moves, pursuant to 10 CFR § 2.749, for summary disposition of subpart (d) of Suffolk County Contention 8 and of the corresponding subpart (4) of SOC Contention 19(h) -- Environmental Qualification, on the ground that there are no genuine issues of material fact to be heard on this issue.1/

BACKGROUND

1. This motion is being filed late in the prelitigation process -- later than LILCO would have preferred. Not until the filing of direct testimony, however, on January 18 did it become clear that no material issues of fact within

1/ LILCO has ben informed this morning that Suffolk County is prepared to execute this agreement tendered to it by LILCO resolving subparts (a) and (b) of the contention.

the scope of subpart (d) of the Environmental Qualification (EQ) contentions had been raised in any direct testimony filed by either of their proponents.

2. SC Contention 8 and SOC Contention 19(h), which are substantially identical, raise the following five specific issues:

- (a) The limited test conditions posed in the Shoreham environmental qualification program are not sufficiently conservative;
- (b) Equipment has been qualified by grandfathering to older, less stringent standards;
- (c) The list of emergency equipment to be qualified is inadequate;
- (d) There has been an inadequate demonstration that all safety-related equipment has been properly qualified to meet aging and other life requirements; and
- (e) There is insufficient information to evaluate the overall adequacy of Shoreham's satisfaction of environmental qualification requirements for safety-related equipment.

3. The filing of testimony on EQ issues follows a long and ultimately unsuccessful attempt at settlement. It is not LILCO's intent here to rehash the substance of the settlement proposals, but an understanding of this process is important in understanding both the timing of this motion and the posture of

the issues it addresses. Pursuant to the Board's direction, settlement negotiations were undertaken beginning in October among LILCO, Suffolk County and the Staff to resolve the EQ contentions. SOC did not participate actively in those discussions. Meetings were held on October 21, December 8 and December 17, 1982. LILCO sent at least three, and on occasion as many as five, technical experts to each meeting. LILCO also prepared and sent to Suffolk County a special submittal, dated December 10, in response to various information requests made by Suffolk County at the December 8 meeting. LILCO requested Suffolk County, at this meeting, to specify its concerns. Suffolk County took the position at the October 21 meeting that it could not specify its contentions until it had been provided with further factual information beyond that already in its possession.

4. At the end of the December 17 meeting, Suffolk County tendered to LILCO a proposal for settlement of the entire contention, which it put into writing by letter dated December 23, 1982. That proposal was discussed in a series of letters and telephone calls between December 23, 1982 and January 10, 1983. On or about January 10, the parties concluded that a comprehensive settlement could not be reached and that no portions of the proposal would partially resolve the EQ contentions.

5. SOC at no time participated actively, or stated any interest in participating actively, in the settlement negotiations. Counsel for SOC discussed the status of settlement negotiations once with counsel for LILCO by telephone and indicated that SOC was permitting SC to take the lead in the negotiation process.

SUBPART(d): AGING

1. The topic of aging as a component of environmental qualification is raised by subpart (d) of the EQ contention.

2. Information was provided by LILCO on the topic of aging in its Environmental Qualification Report for Class IE Equipment (EQ Report). An updated copy of this report has been provided to SC. In the settlement discussions between LILCO and SC, the question of aging was discussed, but Suffolk County never detailed any objection to LILCO's program for determining qualified lives of equipment within the EQ program. In the settlement proposal filed after the December 17 meeting, Suffolk County proposed to resolve its unspecified concern by series of audits which would include reviewing LILCO procedures for controlling the use of parts qualified for lives shorter than 40 years, and for procurement of replacement or spare parts.

3. LILCO has submitted to the Staff in its Environmental Qualification Report for Class IE Components (EQR) a technical justification for control of aging of Class IE components. The NRC Staff has reviewed that program and found that it complies with all applicable requirements. SER Report, November 23, 1982, Attachment 3. LILCO further addressed the question of aging in its prefiled direct testimony on this issue (Q&A 14-21, pp. 11-16), as did the NRC Staff in its prefiled direct testimony (p. 5). LILCO's testimony did not contain any material not already substantially set forth in its Environmental Program. SC did not address the question of aging, directly or by reference, in its prefiled testimony.

There is no absolute requirement that an intervenor file direct testimony as a prerequisite to litigation of an issue in an NRC proceeding. Nor, however, is there automatic license for a party to sit on its hands on an issue, on the mere hope that at trial he will be able to discredit the testimony of a previous ~~movement~~^{movant} for summary disposition, or on the vague supposition that something may turn up. Louisiana Power & Light Company (Waterford Steam Electric Station, Unit 3), LBP-81-45 (October 20, 1981), 14 NRC 877, 883 (1981). The context of summary disposition in the Waterford case was relatively preliminary: that of pretrial discovery to which

intervenors had not provided substantive answers, followed by a motion for summary disposition which went unanswered. Here the process of information exchange has taken a procedurally more advanced, but no more informative, form. The subpart of the contention at issue is broad and nonspecific.^{2/} In the two-month-long negotiation process on Environmental Qualification issues, despite LILCO's requests, SC never stated specific objections with respect to LILCO's program for controlling aging. While its written settlement proposal would have enabled SC to review LILCO's proposal procedures for aging, SC neither proposed different substantive standards than LILCO's for dealing with aging nor alleged any specific deficiencies with LILCO's program. Finally, SC did not address the matter of aging at all in its direct testimony.

There comes a time when the accretion of events and circumstances makes it incumbent on a party to go forward if it has any genuine issues of material fact to propose. That time has come. However, SC, by failing to file any testimony on this issue, has simply defaulted on its obligation to allege material facts in support of its bare contention, despite

^{2/} The contention asserts, at subpart (d), simply that "there has been an inadequate demonstration that all safety related equipment has been properly qualified to meet aging and other life requirements."

possession of the description of LILCO's EQ program in the EQ Report, the Staff's approval of that program in the SER, and three lengthy meetings with multiple LILCO and Staff experts to discuss these matters.

On the record now, consisting of LILCO's EQR and the Staff's review of it in the SER, there are no genuine issues of material fact respecting the adequacy of LILCO's program for dealing with aging of components within its EQ program. There were none at the time for filing of testimony. It was incumbent on SC, against this background of provision to it of a wealth of documentation and direct informal discovery, to have asserted the existence and posture of such issues in its direct testimony. The Atomic Safety and Licensing Board recently stated, in the context of a motion for summary disposition:

As the Appeal Board recently observed [in Philadelphia Electric Company (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB-654, 14 NRC 632, 634 (1981)], a hearing on each contention "is not inevitable," but whether one "will be necessary wholly depends on the ability of the intervenors to demonstrate the existence of a genuine issue of material fact respecting any of the issues they previously raised."

Texas Utilities Generating Company (Comanche Peak Station, Units 1 and 2), LPB-82-17 15 NRC 593, 596 (1982).

The time to have raised any such issues, in the context and circumstances of this issue and of this proceeding, was not

later than the date for filing direct testimony. SC has failed to raise them. Summary dismissal should be granted with respect to subpart (d) of the contention.

Respectfully submitted,

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DATED: January 20, 1983

UNITED STATES OF AMERICA
 NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

Docket No. 50-322 O.L.

SUFFOLK COUNTY OPPOSITION TO LILCO MOTION
 FOR PARTIAL SUMMARY DISPOSITION OF SUFFOLK COUNTY
 CONTENTION 8/SOC CONTENTION 19(h) --
 ENVIRONMENTAL QUALIFICATION

On January 20, 1983, LILCO moved for summary disposition of subpart (d) of Suffolk County Contention 8 and corresponding subpart (4) of SOC Contention 19(h). That portion of each contention as to which the summary disposition motion is addressed is as follows:

There has been an inadequate demonstration that all safety-related equipment has been properly qualified to meet aging and other life requirements.

Suffolk County opposes LILCO's summary disposition motion for the following reason.

It is impossible to separate the issues of "aging" and "qualified life," from the broader issue of the adequacy of LILCO's Environmental Qualification ("EQ") program. The broader issue is succinctly expressed in subpart (e) of SC Contention 8.

In pursuing its concerns relating to the overall adequacy of LILCO's EQ program and the adequacy of its documentation relating to equipment qualification, the County intends to pursue the adequacy of LILCO's methodology and documentation relating to the aging and determination of qualified life for equipment in the EQ program. For instance, the County believes that the LILCO justifications for interim operation prior to qualification, are in many cases, insufficient and/or incomplete because they fail to demonstrate that equipment is capable of surviving for the necessary amount of time in an environment to which it may be exposed. These concerns are encompassed in both subparts (d) and (e) of the contention, and the County intends to pursue them. In addition, the concerns relating to aging and qualified life also come into play in evaluating LILCO's EQ program as applied to replacement and spare parts.

As LILCO notes in its motion, there is no requirement for an intervenor to file direct testimony as a prerequisite to litigating an issue. Moreover, in this instance, Suffolk County has filed direct testimony that directly takes issue with the adequacy of LILCO's EQ program and its documentation of that program. As noted above, the demonstration of proper aging and satisfaction of other life requirements is an integral part of the EQ program. Thus, there are material facts in dispute and there is no basis for the LILCO motion.

Finally, some of the statements in LILCO's motion require additional response. First, Suffolk County finds it unacceptable that private discussions in the context of negotiations for possible settlement between LILCO and the County on this (or any) issue have suddenly become information that LILCO chooses to set forth in a summary disposition motion.^{1/} In settlement discussions, as LILCO should know, parties take many positions in order to attempt to narrow issues and to find a means to resolution. These are not necessarily indicative of parties' final positions and are intended to remain private. However, LILCO has totally ignored these facts in parading a litany of "alleged" facts concerning the Suffolk County concerns. If LILCO believed that there was no material dispute on this issue, LILCO simply should have moved for summary disposition in the manner provided for under the rules -- namely, by setting forth a clear, concise statement of material facts as to which there is allegedly no dispute. LILCO failed to

^{1/} The County does not object to providing status summaries of discussions to the Board to inform it of the status of issues. This has been done on many occasions. The County does object strongly to statements made about positions the County allegedly took or did not take regarding the details of these discussions. See e.g., LILCO motion, pp. 4-5.

do that in this instance, which alone constitutes grounds to disregard LILCO's motion.^{2/}

In view of the fact, however, that LILCO has chosen on this occasion to set forth its "understanding" of the facts,^{3/} Suffolk County will respond in one respect. The basic thrust of LILCO's motion is that the County has never informed LILCO of any concerns relating to subpart (d) of SC 8. That is not correct. On several occasions, the Suffolk County consultants have in fact expressed concerns about the aging and qualified life problem and have detailed those concerns to LILCO. For instance, on October 21, 1982, the County's consultant, Mr. Minor, explained in some detail to technical personnel from LILCO, General Electric, Stone & Webster, and the Staff his concerns about the importance of aging in determining qualified life

2/ Section 2.749 makes it mandatory for LILCO to have included a statement of material facts as to which there allegedly is no dispute as part of its motion.

There shall be annexed to the motion a separate, short and concise statement of the material facts as to which the moving party contends that there is no genuine issue to be heard.

10 C.F.R. § 2.749 (emphasis supplied).

3/ In the future, the County will have to consider carefully what to discuss with LILCO unless LILCO confirms the private nature of these discussions.

and the methods employed and/or approved to demonstrate equipment qualification after aging. It was clear during that and subsequent discussions, that the parties disagreed on the matter on a technical basis. In addition, at every technical meeting on this issue, the parties discussed at length the County's belief that improper or inadequate assumptions were included in LILCO's justifications for incomplete qualification. Accordingly, LILCO's claim of ignorance of the County's concerns is simply untrue.

Respectfully submitted,

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January 24, 1983

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,
Unit 1))

) Docket No. 50-322 (O.L.)
)
)
)
)

CERTIFICATE OF SERVICE

I hereby certify that copies of SUFFOLK COUNTY OPPOSITION TO LILCO MOTION FOR PARTIAL SUMMARY DISPOSITION OF SUFFOLK COUNTY CONTENTION 8/SOC CONTENTION 19(h) -- ENVIRONMENTAL QUALIFICATION have been served to the following by U.S. Mail, first class, except as otherwise noted.

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

}
}
}
} Docket No. 50-322
(OL)

NRC STAFF SUPPORT OF APPLICANT'S MOTION FOR
SUMMARY DISPOSITION OF ISSUE SC 8(d) AND SOC 19(h)(4)

I. INTRODUCTION

On January 20, 1983, the Applicant filed a motion with the Licensing Board, pursuant to 10 C.F.R. § 2.749, for summary disposition of subpart (d) of Suffolk County Contention 8 and the corresponding subpart (4) of SOC Contention 19(h).

The NRC staff supports this motion and asserts that the papers filed in this proceeding demonstrate that there is no genuine issue of material fact, and that the Applicant and the Staff are entitled to a decision as a matter of law.

II. DISCUSSION

Suffolk County Contention 8(d) and SOC Contention 19(h)(4) states:

There has been an inadequate demonstration [for Shoreham] that all safety-related equipment has been properly qualified to meet aging and other life requirements.

However on January 19, 1982 Suffolk County filed "Direct Testimony of Gregory C. Minor on Behalf of Suffolk County Regarding SC Contention 8

and SOC Contention 19(h) - Environmental Qualification." This testimony completely fails to address the issue of aging.

The Commission's Rules of Practice provide that summary disposition of any matter involved in an operating license proceeding shall be granted if the moving papers, together with the other papers filed in the proceeding, show that there is no genuine issue as to any material fact. 10 C.F.R. § 2.749(d). The use of summary disposition has been encouraged by the Commission and the Appeal Board to avoid unnecessary hearings on contentions for which an Intervenor has failed to establish the existence of a genuine issue of material fact. E.g., Statement of Policy on Conduct of Licensing Proceedings, CLI-81-3, 13 NRC 452, 457 (1981) and Houston Lighting and Power Company (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542, 550-551 (1980). Suffolk County in its prefiled testimony has failed to demonstrate the existence of a genuine issue related to aging. The testimony does not mention aging at all, and no issue of fact is created in regard to the environmental qualification of electrical equipment to meet any aging requirements.

Moreover, as stated by the Applicant in its Motion, while there may be no absolute requirement that an Intervenor in an NRC proceeding file direct testimony as a prerequisite to litigation of an issue, an Intervenor does have the burden of making a showing sufficient to require reasonable minds to inquire further into an issue. See Vermont Yankee Nuclear Power Corp. v. NRDC, 435 U.S. 519, 553-4 (1978). In that case the Supreme Court stated that Intervenor's in administrative proceedings must do more than make "cryptic and obscure references to matters that 'ought to be' considered." Id. In theory this burden should be met by the filing of a

reasonably specific contention and the basis for the contention. 10 C.F.R. § 2.714(b). However, the contention as stated lacks this specificity and basis, and it is incumbent upon the County to make this showing in testimony if it wishes to pursue a genuine concern. Thus there is no basis for further consideration of SC Contention 8(d) and SOC Contention 19(h)(4) herein.

III. CONCLUSION

For the reasons stated above, the Applicant's motion for summary disposition of SC Contention 8(d) and SOC Contention 19(h)(4) should be granted.

Respectfully submitted,

David A. Repka

David A. Repka
Counsel for NRC Staff

Dated at Bethesda, Maryland
this 21st day of January, 1983

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,)
Unit 1))

Docket No. 50-322
(OL)

CERTIFICATE OF SERVICE

I hereby certify that copies of NRC STAFF SUPPORT OF APPLICANT'S MOTION FOR SUMMARY DISPOSITION OF ISSUE SC 8(d) AND SOC 19(h)(4) in the above-captioned proceeding have been served on the following by deposit in the United States mail, first class or, as indicated by an asterisk, through deposit in the Nuclear Regulatory Commission's internal mail system, this 21st day of January, 1983.

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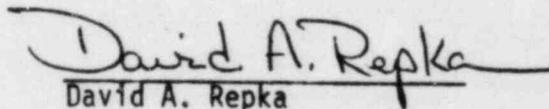
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1 JUDGE BRENNER: Mr. Irwin, LILCO is asking for
2 summary disposition on the basis of there being no
3 material facts as to which there are genuine issues with
4 respect to subpart (d) -- if we can use that designation,
5 which I guess is the subpart of the SC contention. In
6 fact, that subpart is identical in both contentions.

7 MR. IRWIN: That is correct, Judge Brenner.

8 JUDGE BRENNER: Yet, you have presented no
9 statement of material facts that you're asking the Board
10 to find in your favor. So I don't understand how we
11 could grant summary disposition.

12 MR. IRWIN: Let me respond to that in the
13 following fashion. First of all, to the extent that
14 there are material facts, I believe that they are
15 outlined in the top paragraph, page 5 of our motion,
16 which refers to LILCO's submissions to the staff, and
17 the FSAR Environmental Qualification Report and the
18 staff's review of those facts in the SER.

19 There is a technical deficiency in our motion
20 in terms of a classic summary disposition motion in that
21 there is no separate piece of paper labeled "Statement
22 of Material Facts." As I noted, at the time we filed
23 our motion one of our secretaries was taken ill the
24 night before; we flew up with a successor secretary the
25 following morning and we literally worked all night and

1 did the best we could and we filed on time.

2 Finally, the fact is that Suffolk County, even
3 in their response, has not placed any facts into
4 contest. So I think that to the extent there is a
5 deficiency, it is a purely technical one. The County
6 was fully on notice of what we intended, and they didn't
7 meet it on the merits, which is a point that I know you
8 don't yet want to address, but we are prepared to come
9 to that.

10 JUDGE BRENNER: Well, I don't think it is just
11 a technical defect, and we understand the circumstances
12 that you just laid out, and I wasn't questioning it from
13 the point of view of not having a separate list, nicely
14 labeled list of facts. Your references on page 5 are
15 rather cryptic, passing references to larger documents,
16 and the purpose of the statement of facts in a motion
17 for summary disposition is a very real purpose, not a
18 formalistic purpose, in focusing what facts we would
19 find, and putting the respondent on notice as to what
20 facts either to controvert or to argue or not are the
21 material facts.

22 So I wasn't hung up on the format so much as
23 the substance. We do not have the concise listing of
24 what the facts are that we would find in LILCO's favor.

25 I might add that we looked at LILCO's

1 testimony primarily in that regard also, and I would not
2 call it a concise specification of facts. It is a
3 rather broad brush description, perhaps understandable
4 given the subpart of the contention. But nevertheless,
5 when viewing it in the context of a summary disposition
6 motion, a broad brush description that LILCO is going to
7 comply with the requirements.

8 MR. IRWIN: Judge Brenner, I think one has to
9 view this motion in the nature of a motion for the final
10 judgment. There is no such specific term in the
11 Commission's regulations, but we all know what it
12 means. And our argument is primarily conceptual.

13 We have laid out the prima facie case; we have
14 laid it out again and again. We have submitted to
15 preliminary discovery on the basis of interrogatories,
16 provided technical documents, provided the County with
17 three long meetings at which numerous technical experts
18 were present; we have provided them with special
19 submissions, not just the tendering of documents but the
20 preparation of documents.

21 And as I have said in the motion, I think the
22 time comes when the burden falls upon a serious litigant
23 to go forward and not just sit on its hands and hope
24 that something comes up.

25 The Board -- I submit that there is no set of

1 circumstances if this one is not such a set where the
2 failure of a party to file testimony can lead to summary
3 disposition. The facts are there presented by LILCO and
4 corroborated by the staff, and there was nothing put in
5 by the County.

6 JUDGE BRENNER: All right. Mr. Dynner, what
7 about that? They're claiming that the contention is
8 just too vague -- the subpart of the contention is just
9 too vague given the state of the proceeding; that they
10 don't know what it is the County wants to litigate.
11 They didn't know that at the time they filed their
12 motion, and even after seeing your response, they still
13 don't know that. And let me add, the Board doesn't know
14 it, either.

15 MR. DYNNER: Based upon my conversations with
16 Mr. Minor, who is the consultant who is involved in the
17 meetings concerning potential settlement, which are
18 alluded to in the LILCO motion, there was a very clear
19 discrepancy of views concerning the aging issue, and
20 concerning the assessment of aging and the process and
21 the lack of explanation for those processes. All of
22 which was addressed at length in the various meetings.

23 For LILCO to come in now and attempt to create
24 a new motion and draft a resolution for default, which
25 doesn't exist in the current regulations, on the ground

1 that it didn't really understand what was going on in
2 those meetings when the issues were joined, it seems to
3 us is improper.

4 You'll note that there are a series of
5 questions on page 8 of the cross plan on this issue.

6 JUDGE BRENNER: Yes, we took that into
7 account, and I mentioned the other day that we look at
8 these cross plans in terms of ruling on these
9 preliminary motions, and at times they assist us.

10 And when we read the County's response,
11 putting the form aside for the moment and forget what
12 you just said about creating a new motion, putting that
13 aside -- in fact, let me go beyond putting it aside. It
14 is within our authority under 2.752, among other places,
15 to seek a better specification, even though an admitted
16 contention or subpart is quite vague. And I will
17 discuss the background in a moment. But for now, and
18 the need for trial, it is quite vague.

19 So without regard to the form of the drafting
20 of a motion or whether a proper motion would lie for
21 default or summary disposition, but just viewing it as a
22 request for a more definite statement, given the stage
23 of the proceeding, either from LILCO or, for that
24 matter, from the Board, we were hoping to find out what
25 about aging it is that the County seeks to litigate.

1 And in the motion itself it really doesn't
2 tell us; it just says the issue of aging qualified live
3 comes within the broader issue of environmental
4 qualification, and see Subpart (e) of the contention.
5 Subpart (e) of the contention is, if anything, vaguer
6 than subpart (d), which is the point maybe we will come
7 back to. But that doesn't tell us anything.

8 So then we went to the cross plan, and I don't
9 want to reveal anything beyond that that is necessary to
10 reveal. But there are a couple of items on page 8 of
11 the cross plan of LILCO's witnesses, and an item at the
12 bottom of page 3 of the plan for cross examination by
13 the County of the staff's witnesses. And that, too,
14 doesn't tell us what disagreement the County has with
15 the way LILCO and the staff are implementing the aging
16 requirements for environmental qualifications.

17 There is no dispute that there are aging
18 requirements; there is no dispute now with the new rule
19 that the aging requirements have to be met in certain
20 ways, depending upon any age of the equipment and so
21 on. That is, when equipment was purchased. I don't
22 want to hold that as a finding; I will have to take a
23 look as to exactly whether it is a procurement date or a
24 permitting date, but in any event, depending upon the
25 timing of the equipment, you have to look at what aging

1 requirement is appropriate.

2 And there is aging by assessment and aging by
3 the simulated coupon sample, if you will. I don't know
4 if it is a coupon, but simulated in all cases. It has
5 been a simulated sample.

6 What about LILCO's program? Is it that the
7 County disputes and that is what we don't know, and if
8 you look at the questions, I think if you are fair you
9 will agree with me that they don't tell us. There are a
10 few questions you want to ask about it, but I don't know
11 what is in dispute.

12 MR. DYNNER: All right. Let me try to answer
13 that. Number one, the County would have no problem in
14 responding to the Board's request for a more detailed
15 explanation by way of addition to the cross plan or
16 otherwise about what the County's concerns are. We
17 would get that to them. That is not the motion that is,
18 of course, before us.

19 And my general response to LILCO's argument is
20 at this late date to come in and say that they don't
21 know what this contention means when there has been a
22 background of discussions, which I understand have been
23 -- the parties have taken contrary views with some vigor
24 -- is, it seems to us, not appropriate.

25 JUDGE BRENNER: Let me make it easier for

1 you. I don't want to go into the background of
2 discussions too much, and I agree with some of what the
3 County said in its response about that, although not
4 quite the full extent with which the County said it.

5 MR. DYNNEP: The issue, if I can state it as I
6 understand it, is that under the IEEE standard 3.2.3,
7 assessments are being made by LILCO concerning the aging
8 impact, and those assessments when they are made do not
9 always -- are, in part, made upon a variety of judgments
10 being made, and the County has expressed concern and has
11 expressed disagreement with the judgments which are
12 being used to make those assessments with regard to a
13 variety of pieces of equipment.

14 Those facts that the County is seeking to make
15 an issue in this proceeding go to the area of the
16 grounds for the assessments, the judgments behind the
17 assessments, and whether or not those assessments are
18 accurate with regard to a specific list of equipment.

19 That statement, which I think is more precise
20 than what you have so far, is indicative of why we felt
21 that (d) really is a part of (e). That is to say, that
22 there is insufficient information in part as to the
23 basis on which LILCO has reached the judgments and the
24 assessments, and that is where those two tie together.

25 JUDGE BRENNER: I know, but if you can read

1 (e) with a straight face and tell me that that tells us
2 what you want to litigate about (d), you are a better
3 man than I.

4 MR. DYNNER: I certainly didn't say that and,
5 of course, subsection (e) is apparently understood by
6 LILCO, since they haven't moved to strike that. I'm
7 just saying that the two are closely related. And that
8 with regard specifically to (d), the issue is a contrary
9 view as to the judgment for making assessments with
10 regard to aging.

11 An example which I guess was used to -- and
12 I'm getting into a technical area --

13 JUDGE BRENNER: Well, your statement is still
14 very vague. You want to challenge the basis for the
15 judgments that they made? That doesn't tell us
16 anything. They filed a lot of things, now. Let me back
17 up and maybe say something about the background, because
18 the Board really does think there are equities on both
19 sides here, and maybe we should pull it into perspective
20 for a moment and not trying to save time, but trying to
21 get closer to the bottom line. Maybe I should have
22 spent a moment on the background, as we did.

23 We believe that for a motion for summary
24 disposition to be successful in the classic sense of a
25 motion for summary disposition, you need a statement of

1 material facts as to which there is no genuine issue.
2 It is not a formalistic requirement; it is there for the
3 purpose of focusing on that which is material, and
4 focusing on what the dispute is.

5 Even if a motion is not granted in full,
6 sometimes the relief is a narrowing of the issue, and in
7 that sense, a motion for summary disposition is one of
8 other available devices to attempt to get a narrowing of
9 a contention. But even for that purpose you need -- and
10 perhaps especially for that purpose -- you need the
11 statement of material facts so that the respondent can
12 deal with it and the Board can deal with it. The
13 affidavit isn't required, and especially if there is
14 other information on file.

15 So we think that is a fatal defect for
16 granting a motion for summary disposition; that is, a
17 finding on the merits of the contention. And that is
18 what a motion for summary disposition is.

19 On the other hand, it is the object of various
20 procedural devices throughout the prehearing process to
21 get a reasonable specification of contentions. The
22 staff in its supporting filing supporting LILCO's
23 motion, cites Vermont Yankee on the standard of an issue
24 being sufficient for reasonable minds to inquire
25 further, and pulled out the by-now classic Vermont

1 Yankee language as to how cryptic and obscure references
2 to matters that ought to be will not suffice. However,
3 the stage for those tests are the contentions admission
4 stage.

5 It is true that in our view, this contention,
6 this pair of contentions is somewhat vague in terms of
7 informing somebody reading them what it is that the
8 parties seek to litigate within the broad area of
9 environmental qualifications. However, I will remind
10 the parties that this contention, or these contentions,
11 were stipulated to by the parties in the December 2nd,
12 1981 stipulation, and all parties urged us to approve it
13 and we did.

14 In fairness to the framers of the contention,
15 we will take notice of the fact that the contention was
16 framed at a time when the information we now have on
17 environmental qualifications was not available, so a lot
18 of information has been filed on environmental
19 qualifications as to how it would be implemented by
20 LILCO, and as to how the staff would review it. And we
21 also have the new rule most recently. How new it is in
22 substance is a matter we will hear about, but certainly,
23 all of the environmental qualification reports are filed.

24 So it may be appropriate for the
25 contention-filing stage for the County to have expressed

1 the type of concern embodied in the wording of
2 contention (e), and that is similar to the way you've
3 phrased things here this morning, Mr. Dynner, as to
4 concern about how LILCO was applying its judgments and
5 how the staff was reviewing the matter and so on.

6 But now we are past that stage. One of the
7 prehearing devices is to require parties to come forward
8 before the Board with contentions that were at one time
9 sufficient for admissibility and after discovery but
10 before the hearing, to inform the Board as to what
11 specifically within those contentions the party still
12 wishes to pursue, given the discovery, and why.

13 It isn't a summary judgment test, but it is a
14 test of what is still in dispute. We have not formally
15 required those filings throughout this prehearing
16 process because we have deemed the procedures that were
17 being followed actually more efficient and more
18 advisable. That is, the parties negotiating among
19 themselves and reporting back to us from time to time.

20 We think the results have been excellent.
21 From the parties' point of view, I don't know if the
22 parties agree or not. That is, it was more efficient
23 and more satisfying to the parties to have the give and
24 take of informal negotiation rather than have to file
25 formal pleadings as to what was still in dispute and

1 another party responding that that shouldn't be because
2 of this information and so on. And the result of that
3 process, even when there hasn't been a settlement of an
4 issue, has been a narrowing of the issue.

5 In this case, we take it, given the vagueness
6 of subpart (e), which we think you can fit anything
7 under that subpart, it is as vague as subpart (d).
8 There was no request to narrow that in any form by LILCO
9 before us. We take it from what they said in their
10 motion as to subpart (d) that the reason for that is
11 that they've got the direct testimony of Mr. Minor, and
12 they can proceed with that subpart on that basis. And
13 in fact, the direct testimony of Mr. Minor assists us in
14 understanding what the County means under subpart (e),
15 and we understand the overlap that the County sees
16 between (c) and (d), as well as some concerns within
17 each.

18 But the County's testimony, because there is
19 no testimony on subpart (d), cannot serve that purpose.
20 It is unfortunate that with respect to this one subpart
21 it appears that the process to better specify matters
22 did not work. That happens sometimes. As I said, we
23 still believe the process overall has worked very well,
24 and we are not sorry that we have urged that process
25 instead of the formal filings of specified issues.

1 But in terms of a better specification within
2 our prehearing authority, we think it appropriate to get
3 one orally, at least so we know where we are headed on
4 the litigation of this subpart. We thought the cross
5 plan would supply that. It does not, for the reason we
6 indicated.

7 Had LILCO's motion been filed a little
8 earlier, perhaps we would have been willing to go
9 through a formal response round. On the other hand, we
10 understand why it was not filed earlier, because the
11 final trigger was seeing what was not covered in the
12 County's testimony.

13 We are not interested at this point as a Board
14 in whether or not the County may have sufficiently
15 specified its concerns within subpart (d) in the
16 negotiations. That may be true; it may not be true. We
17 are not going to decide that; we are not interested in
18 deciding that. But we do want to get a specification of
19 what it is about the aging, the implementation of the
20 aging requirements by LILCO that the County doesn't like.

21 Within the framework of the rules, some of the
22 questions asked on page 8 -- and it is hard to tell from
23 the culled page of the cross plan, and we certainly are
24 not making this ruling in advance, but it looks like
25 some of it is geared more towards exploring the pros and

1 cons of having the two categories for different ways of
2 treating aging requirements, as distinguished from
3 whether or not LILCO is correctly implementing the aging
4 requirement.

5 And to say simply that it is within the
6 broader issue of the adequacy of environmental
7 qualification only states the obvious and does not help
8 us with the specifics.

9 So we are not going to permit just wide open
10 cross examination as to why did you do this and why did
11 you do that on aging. We want a statement specifically
12 geared to the filings, the environmental qualification
13 report, the staff's SER and things of that nature, as to
14 where the County believes LILCO has not or will not
15 correctly implement the aging requirements of
16 environmental qualification.

17 Now, it may be that when the County sits down
18 and does that you will realize that all your concerns
19 are, in fact, subsumed by Mr. Minor's testimony which
20 focuses on a different area. That is, the concern might
21 be in identifying the right equipment and applying the
22 environmental qualification criteria to that equipment,
23 which criteria includes aging. But if that is your
24 issue, we don't have to litigate aging per se or
25 directly.

1 You're not prepared to give us that statement
2 now, Mr. Dynner?

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1 MR. DYNNER: Not with the specificity that you
2 are I think requesting. That would require some more
3 input from our consultant. Just so I understand it, the
4 statement that you want is with more particularity as to
5 how the County does not feel that the EQ report and any
6 other documents by LILCO would not properly implement
7 its assessment on aging?

8 JUDGE BRENNER: And you can include the
9 Staff's documents if you believe they are not correctly
10 reviewing what LILCO is doing for aging. Give us
11 particular references. If you can attach the excerpts
12 from the document, that would be helpful, if the
13 excerpts aren't thick, and then we will understand what
14 it is you will want to litigate within subpart D as
15 distinguished from subpart C and B. And you don't have
16 to overcome any burden of a genuine issue, but you do
17 have to overcome a burden of requisite specificity. So
18 it is a hearing management tool and not a motion for
19 summary disposition tool.

20 MR. DYNNER: Is the document that you are
21 requiring for the Board only, or is for the Board and
22 the parties?

23 JUDGE BRENNER: No; for everyone. And if you
24 want to, you decide if you can give us all the same
25 thing, that is fine. If you want to separate out some

1 of the detail of the particular questions, that is
2 acceptable. But certainly the specifics of which
3 portions of the report you want to challenge and what it
4 is you want to challenge about them needs to be made
5 known to the other parties.

6 Now, I understand the County's position might
7 be that you have already told them orally. It I don't
8 want to resolve that to date, and I am not suggesting to
9 the contrary by requiring it in writing now.

10 All right. The timing. I would think that by
11 the close of business Friday to the other parties would
12 be reasonable. And our thought there is that you can
13 cross-examine on all of the other items other than
14 aging. And if you have otherwise completed your cross
15 by next week, we will let you come back to aging if you
16 want to pursue it if you haven't completed your cross
17 and it is just a matter of arranging your order.

18 MR. IRWIN: Judge Brenner, may I ask a couple
19 of clarifying questions?

20 JUDGE BRENNER: Let me just point out one
21 detail: that we would like to receive if you have
22 logistics problems and can't get the filing to the Board
23 by the close of business Friday, we will accept ours
24 Monday morning. But get it to the Staff and LILCO by
25 the close of business Friday.

1 (The Board conferred.)

2 JUDGE BRENNER: That is, Monday morning before
3 we start here. And incidentally, we will be starting at
4 10:00 this coming Monday, as an aside, now that the
5 flights have been dependable so far.

6 So we will give you a chance, Mr. Irwin.

7 MR. IRWIN: Judge Brenner, I take it that the
8 scope of your order to the County includes matters
9 relating to the substantive compliance with aging
10 requirements and not documentation.

11 One of the difficulties we have had, and I did
12 not get a chance to address this earlier in my remarks,
13 is that the County's response to our motion it seems to
14 me totally misses the point when it says that aging is
15 inherently within broader issues relating to
16 environmental qualification and apparently within the
17 scope of subpart E.

18 I admit subpart E is vague, but it goes only
19 to documentation. Subpart D goes to substance, as we
20 understand it. And if the Board is going to keep
21 subpart D alive as a contention, it goes to substance
22 rather than documentation. And I think we need to
23 understand with specificity what it is about the
24 substantive aging process that LILCO has observed that
25 fails to meet specific requirements of the regulations

1 and not whether we have documented it adequately.

2 JUDGE BRENNER: I am not going to impose that
3 restriction in the abstract. We will take their
4 specific statement. Now, if it is just documentation,
5 that will put a very different color on what is in
6 controversy and may in fact be very close to the same as
7 subpart E except they are highlighting the fact that
8 they want to include the inadequate demonstration as to
9 some aspects of aging. And it may be they don't want to
10 lose the right to do that by a settlement of subpart D.
11 And for all I know, that was a large part of the problem.

12 But I don't know, so we are not going to
13 impose that restriction, but we are going to see what it
14 is the County still controverts about LILCO's
15 implementation of the environmental qualification aging
16 requirements. And if it turns out to be just a mere
17 documentation, that will be a different area than the
18 substance.

19 MR. IRWIN: I would assume that that would
20 fall under subpart E, definitionally.

21 JUDGE BRENNER: We will deal with it when we
22 have something more concrete for us.

23 MR. IRWIN: A second matter, Judge Brenner,
24 goes to the Board's concern with specification of
25 issues. The purpose, it seems to us, is to provide

1 notice not only to the Board but the parties as they
2 file their testimony.

3 One of the difficulties LILCO has had -- and I
4 am not going to go into the substance of our discussions
5 -- but obviously there was an imperfect meeting of the
6 minds during that. With respect to containment
7 isolation there is at present a proposed form of
8 agreement for settlement to which we have received no
9 response from the County. I want to put the County on
10 notice now.

11 JUDGE BRENNER: I am sorry, I heard you say
12 there was a proposed form of agreement for settlement,
13 but I didn't hear your next sentence.

14 MR. IRWIN: I said with respect to the next
15 issue coming up, containment isolation, there is a
16 proposed memorandum outlining the terms of a possible
17 settlement, which we served on the County last Friday
18 following discussions among technical representatives.
19 Without going into the terms of that, we need to get a
20 response from the County as to whether or not they are
21 going to find that proposal substantively acceptable or
22 propose a counter proposal, because if they don't, we
23 need to file testimony and we need to know what issues
24 they care about.

25 And I want the County to be on notice that as

1 of tomorrow morning we intend to file such a request for
2 specification, and we would like to receive it in time
3 to make use of it in preparing our final testimony.

4 JUDGE BRENNER: Who is handling containment
5 isolation for the County?

6 MR. DYNNER: Ms. Letsche.

7 MR. IRWIN: Ms. Letsche received our
8 memorandum last Friday.

9 JUDGE BRENNER: When are you going to file
10 your request for a better specification?

11 MR. IRWIN: If I have not heard by the close
12 of business today or tonight, we will file it at the
13 start of the hearing tomorrow morning.

14 JUDGE BRENNER: All right. After we receive
15 it, maybe the best thing to do is -- and we will solicit
16 the views of the parties when Ms. Letsche is here -- it
17 may be good to discuss the specification or lack
18 thereof. We can perhaps start out in the nature of a
19 status report on the negotiations of that issue and get
20 to the point of possible specification in lieu of
21 settlement. And perhaps we can do that on Thursday.

22 MR. IRWIN: I hope nobody misunderstands the
23 tenor of argument. We would far rather reach an
24 agreement on this issue, and I think that the parameters
25 of agreement are there. But if we don't, we need to be

1 able to focus our testimony.

2 JUDGE BRENNER: I would think -- and we will
3 give the County an opportunity tomorrow to tell us to
4 the contrary -- I would think it couldn't hurt and might
5 help for us to have that discussion regardless of what
6 your purposes are. Does the proposed agreement go to
7 all of the subitems within the overall category of
8 containment isolation?

9 MR. IRWIN: Yes, Judge Brenner, it does.

10 JUDGE BRENNER: The last report we heard from
11 the County on that was that they were working on it.
12 You relayed that to us, Mr. Dynner. I believe you said
13 -- is that a fair recollection?

14 MR. DYNNER: Yes, that is right. I think that
15 part of what we are getting into again is the crunch on
16 one person who -- it has turned out unfortunately a
17 number of issues have all dovetailed within the same
18 time frame. But this is -- will be an issue that I will
19 raise with Ms. Letsche.

20 JUDGE BRENNER: I will point out that we knew
21 well in advance that that would happen. And she hasn't
22 been involved with a lot of the other issues for a long
23 time that have taken a lot of time. And presumably,
24 that was part of the County's planning. And some of
25 these issues that are now dovetailing have dragged on in

1 the October, November, and December time period for
2 reasons that, as I recall, she was working on another
3 case.

4 So it is not as if, if there is a crunch, it
5 is not as if it shouldn't have been foreseen on the part
6 of the County. So you will have to work it out. We
7 don't deem in the context of this proceeding this to be
8 a surprise crunch, that is what I am saying.

9 MR. DYNNER: Crunches are crunches. We just
10 are reporting a fact that it has occurred. I think how
11 and why is a separate issue.

12 JUDGE BRENNER: All right. Well, the
13 testimony is due to be filed on Monday, so obviously
14 Thursday will be time to take the pulse of the parties
15 on where it is going.

16 All right. The motion for summary disposition
17 is denied. Just to make it express, in the alternative
18 we are either reading, construing the motion, or
19 substituting our own request for a more definite
20 statement of what it is specifically at this stage of
21 the game, given the additional information available
22 since the agreement to the admissibility of the
23 contention by stipulation back in December, what it is
24 that the County seeks to litigate about subpart D.

25 And that more definite statement is due to be

1 received by the parties by the close of business on
2 Friday and by the Board by then if possible but in any
3 event by Monday, morning approximately 9:00 or so.

4 Is there anything else? Let's get the
5 witnesses sworn in before lunch, and then we can see how
6 far we get before 12:15.

7 And while they are getting into place, there
8 was one thing I wanted to check for the record on
9 environmental qualification. We alluded to this a
10 number of weeks ago. We have heard nothing to the
11 contrary, so we assume that the LILCO staff panel is
12 going to be a combined panel, although the cross plan of
13 the County is not so drafted.

14 MR. IRWIN: LILCO has been proceeding on the
15 assumption that it will be a combined panel.

16 JUDGE BRENNER: Well, you had better find some
17 extra chairs for tomorrow.

18 (Pause.)

19 JUDGE BRENNER: Since we know Mr. Hubbard, I
20 take it that is Dr. Samaniego at the table. And did I
21 pronounce that correctly, sir?

22 WITNESS SAMANIEGO: Yes, Judge Brenner.

23 JUDGE BRENNER: Could you stand, please? Mr.
24 Hubbard has been previously sworn. And raise your right
25 hand.

1 While they are getting settled, I should have
2 noted that we will approve the partial resolution of the
3 environmental qualification contention and the entire
4 resolution of the seismic qualification contention. And
5 we can handle that at the time we start the
6 environmental qualification contention. But I did want
7 you to know in advance that we had no questions as to
8 those subparts.

9 Whereupon,

10 RICHARD B. HUBBARD and

11 FRANCISCO J. SAMANIEGO

12 were recalled as witnesses and, having been previously
13 duly sworn, were further examined and testified as
14 follows:

15 DIRECT EXAMINATION

16 BY MR. DYNNER:

17 Q Mr. Hubbard, would you state your name,
18 address, and occupation, please?

19 A (WITNESS HUBBARD) My name is Richard
20 Hubbard. I am a technical consultant and vice president
21 of MHB Technical Associates. And my address is 1723
22 Hamilton Avenue, San Jose, California 95125.

23 Q Dr. Samaniego, would you please state your
24 name, address, and occupation?

25 A (WITNESS SAMANIEGO) My name is Francisco

1 Samaniego. I am an associate professor of statistics at
2 the University of California at Davis, currently
3 visiting associate professor in the Department of
4 Biostatistics at the University of Washington. And my
5 current address is 3773 Northeast 153rd Street, Seattle,
6 Washington 98155.

7 Q Gentlemen, do you have in front of you your
8 prefiled testimony dated December 21, 1982?

9 A (WITNESS HUBBARD) Yes, sir.

10 A (WITNESS SAMANIEGO) Yes, I do.

11 Q Do you have any additions or corrections you
12 wish to make to the testimony at this time?

13 A (WITNESS SAMANIEGO) No, sir.

14 A (WITNESS HUBBARD) No, sir.

15 MR. DYNNER: Judge Brenner, at this point it
16 might be advisable to introduce or to move into evidence
17 the joint deposition of Mr. Hubbard and Dr. Samaniego.

18 JUDGE BRENNER: I don't recall if you marked
19 up all of the corrections, if any, in this. My
20 recollection is that you did.

21 MR. DYNNER: Yes. This document was marked in
22 the copies that were filed.

23 JUDGE BRENNER: So we wouldn't need a separate
24 errata sheet.

25 MR. DYNNER: Right. That is my

1 understanding. So we would mark for identification and
2 move into evidence, with the help of Judge Morris, the
3 joint deposition of Mr. Hubbard and Dr. Samaniego,
4 consisting of two volumes. Volume 1 contains pages 1
5 through 74; Volume 2, pages 75 through 238, of December
6 27 and 28. December 27 is Volume 1. December 28 is
7 Volume 2.

8 And these documents have been reviewed and
9 corrected as filed.

10 JUDGE MORRIS: That would be Suffolk County
11 Exhibit 112.

12 (The documents referred
13 to were marked Suffolk
14 County Exhibit No. 112
15 for identification.)

16 JUDGE BRENNER: All right, in the absence of
17 objection, we will admit Suffolk County Exhibit Number
18 112 into evidence.

19 (The documents referred
20 to, previously marked
21 Suffolk County Exhibit
22 No. 112 for
23 identification, were
24 received in evidence.)

25 MR. EARLEY: Judge, for the Johnson and

1 Novarro depositions we also bound into the record
2 LILCO's designation along with that. If we could do
3 that for this deposition, I would appreciate that. I
4 don't have a copy with me, but I believe it was
5 designation of portions of Dr. Samaniego's and Mr.
6 Hubbard's deposition.

7 JUDGE BRENNER: Yes. If you give me a moment,
8 I believe I have it.

9 I have got your initial designation, Mr.
10 Earley. Was there a second designation in this instance?

11 MR. EARLEY: No, there was not, Judge. When
12 the County indicated they were going to move all of the
13 deposition into evidence, we did not go back and file a
14 supplementary designation.

15 JUDGE BRENNER: All right. The purpose of
16 this mystifies me, but we did do it before, and we will
17 do it again. And I can't imagine what purpose it will
18 serve later. But I can't think of everything that you
19 are going to do with things. We have no problem doing
20 that. What did we do last time? Make it an A?

21 MR. EARLEY: I think we made it an A.

22 JUDGE BRENNER: Okay, we will make this
23 memorandum, if you will, even though it originates with
24 the other party -- the mechanics of this escapes me.

25 (Pause.)

1 JUDGE BRENNER: All right. Consistent with
2 what we did last time, we will make this Suffolk County
3 Exhibit 112A, even though it is LILCO's designation.

4 (The document referred to
5 was marked Suffolk County
6 Exhibit No. 112A for
7 identification.)

8 JUDGE BRENNER: So we can keep it together
9 with the exhibit, the Suffolk County Exhibit 112A is a
10 memorandum to Messrs. Dynner and Miller from Mr. Earley,
11 dated January 4, 1983, consisting of one page and is
12 entitled "LILCO's Initial Designation of Portions of the
13 Deposition of Richard B. Hubbard and Francisco J.
14 Samaniego." And we can, in addition to making it an
15 exhibit, we can bind that one page in.

16 (The material referred to, Suffolk County
17 Exhibit 112A, follows:)

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INSERT#2

TO: ALAN R. DYNNER, ESQ.
FROM: A. F. EARLEY

202-452-7052

MEMORANDUM

TO: Alan R. Dynner, Esq.
Michael S. Miller, Esq.

DATE: January 4, 1983

FROM: Anthony F. Earley, Jr.

LILCO's Initial Designation of
Portions of the Deposition of
Richard B. Hubbard and
Francisco J. Samaniego

LILCO intends to move the following portions of the
Hubbard-Samaniego deposition into evidence:

- page 3, line 1 through page 8, line 24
- page 9, line 20 through page 10, line 23
- page 15, line 24 through page 17, line 24
- page 18, line 22 through page 24, line 12
- page 25, line 8 through page 74
- ✓page 75 through page 79, line 12
- ✓page 88, line 10 through page 104, line 11
- ✓page 113, line 26 through page 154, line 18
- ✓page 160, line 11 through page 169, line 8
- ✓page 175, line 3 through page 196, line 6
- ✓page 197, line 27 through page 198, line 8
- ✓page 210, line 25 through page 222, page 17

Once we have had a chance to review Suffolk County's
initial designation, we will give you a final list.

Anthony F. Earley
A.F.E.

221/765

1 (Discussion off the record.)

2 JUDGE BRENNER: 112A is admitted and also
3 bound in for convenience.

4 (The document referred
5 to, previously marked
6 Suffolk County Exhibit
7 No. 112A for
8 identification, was
9 received in evidence.)

10 MR. DYNNER: Judge Brenner, we might also,
11 consistent with the past practice, want to bind in the
12 prefiled testimony of Mr. Hubbard and Dr. Samaniego into
13 the record at this point. That consists of 30 pages
14 with an attachment of four pages.

15 JUDGE BRENNER: The attachment is Dr.
16 Samaniego's qualifications.

17 MR. DYNNER: That is correct.

18 JUDGE BRENNER: Did you ask them if this was
19 correct? If you did, I missed it.

20 MR. DYNNER: I asked if they had any further
21 corrections or additions to make, and they said no.

22 JUDGE BRENNER: All right. In the absence of
23 any objection, we will admit into evidence the direct
24 testimony of Richard B. Hubbard and Dr. Francisco J.
25 Samaniego, regarding Torrey Pines Technologies'

1 inspection of Shoreham Nuclear Power Station. And we
2 will bind it in at this point as if read.

3 (The material referred to, the prefiled
4 testimony of Richard B. Hubbard and Francisco J.
5 Samaniego, follows:)

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,)
Unit 1))

) Docket No. 50-322 O.L.
)
)
)
)
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)

DIRECT TESTIMONY OF
RICHARD B. HUBBARD AND DR. FRANCISCO J. SAMANIEGO
REGARDING TORREY PINES TECHNOLOGY'S INSPECTION OF
SHOREHAM NUCLEAR POWER STATION

I. INTRODUCTION

Q: Mr. Hubbard, please state your name, address, occupation and professional qualifications.

A: My name is Richard B. Hubbard, and my business address is 1723 Hamilton Avenue, San Jose, California. I am vice-president of MHB Technical Associates. My qualifications have been previously submitted to the Board in this proceeding.

Q: Dr. Samaniego, please state your name, address, and occupation.

A: My name is Dr. Francisco J. Samaniego. I am an Associate Professor of Statistics at the University of California, Davis and am currently a Visiting Associate Professor of Biostatistics at the University of Washington. My address is 3773 N.E. 153rd Street, Seattle, Washington.

Q: Please describe your qualifications and research experience which are relevant to the matters you address in your portion of this testimony.

A: My research interests include Mathematical Statistics, Decision Theory, Reliability and Survival Analysis. My research covers a broad range of statistical theory and application. I have published research contributions in over ten refereed journals. Most of my research efforts have been directed toward signal detection, reliability and statistical applications in engineering. I have served on the editorial board of the Journal of the American Statistical Association since 1978 and am an elected Fellow of the American Statistical Association.

Over the last ten years, I have served as a statistical consultant to over one hundred researchers at the University of California, Davis. I have also served as a private consultant to the City of Davis, the State of California Employment Development Department and Arthur Young, Inc. In each of the last ten years, I have been an invited lecturer on sampling techniques at the annual Short Course on Statistical Quality Control sponsored by the College of Agriculture at the University of California, Davis. A further statement of my professional qualifications is attached to this testimony as Attachment 1.

Q: Who is sponsoring the various portions of this testimony?

A: Except when indicated otherwise, Mr. Hubbard is the author and sponsor for Parts III through VI of this testimony, and Dr. Samaniego is the author and sponsor of Part VII of this testimony.

II. PURPOSE AND CONCLUSIONS

Q: Mr. Hubbard, what is the purpose of your testimony?

A: The purpose of my testimony is to address the adequacy of the inspection conducted by Torrey Pines Technology ("TPT") of the Shoreham Nuclear Power Station ("Shoreham"). I have had only a very limited time to review the TPT "Final Report: Independent Verification -- Shoreham Nuclear Power Station" ("TPT Report") and to prepare this testimony, and I have not had access to the underlying data and inspection checklists used in preparing the TPT Report. However, I have identified a number of serious deficiencies and limitations in the TPT inspection which lead to certain conclusions.

Q: What are these conclusions and where are they discussed?

A: First, as discussed in Part III, the lack of independence of TPT, the inadequacy of the protocol by which the inspection was conducted, and the limited scope of the TPT

inspection program (including that TPT inspected "safety-related" systems, and not those which are also "important to safety") indicate that the TPT inspection was not an "independent verification" showing that there was an adequate construction QA/QC program at Shoreham. Second, TPT did not consistently properly identify discrepancies and preliminary findings; accordingly, the number and safety significance of deficiencies are understated in the TPT Report. This matter is discussed and examples are presented in Part IV of this testimony. Third, as discussed in Part V, the number of discrepancies which remained undetected until the TPT review, despite the number of layers, or "gates," in the QA/QC program at Shoreham, corroborates Suffolk County's contentions regarding deficiencies in that program. Fourth, the Corrective Action Plans ("CAPs") proposed by LILCO and accepted by TPT do not in all cases fully respond to the root causes or the extent of TPT's Findings, and no CAPs were prepared in response to TPT's Observations or Discrepancy Reports, as discussed in Part VI. Finally, I concur with Dr. Samaniego's testimony in Part VII.

Q: Dr. Samaniego, what is the purpose of your testimony?

A: The purpose of my testimony is to address the question of whether the conclusions of the TPT Report are justified, given the sampling methodology which was used.

Q: In summary, what are your conclusions?

A: The samples taken by TPT were obtained in a non-random fashion and do not lend themselves to extrapolation to the populations of items and documents under study. I therefore

conclude that the substantive findings of the TPT Report are unjustified. These matters are discussed in Part VII of this testimony.

III. INDEPENDENCE AND SCOPE OF TPT REVIEW

Q: Mr. Hubbard, was the TPT review the kind of independent inspection of the as-built plant which you have urged be conducted?

A: No. Aside from other factors discussed in my testimony, TPT was not acceptably independent from LILCO, nor did it operate under an acceptable protocol.

Q: Why wasn't TPT acceptably independent?

A: TPT was selected and retained by LILCO unilaterally. In the context of settlement negotiations with LILCO, Suffolk County's Assistant County Attorney identified TPT as one of eight consultants which the County recommended to "includ[e] in the bidding for the contract" for a QA/QC independent inspection. Had the negotiations resulted in a settlement, the County would have been involved in the selection process and in determining the scope and protocol for the inspection. Instead, when LILCO itself hired TPT, the County was excluded from these matters and prevented from participating in the inspection to ensure TPT's independence. No engineering consultant can properly be deemed "independent" when it was selected by LILCO, its job was defined by LILCO, it reported to LILCO, and its personnel

were in daily contact with LILCO personnel to perform their tasks, to the exclusion of other parties.

Q: Why wasn't the protocol under which TPT operated acceptable?

A: Because no party other than LILCO had any relationship with TPT. Not only LILCO, but Suffolk County, and indeed the other parties in the licensing proceeding, should have had the opportunity to review and comment on the scope of work, acceptance criteria, procedures, schedule, and resource allocation of TPT. Not only LILCO, but Suffolk County and the other parties, should have had the right to observe inspections and audits in progress, attend all meetings, and review all documents presented to and generated by TPT. Instead, TPT interfaced only with LILCO, received information and comments only from LILCO, reported only to LILCO, and could only be influenced by LILCO.

Q: Aside from the fact that only LILCO participated with TPT in the inspection, was the protocol adequate?

A: I have not had access to the documents underlying the TPT Report and not contained in it, such as the procedures used by TPT and inspection checklists. Examination of such documents could disclose other problems with the protocol and procedures under which TPT operated.

Q: Does the TPT inspection provide a comprehensive design review, physical inspection, and QA/QC review to verify that the design and construction of Shoreham have been implemented in accordance with FSAR commitments and regulatory requirements?

A: No. It is generally true that the work effort on a nuclear plant can be subdivided into four basic phases: design, construction, startup, and commercial operation.^{1/} While overlaps between phases do occur, the subject of the TPT verification effort was the construction phase. Thus, the adequacy of the design of Shoreham and of LILCO's proposed operating procedures, including the QA/QC program for operations, are not addressed by TPT.

Q: Was the scope of the TPT review of the construction process adequate to support the conclusions of the TPT Report?

A: No. The TPT review of the construction process was improperly limited or restricted in three important areas: equipment "important to safety;" electrical equipment; and QA/QC programs.

Q: Explain how the TPT review of equipment "important to safety" was improperly limited or restricted.

A: In this proceeding there has been substantial testimony which addressed LILCO's failure to implement a systematic QA/QC program for items "important to safety," as required by GDC-1 of Appendix A to 10 C.F.R. Part 50. I believe the evidence adduced to date indicates that LILCO has largely limited its Shoreham QA/QC program to the subset of items designated as "safety-related."^{2/} The TPT review suffers

^{1/} TPT Report, Volume II, pp. 1-1 and 1-5, defines these phases.

^{2/} See definitions of "safety-related" and "important to safety" as set forth by Harold Denton of the NRC and included as Attachment 1 to the County's direct testimony on Contention 7B. The definitions will not be repeated herein for the sake of brevity. LILCO also identifies safety-related items as "Category I."

from the same deficiency, since TPT appears to limit its review and conclusions to "safety-related" features. As Mr. Johnson of TPT states in his prefiled testimony:

- (i) "TPT's conclusions are applicable to construction of all safety-related equipment. . ." (Emphasis added.)
- (ii) "It was obviously impractical to inspect all safety-related equipment at the plant. We therefore designed our program to provide a basis to judge the adequacy of all safety-related components." (Emphasis added.) 3/

For example, as discussed in more detail in Part IV of this testimony, valid Discrepancy Reports identified during the TPT inspection were not converted to Potential Finding Reports in a number of instances because components or equipment were not designated as safety-related.^{4/} Thus, the TPT review can provide no assurance that the QA/QC requirements of GDC-1 of Appendix A have in fact been systematically implemented. This is a significant omission in the scope of the TPT review.

Q: How was the TPT review of electrical equipment improperly limited or restricted?

3/ Testimony of Louis D. Johnson, p. 26. See also, e.g., TPT Report, Volume I, pp. 1-6, 2-2, 3-1, 3-2, 3-3, 3-4, 3-5, 3-7, 4-2, 4-3, 5-1, 5-2, and 5-3 and Figures 4-1 and 4-2. A similar pattern of limitations of the TPT review to safety-related activities is set forth in Volumes II and III of the TPT Report.

4/ See, e.g., TPT Report, Volume II, Table C-1, pp. 4C-1, 4C-2, and 4C-3, as to electrical items.

A: The TPT program plan, and the manhours required for the review, are summarized below:

<u>Task</u>	<u>Description</u>	<u>Manhours</u>	
A	Construction QA/QC Control Program Review	500	<u>5/</u>
B	Construction QA/QC Program Implementation Review	1,200	<u>6/</u>
C	Physical Inspection, Walkdown	21,000	<u>7/</u>
D1	ASME Piping Weld Inspection	1,100	<u>8/</u>
D2	Primary Containment Concrete Test	240	<u>9/</u>
D3	Witnessing Primary Containment Structural Acceptance Test	200	<u>10/</u>
E1	ASME Piping Material Certification Review	240	<u>11/</u>
E2	Preoperational Test Review	450	<u>12/</u>
F	Potential Finding Processing)	7,000	<u>13/</u>
G	Administrative and Reporting)		
TOTAL		33,000	<u>14/</u>

The walkdown of electrical items made up only about 8% of the total features checked by TPT.^{15/} Clearly, the major emphasis of the TPT inspection was devoted to an evaluation of whether the mechanical and pipe support items were installed as shown on the applicable design documents. The pipe support and mechanical walkdowns constituted about 47% and 45%, respectively, of the total features checked and resulted in 49% and 17% of the Discrepancy Reports.^{16/} In contrast, the electrical walkdown, constituting 8% of total features checked, resulted in about 34% of the Discrepancy Reports.^{17/} As a result, TPT concluded:

<u>5/</u> TPT Report, Volume I, p. 3-2.	<u>12/</u> Ibid., p. 3-8.
<u>6/</u> Ibid., p. 3-3.	<u>13/</u> TPT Report, Volume II, p. 1-6.
<u>7/</u> Ibid., p. 3-4.	<u>14/</u> Id.
<u>8/</u> Ibid., p. 3-5.	<u>15/</u> Ibid., p. 7-25.
<u>9/</u> Ibid., p. 3-6.	<u>16/</u> Id.
<u>10/</u> Ibid., p. 3-7.	<u>17/</u> Id.
<u>11/</u> Id.	

- (i) ". . . electrical discrepancies are much more prevalent than the relative number of electrical walkdown features." 18/
- (ii) ". . . relatively more discrepancies were identified on electrical than on mechanical features because of the greater complexity of electrical equipment and component identification." 19/

The alleged complexity of electrical features does not explain why the Shoreham QA/QC program failed to reveal and cure deficiencies. Moreover, if the electrical items are in fact more complex, one would have expected a more intense inspection by TPT of those items. Yet even when it became clear that discrepancies in electrical features occurred with a much higher frequency than in other systems, TPT failed to increase the scope of its inspection of electrical items. This is a serious deficiency.

Q: Explain how the TPT review of QA/QC programs was improperly limited or restricted.

A: Tasks A and B of the TIT review included, respectively, an assessment of the Shoreham QA/QC program for construction and a review of the effectiveness of the QA/QC program implementation. As discussed above, the TPT review of QA/QC was restricted to the QA/QC measures applied to safety-related items; that review was not extended to items important to safety. The

18/ Id.

19/ Ibid., p. 7-26.

QA/QC program assessment was further limited to a review of the Stone and Webster ("S&W") and LILCO QA/QC manuals and procedures. Other Shoreham site contractors with QA/QC programs during construction, such as Courter and Reactor Controls, were in large part excluded from the TPT assessment, even though they had substantial construction responsibility. Based on the restricted number of contractors addressed in the TPT program, no valid conclusions can be drawn concerning the overall QA/QC program implementation for all site contractors.

Q: Are there other limitations in the scope of the TPT review which impact its conclusions?

A: Yes. In important cases, such as the large bore piping review (Task C), the TPT assessment was conducted against a changing construction baseline. Because of the ongoing construction activities and the QA/QC activities which had not yet occurred, TPT was not able to verify that the completed items were constructed in accordance with the design requirements. Thus, a number of items selected by TPT could not be reviewed in a completed condition. In one instance, 27 potential pipe support safety concerns were designated as invalid during the Potential Finding Review process, merely because construction of the final pipe supports was incomplete. In other cases, the required documentation requested by TPT initially was not

readily retrievable, contrary to the records requirements of Criterion XVII of 10 C.F.R. Part 50, Appendix B. Seven potential safety concerns resulting from the documentation review were determined to be invalid Potential Finding Reports when appropriate documentation was identified "post-facto" to resolve the concern.^{20/}

IV. DISCREPANCY/FINDING PROCESSING

Q: Do you know how TPT prepared and processed Discrepancy Reports ("DRs") and initiated Potential Finding Reports ("PFRs")?

A: Yes. According to the TPT Report:

"The DR was the form used to document perceived differences between an observed condition and a required condition. When a walkdown team or a document investigator perceived a difference between what was being reviewed and the requirement document, they were required by procedure to fill out a DR to document the perceived discrepancy, indicating the required condition as well as the observed condition. This document was then reviewed by the respective team leader to evaluate the validity of the DR (i.e., to assess whether there was an actual difference between the observed and required conditions) and to evaluate the potential of the observed condition for safety impact. The task leader then reviewed the completed DR, including the team leader's assessment of validity and potential safety impact. If either the team leader or the task leader perceived a potential safety impact, a PFR was initiated and the PFR number was referenced on the DR." ^{21/}

^{20/} TPT Report, Volume I, pp. 4-2 and 4-3.

^{21/} TPT Report, Volume II, p. 1-9.

Q: In your opinion, were all DRs invalidated by TPT properly invalidated?

A: No. Although the TPT Report required that "any difference between an observed condition (document or installed hardware) and a required condition" be documented, ^{22/} DRs were often invalidated in a manner inconsistent with this standard. Of the 371 DRs generated, 103 were found by TPT to be invalid.

Q: Can you give some examples of DRs which you believe were improperly invalidated?

A: Yes. DRs 010, 011, 015, 022, 048, 068 and 153 are examples of DRs that were invalidated because differences between the item and the required condition did not affect system performance. DR 25 was invalidated because a circuit was found to function properly despite the difference from the required condition. A number of secondary pipe supports were found to be different from the required condition, but their DRs (see, for example, DRs 245, 287, 324, 328, 354, and 356) were invalidated because the differences did not affect the primary line. DRs 034, 042, 047, and 168 are examples of DRs that were invalidated because the inspected items were not within the scope of the TPT walkdown. DR 199 was invalidated because LILCO considered the item to be acceptable. In some instances DRs were invalidated for reasons that also applied to DRs that remained valid (for example, compare DRs 54 and 57 and DRs 287 and 312).

Q: Could improper invalidation of DRs have resulted in fewer Observations and Findings?

A: Some improperly invalidated DRs may have become PFRs and eventually Findings or Observations. There is no way to make an accurate prediction, because invalidated DRs were not subjected to the next level of inquiry and were therefore not evaluated with respect to their potential safety impact. Further, the cumulative effect of similar DRs could have a potential safety impact, or could indicate a repetitive QA/QC program deficiency, which would not be evident in a single isolated DR.

Q: Do you believe that TPT consistently and accurately determined which valid DRs should be PFRs?

A: No. TPT dismissed from further consideration DRs which related to non-Category I ("safety-related") material, components or equipment. DRs 112, 124, 130, 137, 139, 249, 259, 264, 268, 292, and 331 are examples. Accordingly, there was a wholesale exclusion from the PFR category of valid DRs for items which may have been important to safety, but which had not been classified as Category I. This decision may have resulted in a fewer number of Findings and Observations in the final TPT Report.

In addition, in some instances TPT made inaccurate determinations concerning a DR's potential safety impact, and therefore no PFR was written. For example, DR 123 examined LILCO's QA Audit Program and concluded that the program was deficient in not following LILCO QA Procedure No. 18.2, regarding corrective action for violations reported by audits. In its inspection, TPT discovered that a failure to follow Procedure 18.2 had led

to the same violation over four consecutive audits. Nevertheless, this DR was not made a PFR, because TPT concluded that there was no potential safety impact. I disagree with this conclusion because the failure to initiate prompt corrective action in response to a repetitive audit finding could have a safety impact, depending upon the nature of the audit finding. In addition, this failure is contrary to the requirements of Criteria XVI and XVIII of Appendix B to 10 C.F.R. Part 50.

Another example was TPT's questionable decision to find that DR 281 was "no longer a safety item" and therefore did not warrant being made a PFR. DR 281 disclosed that General Electric and S&W differed in their views of whether certain equipment was safety-related. General Electric had listed a number of items as Category I classification, while S&W had listed the same items as Category II. This difference resulted in certain equipment being classed as safety-related (Category I) during receipt inspection, but non-safety-related (Category II) during installation. It is not clear whether General Electric agreed to the downgrading of these items.

As a final example, TPT decided that DR 230 was "not a safety problem," and therefore no PFR was written. DR 230 determined that an uncalibrated torque wrench might have been used in the torquing of the primary containment drywell head. In my opinion, this decision ignores the fact that the use of an uncalibrated tool is prohibited by a specific QA policy (LILCO QA Manual, Section 12, paragraph 12.3.1.). Apparently, TPT did

not conduct a further investigation of the generic implications of this DR to determine whether uncalibrated tools were used in other plant procedures in violation of the QA policy.

Q: In summary, what are your conclusions in this area?

A: TPT improperly invalidated a number of DRs. Accordingly, the TPT Report understated the number of deficiencies and PFRs and possibly the number of Findings and Observations.

V. DEFICIENCIES IN SHOREHAM QA/QC PROCESS

Q: What is your understanding of LILCO's so-called "gating effect"?

A: As described on page 22 of LILCO's prefiled testimony on Suffolk County Contentions 12, 13, 14 and 15 and Shoreham Opponents Coalition Contention 12:

"LILCO's several types of inspections, whether receipt, in-process, or final, produce what is called a 'gating effect.' The term 'gate' means a stage in the process at which functions or attributes must be verified and beyond which material or components may not pass unless the requirements have been met. Within each major gate (procurement, receiving, storage, pre-installation, installation, system turnover, and test program) there may also be several subgates that require passing an inspection before the item may continue to be processed. The effect of these multiple gates is to provide several chances to detect a nonconformance."

Q: Does the TPT inspection substantiate that LILCO's "gating effect" is adequate to ensure that materials, components or equipment that do not satisfy requirements will be detected?

A: No. The TPT inspection indicates the opposite. TPT identified a number of discrepancies and PFRs that were later classified as Findings or Observations. Based upon information available to me in the TPT Report, I believe that many of these Findings and Observations described deficiencies that were first detected by TPT, despite prior opportunities for the LILCO "gating effect" to have detected the same deficiencies. It is likely that an analysis of PFRs which did not become Findings or Observations, and of valid DRs which were not made PFRs, would disclose additional deficiencies not detected by LILCO's QA/QC program. Unfortunately, TPT did not attempt to identify failures in the LILCO QA/QC program which permitted discrepancies to occur and remain undetected.

Q: Please give some examples of Findings which you believe demonstrate that LILCO's inspection process failed to detect deficiencies in materials, components or equipment.

A: In PFR 004 (piping boss material certification), TPT found that a 6,000 pound boss had been installed on a line when the material certification provided by the manufacturer recorded a 3,000 pound boss. TPT also noted two other identical discrepancies. These discrepancies appear to have escaped at least four inspection stages in the LILCO "gating process": (1) procurement; (2) receiving; (3) pre-installation; and (4) installation.

In PFR 114 (debris inside HVAC ducting), TPT noted that QA/QC procedures required "inspection of all ducting at completion of construction to prevent the fouling/clogging of ducts by foreign material." ^{23/} Despite these procedures, TPT discovered that:

" . . . garbage, consisting of fiberglass cloth and insulating material, was blocking approximately 25% of the duct flow area. This garbage would have eventually worked its way into the fan with resultant damage/failure of the fan, and thus, preventing proper operation of the system. The impact of such a failure would have serious consequences if postulated to occur during accident conditions. . . ." ^{24/}

Notwithstanding these QA/QC procedures and the potential seriousness of these conditions, the discrepancy had gone unnoticed until detected by TPT. There were at least two opportunities for detection of the debris before that time -- at the installation and system turnover inspections.

Q: Please give some examples of Observations which you believe demonstrate failures in LILCO's "gating effect."

A: PFR 022 (installed solenoid valve different from that which was required), PFR 037 (opening in HVAC duct) and PFR 092 (temperature elements not installed as required in the steam tunnel) all confirm my concerns with the adequacy of LILCO's

^{23/} TPT Report, Volume III, Book 2, p. 5 of PFR 114.

^{24/} Id.

inspection process. The valve addressed in PFR 022 was incorrect from the time of procurement; therefore, as many as four prior inspections may have failed to detect the discrepancy (procurement, receiving, pre-installation, and installation inspections). In PFR 037, TPT discovered that a sizable hole had been left in a QA Category I HVAC duct as a result of relocating certain instrumentation. This discrepancy should have been discovered by LILCO during inspection at the time of the removal of the instrumentation. In PFR 092, TPT detected that four temperature elements had been installed in locations which differed from the design drawings. Although the actual locations were determined to be acceptable, this discrepancy should have been detected at the time of the initial installation inspection. Moreover, although a subsequent inspection noticed the improper locations, that inspection resulted in initiating a corrective Engineering and Design Coordination Report ("E&DCR") which left the temperature elements in incorrect locations.

Q: But doesn't the relatively small number of TPT's Findings and Observations suggest that LILCO's gating system basically worked well?

P: No such conclusion is justified. If, as discussed in Part III of this testimony, the scope of the TPT review had not been so restricted, and if TPT had not improperly assessed DRs and identified PFRs, as discussed in Part IV, I believe there would be substantially more examples demonstrating the inadequacy of the QA/QC program for construction of Shoreham. Given the scope and methodology of the TPT review, the number of discrepancies not discovered until the TPT inspection provides evidence supporting Suffolk County's concerns.

VI. INADEQUATE CORRECTIVE ACTION MEASURES

Q: Did LILCO initiate corrective action measures in response to the TPT Findings?

A: Yes. Thirteen Corrective Action Plans ("CAPs") were prepared by LILCO and reviewed by TPT. A CAP was prepared for each of the 19 Findings, except that seven similar pipe support Findings were grouped into one CAP. However, no CAPs were prepared in response to the 32 Observations or the hundreds of DRs. This appears to be a significant omission in the TPT program.

Q: In your technical judgment, do all 13 CAPs fully satisfy the requirements for corrective action of Criterion XVI of 10 C.F.R. Part 50, Appendix B?

A: No. The proposed corrective action measures in a number of cases appear to address the symptom, rather than the root cause, of the inspection Finding. Of the 13 CAPs, a number had weaknesses that indicated an incomplete review of the discrepant conditions. For instance, the CAPs in some cases failed to provide for an investigation beyond the immediate discrepant condition to determine the cause, the underlying reason for the cause, why the condition had not been detected by the QA/QC program, and where else the condition could exist.

Q: Do you have examples of CAPs which exhibited the weaknesses you described?

A: Yes. CAPs 2, 5, 6, 11 and 13 all exhibited incomplete corrective action measures.

Q: Explain what you mean by incomplete corrective action measures as applied to CAP 2 (PFR 009).

A: CAP 2 was prepared in response to PFR 009 (the as-built HVAC ducting in systems T41 and T46 did not agree with flow diagrams). The CAP is judged as weak in that it merely agrees, through the means of an E&DCR, to update the flow diagrams to reflect the as-built installations. Some type of engineering evaluation or assessment should be accomplished concurrent with the updating effort to ensure that the as-built installation of the HVAC system still meets requirements and specifications. Such an engineering evaluation or assessment

may have been done, but if so, it is not evident from Mr. Novarro's prefiled testimony or the CAP.

Q: Explain what you mean by incomplete corrective action measures as applied to CAP 5 (PFR 045).

A: PFR 045 disclosed that construction temporarily removed part of a large-bore pipe support without following the appropriate procedure, FQC Procedure QC 15.4. Thus, there was no record of the temporary removal nor a request to replace the pipe support. CAP 5 did not go far enough in preventive action, in that LILCO should have done more than just issuing a verbal reminder to the offending organization. LILCO should have taken a stronger stand by going to each organization accomplishing work with a strong, written reminder of the seriousness of this type of oversight or omission. After all, the omission of a pipe support removes one of the assurances that a plant will be constructed as designed.

Q: Explain what you mean by incomplete corrective action measures as applied to CAP 6 (PFR 048).

A: In PFR 048, problems were identified in certifying that the recirculation pump motors met the Quality Classification assigned. These motors had been classified as QA Category I, then reclassified as Category II, and then parts of the motors were again reclassified as Category I. CAP 6 presented logical steps to resolve the certifying process problem; however, the attachment to this CAP described prior problems that were detected while these motors were in QA Category I storage. As

noted by TPT:

"The reactor recirculation pump motors had been fabricated, shipped, and lying in controlled QA Category I storage on the Shoreham site for about four years when, in October of 1979, heat exchangers were removed from both motors to facilitate installation in the drywell. During this operation, a number of adverse conditions were discovered. Upon further inspection using a boroscope, non-conforming conditions were observed, including: mildew on the insulation, rust on bearings, evidence of rodent occupation, large pieces of loose insulating varnish, steel cuttings, free water and high humidity." 25/

These problems indicated an apparent lapse in storage procedures. That this CAP, and the follow-up actions by TPT, did not address this apparent lapse is considered a weakness. The CAP should have at least indicated:

- (i) When and where these conditions developed;
- (ii) What lapses in QA/QC control permitted these conditions to develop;
- (iii) Why QA/QC inspections and audits had not detected these conditions earlier;
- (iv) What other Category I equipment has possibly been subjected to these lapses in control;
- (v) What has been done to verify the acceptability of the equipment identified in Item iv, above.

Until the above information has been provided, doubt will exist about the condition of other Category I equipment installed in the Shoreham plant that came from the same source, or that was stored in the same place at the same time, as the recirculating pump motors.

Q: Explain what you mean by incomplete corrective action measures as applied to CAP 11 (PFR 114).

A: In PFR 114, debris was found in the HVAC distribution system of the Control Room. The system had been completed, inspected, and placed in operation with the debris inside. Neither CAP 11, nor Mr. Novarro's prefiled testimony, nor TPT's actions after discovery of the debris, adequately address the potential generic problem of contamination found in a completed, inspected, and closed system. CAP 11 has several weaknesses in that:

- (i) LILCO is planning to use flow rates as evidence of lack of debris in closed systems;
- (ii) This incident did not appear to raise questions on effectiveness of inspection in assuring cleanliness in other closed systems, such as steam, water, pneumatic, and hydraulic systems.

Systems that are closed without assuring cleanliness can show proper flow rates even though debris is present. Such debris often collects over time at certain sensitive points, such as low points, corners, valves, restrictions, filters,

junctions, pump and fan intakes, and instrumentation parts, where it could impede flow at inopportune times. Also, the effects of some kinds of contamination may not show up as impedance to flow performance, but could show up in valve opening or closing performance or as deterioration of internal lines and components. Suitable corrective action questions should have included:

- (i) How did QA/QC inspections miss the debris in the HVAC ducting?
- (ii) Where else could inspections have missed debris or other forms of system contamination (objects, materials, liquids and gases)?
- (iii) How does LILCO know for certain that other closed systems (ducting, piping, lines, and equipment) are not also contaminated?

Q: Explain what you mean by incomplete corrective action measures as applied to CAP 13 (PFR 120).

A: PFR 120 identified three aspects deficient in the installation of a solenoid-operated valve ("SOV") as follows:

- (i) SOV not yet replaced per E&DCR with an SOV that was environmentally qualified;
- (ii) SOV not oriented as per manufacturer's instructions at installation;
- (iii) Installation had been "bought" by QA/QC inspection.

Corrective Action Plan 13 has several weaknesses, as follows:

- (i) Despite an installation orientation arrow on the SOV body and despite the note "Installation: Valves must be mounted with solenoid vertical and upright" in the manufacturer's bulletin, LILCO has elected to accept telephonic assurance from the manufacturer that the SOV installed orientation is satisfactory for angles "up to and including 90° from the upright and vertical position." Further, LILCO plans to issue E&DCR P-3810B for installation of new, environmentally-qualified valves to this relaxed orientation criterion.
- (ii) Despite the finding of TPT that this one valve was installed and verified correct by inspection, LILCO made only a limited inspection of the installation of several SOV model numbers. A reinspection verification is needed on at least all safety-related SOVs in the plant.
- (iii) LILCO should verify the manufacturer's telephonic information to assure that the relaxed installation orientation requirement has been confirmed by tests and experience over long time periods, before adopting such relaxation.
- (iv) LILCO should determine what caused the breakdown in QA/QC inspection that permitted acceptance of valve installation that did not conform to the

manufacturer's instructions. Neither the CAP nor Mr. Novarro's prefiled testimony addresses the range of corrective action measures described herein.

VII. STATISTICALLY VALID SAMPLING METHODOLOGY NOT UTILIZED BY TPT

Q: The TPT Report concludes that ". . . the implementation of the construction control program has resulted in adequate construction of nuclear safety systems and components in the Shoreham plant"^{26/} and that the construction of Shoreham ". . . is judged to meet the construction requirements of the design documents" ^{27/} In your judgment, given the methodology applied by TPT, are these conclusions justified?

A: No. The determination of the status of Shoreham vis-a-vis any fixed measure of quality or safety is very definitely a statistical matter. It is clearly not feasible to inspect every component of the plant or examine every document that has been generated during Shoreham's construction phase. Thus, one must seek to answer general questions about Shoreham from an inspection of a sub-collection of components or documents. However, in order for one to make statistically valid inferences about the general character of the plant, the sample of items examined must be selected in such a way that they can appropriately be thought of

^{26/} TPT Report, Volume I, p. 5-2.

^{27/} Ibid., p. 5-3.

as representative of the entire collection of items. It is in this crucial area that the TPT study is deficient. Instead of availing itself of widely-accepted, probability-based sampling methods and their attendant systematic methodologies for extrapolating from sample to population, TPT has selected items for inspection in a non-random, ad hoc manner.^{28/} While such an inspection, especially when it is of the magnitude of TPT's, can uncover useful information (for example, some previously undetected flaws might be identified), it cannot form the basis for reaching general conclusions about Shoreham.^{29/}

Q: Why wasn't it valid for TPT's engineers to use their experience and judgment in selecting a cross-section of items to be sampled?

A: TPT's approach to the formation of samples does not provide a vehicle for developing a general profile of the

^{28/} See, e.g., testimony of Louis D. Johnson, p. 12.

^{29/} On page 26 of his prefiled testimony, Mr. Johnson of TPT states:

"TPT thus believes it very reasonable to conclude that the hardware not inspected by TPT, which was built under the same construction controls and QA program, is also satisfactorily built to the engineering requirements."

For the reasons discussed in my testimony, I disagree that such a conclusion is justified.

population. While engineering experience and judgment play important roles in evaluation, they can introduce biases into the sampling process that preclude the possibility of drawing general conclusions. For example, when TPT engineers included welds for inspection during their implementation of Task D, two of the factors included among the selection criteria were: (1) a preference for high stress welds; and (2) weld accessibility.

A sample that is formed on the basis of judgment or convenience carries with it a high risk of being statistically biased. The direction of the bias is often unpredictable, and the magnitude of the bias can be substantial. More importantly, there is no rigorous methodology which enables one to validly extrapolate from a judgment sample to the population. In contrast with this, a randomly-chosen sample can be expected to be representative of the population from which it was drawn. Moreover, we can estimate population characteristics from such a sample, and can bound the error of our estimates in a manner that is mathematically and logically rigorous. In summary, the process of extrapolation from sample to population is justified through the unbiased and representative character of random samples. The use of engineering judgment in the selection of items to be involved in a sample can only obscure our view and obstruct our efforts to describe the population as a whole.

Q: Does the application of the science of Statistics preclude the use of engineering experience and judgment?

A: No. The design of a statistical study benefits from an engineer's experience and judgment. The engineer must decide what populations are of interest, and he must decide which questions are worth asking. Large and diverse populations can best be studied through stratification into relatively homogeneous subpopulations. Such a division into parts is again a matter of judgment. Finally, after a statistical study is complete, the engineer will often identify follow-up questions suggested by the current data. The process of studying a population statistically is interactive, and involves design phases which are subjective and testing phases which are objective and scientifically rigorous.

Q: Is it possible to design a statistically-valid program to demonstrate that Shoreham was constructed in accordance with design requirements, without an inspection of virtually every item in the plant?

A: Yes. It is neither necessary nor desirable to inspect every item in the plant. The validity of a statistical study depends on the extent to which the sample taken is representative of the population. If random samples are drawn, and the sizes of the samples are large enough to ensure the desired precision in estimating population parameters, questions concerning the general characteristics of Shoreham can be definitively resolved.

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Publications:

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- [27] "Estimating a Survival Curve Based on Nomination Sampling," in preparation (with R. Boyles).

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)

LONG ISLAND LIGHTING COMPANY)
)

(Shoreham Nuclear Power Station,)
Unit 1))
)

) Docket No. 50-322 (O.L.)

CERTIFICATE OF SERVICE

I hereby certify that copies of the DIRECT TESTIMONY OF RICHARD B. HUBBARD AND DR. FRANCISCO J. SAMANIEGO REGARDING TORREY PINES TECHNOLOGY'S INSPECTION OF SHOREHAM NUCLEAR POWER STATION have been served to the following this 21st day of December, 1982 by U.S. Mail, first class, except as otherwise noted.

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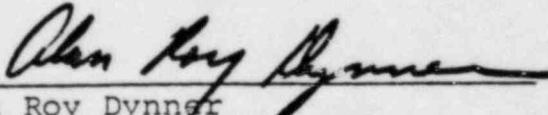
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1 JUDGE BRENNER: That also includes the
2 four-page Attachment 1, which is Dr. Samaniego's
3 qualifications.

4 (Pause.)

5 JUDGE BRENNER: Are you done, Mr. Dynner?

6 MR. DYNNER: Yes.

7 JUDGE BRENNER: I am sorry, I was waiting for
8 you.

9 Why don't we get about 15 minutes in, and then
10 we will break around 12:15 and you can stop at a
11 convenient point, Mr. Earley.

12 CROSS-EXAMINATION

13 BY MR. EARLEY:

14 Q Good morning, gentlemen. For the interest of
15 the Board, we will be starting with the first item on
16 the cross-examination plan. I would like to direct the
17 questions initially to Dr. Samaniego, since we will
18 start on your portion of the prefiled testimony.

19 You don't have the cross plan, but there are
20 logical break points, and I would like to request that
21 if Mr. Hubbard wants to add to Dr. Samaniego's answers,
22 that I will indicate when we reach the end of a
23 particular subject, that if he has something to add onto
24 Dr. Samaniego's testimony, he can do it then.

25 MR. DYNNER: Yes, I would say that consistent

1 with past practice that under I think what has now
2 become known as the Powell rule, that it would be
3 certainly appropriate consistent with past practice.
4 And if a question is directed to Dr. Samaniego, that he
5 will certainly answer it. But then there shouldn't be
6 any restraints upon the other member of the panel who
7 might wish to add something to the question. I don't
8 think he ought to be artificially constrained from
9 adding any comments that he might have to a particular
10 question.

11 JUDGE BRENNER: I think that is accurate. I
12 think what Mr. Earley said is that he is asking that he
13 be permitted to direct his questions initially to Dr.
14 Samaniego, and he thinks it would be better rather than
15 having Mr. Hubbard asked after each single question,
16 that he will have some logical break points. And we
17 have permitted some flexibility on the cross-examiner in
18 that regard so long as it didn't get too far down the
19 road, making it difficult for the other witness to make
20 the interjections. So let's see how it goes.

21 MR. EARLEY: Judge, that was my purpose for
22 efficiency in trying to get through the discrete areas
23 and focusing on Dr. Samaniego's testimony. I think it
24 will go much faster if we do it that way.

25 BY MR. EARLEY: (Resuming)

1 Q Dr. Samaniego, focusing on page 29 of your
2 prefiled testimony, you use the term "biases." As a
3 statistician, what do you mean by the word "bias"?

4 A (WITNESS SAMANIEGO) Do you have a specific
5 line number in mind where the word "bias" is used? I
6 would like to read the context in which it was used.

7 Q You use it on the second line of page 29.

8 A (WITNESS SAMANIEGO) The statistical process
9 involves several elements. There is a population of
10 items about which information is sought. There is a
11 sample of items drawn from that population by some
12 process. Then there is the process of inference.

13 Now, the term "bias" refers to the possible
14 difference estimates of population characteristics that
15 are derived from the sample and to the true value of
16 those characteristics in the population.

17 A technical definition of bias is the
18 difference in the expected or average value of an
19 estimate, difference between that and the population
20 value that is of interest.

21 Q You also used that term further down on page
22 29, saying, the magnitude of the bias can be
23 substantial. You also refer to the direction of the
24 bias. Would that be the same definition for bias as
25 used there?

1 A (WITNESS SAMANIEGO) Yes, it is.

2 Q I take it from your testimony that you believe
3 bias should be minimized; is that correct?

4 JUDGE BRENNER: Mr. Earley, this is my fault.
5 Did you say "can be" or "should be"?

6 MR. EARLEY: "Should be minimized."

7 WITNESS SAMANIEGO: The bias that results in
8 the extrapolation process is something that one seeks to
9 eliminate or control.

10 BY MR. EARLEY: (Resuming)

11 Q And one of the ways to eliminate or control
12 that is the use of random sampling, isn't that correct?

13 A (WITNESS SAMANIEGO) It is possible to develop
14 unbiased procedures where the unbiasedness that I am
15 referring to is in the technical statistical sense by
16 the use of random sampling techniques.

17 Q Those are the techniques that you refer to in
18 your prefiled testimony, isn't that correct?

19 A (WITNESS SAMANIEGO) In my testimony I refer
20 to the process of random sampling and the statistical
21 process that follows upon that sampling. And in my
22 reference to the development of representative samples,
23 I am referring to the random sampling process.

24 Q And one of the reasons you included that in
25 your testimony is that it is a way to minimize or

1 eliminate bias, isn't that correct?

2 A (WITNESS SAMANIEGO) That is one of the
3 concerns, certainly, in developing a random sampling
4 plan. And there are several others, including the
5 ability to make probability statements and confidence
6 statements regarding the population as well as
7 introducing a measure of control with regard to the
8 precision in which inferences can be made with regard to
9 that population.

10 Q Dr. Samaniego, in a study such as the Torrey
11 Pines independent verification, if a random sampling
12 process was used in order to minimize bias, I take it
13 that the inspector would be given a list of items to be
14 checked, and in order to insure that sample's neutrality
15 or to minimize bias, the methodology would require the
16 inspector to check every item on that particular list,
17 is that correct?

18 A (WITNESS SAMANIEGO) Once the items have been
19 identified in a sampling plan, the inspector would be
20 expected to review every item on that list. I should
21 mention that the list could well be subject to
22 qualifications like accessibility of items so that there
23 wouldn't be unexpected problems with accessing items
24 that had been singled out for inspection.

25 In limiting the list in that way, it should be kept

1 in mind that the inference process about the population
2 would be restricted to the population that is sampled
3 from, and if items are going to be excluded from
4 inspection, then those items would also be excluded from
5 any conclusions that would be drawn from the inference
6 process.

7 Q You would agree with me, though, wouldn't you,
8 that if your list did not exclude inaccessible items and
9 when the inspector went out to check a particular item
10 and it was inaccessible or removed for repair, that
11 would introduce bias in the results, wouldn't it?

12 (Pause.)

13 A (WITNESS SAMANIEGO) It is certainly a
14 possibility that bias would be introduced by not
15 pursuing the sampling of an item that had been selected
16 for inspection by a random sampling mechanism. On the
17 other hand, it still would be possible to develop a
18 probability theory regarding the items that were
19 inspected and to bound errors by rigorous probabilistic
20 arguments so that the influence of the items that were
21 not pursued for reasons such as inaccessibility could be
22 assessed by such analyses.

23 Q Now, in order to develop that probability
24 theory, you would have to know something about the
25 circumstances and details of the particular items that

1 were excluded, wouldn't you?

2 A (WITNESS SAMANIEGO) On any subsequent
3 analysis which would involve the examination of missing
4 items in a list of items selected for sampling, one
5 would seek to determine all of the details of the
6 absence of those items, and in an actual review process
7 it would undoubtedly be true that statistical personnel
8 and personnel with other expertise, including nuclear
9 engineering expertise, perhaps QA people and so forth,
10 would be jointly involved in assessing the consequences
11 and the circumstances under which omissions occurred.

12 Q And any conclusions about the impact of those
13 particular omissions would be based upon the judgment
14 and experience of the particular engineers who were
15 assessing the impact of those omissions, wouldn't it?

16 A (WITNESS SAMANIEGO) The analysis that would
17 be done on the items that actually were sampled could be
18 done using established methods, probability theory. The
19 overall process of determining the significance of the
20 absence of items on a list selected for sampling would
21 be certainly, in part, a judgment matter which would
22 undoubtedly be something that a statistician and others
23 would be involved in.

24 There is the possibility that further
25 sampling, follow-up sampling, could be commissioned if

1 in fact there were serious deficiencies in the sample
2 that was actually obtained.

3 Q I take it your testimony is that judgment
4 would play a significant role in this process? And I am
5 talking about engineering judgment.

6 A (WITNESS SAMANIEGO) There would certainly be
7 an element of judgment involved, and the experience of
8 engineers would be useful to the statistician in
9 determining what further techniques would be advisable.

10 Q Using the statistical methods you couldn't
11 judge the significance of the omissions without having
12 engineering judgment and experience brought to bear on
13 the particular problem, could you?

14 A (WITNESS SAMANIEGO) Yes, yes, I could, in the
15 following sense: The extent of the sheer number of
16 omissions would be an important factor; for example, if
17 a sampling plan called for inspecting 100 items and
18 somehow only 27 items were inspected, there would be
19 perhaps good cause on a statistical basis alone to judge
20 that that sampling process was not sufficient to achieve
21 the goals of the study and to justify conclusions that
22 one might want to make with the precision that one wants
23 to make them.

24 So there are statistical questions regarding
25 how many items actually were sampled that could be

1 judged without substantive input from engineering
2 personnel. There are other items with regard to the
3 significance of actual omissions which would be
4 considered jointly.

5 Q I take it then you are saying that unless
6 there were some gross level of omission from your
7 original sample size, that you would have to apply
8 judgment and experience in order to determine the
9 significance of that omission?

10 A (WITNESS SAMANIEGO) You are not then asking
11 whether that would be the sole factor? I certainly am
12 prepared to say that it would be a component of the
13 analysis.

14 JUDGE BRENNER: Mr. Earley, excuse me. I
15 don't know if Mr. Hubbard had anything to add on any of
16 those questions, but I thought you were going to give
17 him a little or lesser intervals is I guess the way to
18 express it. If he has anything to add, and we have
19 restricted him, it is getting to be a long time in order
20 for him to come back to a question.

21 MR. EARLEY: Well, Judge, I suspect that each
22 of the subparts A through D will probably take about 20
23 minutes or so each to go through. I think it is fairly
24 efficient to have this exchange with Dr. Samaniego.

25 JUDGE BRENNER: I agree that it has been

1 efficient, and it is primarily Dr. Samaniego's area, and
2 I am sure the County agrees with that too. But
3 nevertheless, I don't want to preclude the possibility
4 that Mr. Hubbard might want to add something. Let's see.

5 Have we restricted you so far, Mr. Hubbard? I
6 don't know how to judge the practicality, is what I am
7 saying.

8 WITNESS HUBBARD: I have felt restricted, yes.

9 (Laughter.)

10 JUDGE BRENNER: In fact, you would have added
11 some things to some of those questions?

12 WITNESS HUBBARD: Well, I wasn't clear in my
13 mind if I could also discuss some of Dr. Samaniego's
14 answers before he made them, and given some leeway, I
15 would have liked to have discussed a couple of them
16 with him as part of his answer.

17 JUDGE BRENNER: No, that restriction we will
18 permit as long as we deem it being fairly applied, and
19 when we are focusing mainly on his area, we would. But
20 you could add whatever it is you want to discuss on the
21 record.

22 MR. DYNNER: I assume that the imposition of
23 the Powell rule on discussions between witnesses may be
24 utilized in the same manner as with the last panel?

25 JUDGE BRENNER: That is the part of the rule

1 that you took from the deposition, Mr. Dynner?

2 MR. DYNNER: Well, I don't intend to jump in
3 and object all of the time, because I think that
4 restricts the free flow. But I think if Mr. Hubbard
5 wants to add a comment, I think it is helpful to the
6 Board, and I think the restrictions that have gone on
7 for some 15 minutes without his input are not helpful.

8 JUDGE BRENNER: Let him add Mr. Hubbard's
9 comments on the record. We will allow the restriction
10 in terms of consultation if the cross-examiner insists
11 on it. And then we will let Mr. Hubbard just add on the
12 record, because otherwise I think it is going to get too
13 difficult and we will end up with Mr. Hubbard having to
14 make a broad statement subsuming his view of the
15 previous ten questions. And I don't want to prevent
16 that either, because I want to restrict the witness to
17 answering the question.

18 Now, remember, Mr. Hubbard, the additions have
19 to be towards answering the question, as we have always
20 held. So let's do it that way. And now that I have
21 interrupted you, my secondary purpose was seeing how far
22 you wanted to go before we took a break.

23 MR. EARLEY: Judge, we can break right now. I
24 am about ready to come back to the original hypothetical
25 to pursue a little bit different line.

1 JUDGE BRENNER: Okay. Let's take an hour and
2 a half until 1:45. We expect the County to inform us at
3 some time later today whether it intends to default. I
4 wouldn't have raised that matter except that you did,
5 Mr. Dynner. It frankly never occurred to me.

6 MR. DYNNER: Yes. I will get back to you on
7 that, Judge.

8 (Whereupon, at 12:15 p.m., the hearing in the
9 above-entitled matter was recessed, to reconvene at 1:45
10 p.m., this same day.)

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AFTERNOON SESSION

[1:48 p.m.]

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3 JUDGE BRENNER: All right, we are back on the
4 record.

5 Before we continue the cross-examination, are
6 there any reports about the matters we discussed this
7 morning? Mr. Dynner?

8 MR. DYNNER: No.

9 [Pause]

10 JUDGE BRENNER: This is going to be a good
11 one, I guess.

12 [Laughter]

13 MR. DYNNER: Let's hope so, Judge Brenner. I
14 discussed this matter of environmental qualification
15 with my colleagues. It does appear that we have been
16 placed in an extraordinarily difficult position. I
17 would say, to preface this just in answer to some of the
18 Board's questions this morning, our estimate, as you
19 know, was based upon a belief (a) that the redirect
20 examination was going to go on for a longer period than
21 it did, again based on past experience, (b) what we
22 thought was going to be possibly covered anyway on the
23 inspection report, and (c) the LILCO counsel's earlier
24 estimates of the time for cross-examination of the
25 County's own panel combined with what we thought would

1 be a likely time for the Board to also question the
2 County's panel.

3 It was based upon those set of facts coupled
4 with the fact, and I must mention this, that Mr. Irwin
5 mentioned that he had called Ms. Letsche yesterday, and
6 I have ascertained that he did not leave a message about
7 what his call was about, and of course there was ample
8 opportunity for LILCO's counsel to inform myself or
9 others, colleagues of mine here, that they were planning
10 on shortening up the time frame and starting
11 environmental qualification today, or at the latest
12 tomorrow morning, and that didn't happen.

13 At any rate, Mr. Miner was not going to
14 leave. He left only on Monday yesterday for Albuquerque
15 for this meeting, the Standards Committee, based upon
16 the assessment that we made of the way things were going
17 this week and our expectations.

18 All of that aside, the County is an
19 extraordinarily difficult position in that it is the
20 feeling that by a combination of events, in order for
21 the County adequately to litigate the contention on
22 environmental qualifications, the two people that have
23 to be involved in that would be Mr. Miner and Ms.
24 Letsche. For Ms. Letsche to come up here and being
25 tomorrow would substantially impair the job that is

1 being done with regard to the findings that the County
2 is preparing and has to file on Thursday. For Mr. Miner
3 to return under these circumstances would, of course, be
4 very difficult, to bring him back from Albuquerque and
5 the meeting.

6 The bottom line is, Judge Brenner, that we are
7 going to have to renew our request that we start this on
8 Monday. It would seem to us, and of course we don't
9 know how long the cross-examination of this panel is
10 going to continue, but if one looks at it in terms of
11 that continuing this afternoon for the three or so hours
12 left to us, and then assuming that the Board also has
13 some follow-up questions that it would like to examine
14 our panel on, we really are talking about a one-day
15 extension from perhaps Wednesday to Thursday afternoon.

16 I don't want to place this in the position
17 where we are ultimately going unless the Board pushes it
18 in that direction. I would request very strongly that
19 the Board reconsider and give us an extension until
20 Monday to start this litigation.

21 JUDGE BRENNER: Well, we are not going to do
22 that, for the reasons we discussed, and we are not going
23 to consider that ruling. There are witnesses sitting
24 here. Our ruling was not based upon Mr. Irwin's phone
25 call or lack thereof. That might have made a difference

1 between today or tomorrow, and as I said, we are not
2 holding you to today. I don't think there will be any
3 time left today anyway, as it turns out, or any time
4 left today would have been minimal.

5 What we asked you to check was if it was
6 convenient for Ms. Letsche to come up today in case.
7 You gave us that answer and we accepted it. I don't
8 want to belabor everything we said already. The whole
9 idea was to have this proceeding preplanned. I don't
10 think this Board's disposition towards schedules should
11 come as any surprise at this late date in this
12 proceeding. When you have a large proceeding, if you
13 become disorganized where dates become unimportant, very
14 quickly the whole process gets very chaotic.

15 MR. DYNNER: I don't think the dates are
16 unimportant. The County doesn't feel the dates are
17 unimportant. We understand that you feel the dates are
18 very important, and we would ask you to reconsider the
19 fact that the bottom line is we are not going to be
20 prepared to start.

21 JUDGE BRENNER: Let me focus on what is
22 important to us. You have not given everything we have
23 already said. You have not told us why Ms. Letsche
24 cannot be here tomorrow.

25 MR. DYNNER: Because Ms. Letsche has been

1 working around the clock on preparation of findings as
2 well as some other matters, including the response to
3 this latest document that was ruled upon this morning to
4 dismiss Part D of that contention.

5 JUDGE BRENNER: Which was principally accepted
6 as late filed, you may recall.

7 MR. DYNNER: Well, late or not, principally
8 she has been working on the findings around the clock,
9 and if we have to make a judgment --

10 JUDGE BRENNER: Mr. Dynner, if she is still
11 writing findings tomorrow on the day it is going to be
12 filed as distinguished from the administrative acts of
13 having it typed and proofread, then you have got big
14 trouble.

15 MR. DYNNER: Well, maybe you think we have big
16 trouble, but we have been practicing law for some time,
17 and any law firm, I think, will tell you that there is
18 an enormous effort that goes in, including at the last
19 minute, to polishing the product and ensuring that it is
20 proper and it is adequate, and that process is going on
21 and it goes on in any law firm which is attempting to
22 supply the best product it can in a vitally important
23 area. So yes, it does go on until the last minute
24 before filing.

25 JUDGE BRENNER: Which date was already

1 extended, as we discussed.

2 Now, why can't Mr. Miner be here from
3 Albuquerque as distinguished from his original departure
4 location, which presumably would have been California?

5 MR. DYNNER: Mr. Miner left on Monday to go to
6 Albuquerque to this meeting of the National Standards
7 Committee on which he serves. For him to come back
8 would be at this point, to try to come back in time to
9 start tomorrow, would be futile insofar as Ms. Letsche
10 would not be here to conduct the cross-examination in
11 any case.

12 JUDGE BRENNER: Yes, but you have confused two
13 things in that statement. You are saying you are not
14 choosing to bring him back here. That is different than
15 the fact that he couldn't be here.

16 MR. DYNNER: Well, I'm saying there is no
17 point in bringing him back if counsel can't be here to
18 cross-examine the panel.

19 JUDGE BRENNER: But he could be here if
20 counsel were here?

21 MR. DYNNER: I haven't been able to reach Mr.
22 Miner to see if he could get on a plane and come back
23 tonight.

24 JUDGE BRENNER: You said it would be
25 extraordinarily difficult.

1 MR. DYNNER: Well, because of the distances
2 involved and the fact that he is involved in this
3 committee which he has responsibilities on. I mean if
4 it were a question of if it were possible to start
5 tomorrow from another point of view, then obviously we
6 would go to extreme efforts to try to reach Mr. Miner
7 and bring him back here, but it is not possible for the
8 reasons that I stated, so we haven't explored what the
9 airline schedules are and whether it would be possible
10 for Mr. Miner to return tonight.

11 JUDGE BRENNER: Or whether he had to be here
12 for the opening of the cross-examination as a necessary
13 element.

14 MR. DYNNER: We haven't gone into that.

15 JUDGE BRENNER: But you made a unilateral
16 decision without discussing it with the Board or the
17 parties that it would be okay for him to be in
18 Albuquerque, notwithstanding the schedule for
19 environmental qualifications?

20 MR. DYNNER: He made his decision based upon
21 our assessment of the time when Torrey Pines would end
22 and when his presence would be needed. He didn't do it
23 unilaterally. He did it on our advice.

24 JUDGE BRENNER: The County did it unilaterally.

25 MR. DYNNER: Well, I have explained already

1 the basis upon which the County made its estimates,
2 which were based upon LILCO's estimates, and I think it
3 just fine if we want to play this game.

4 JUDGE BRENNER: It is not a game, Mr. Dynner.

5 MR. DYNNER: I think it is a game when counsel
6 for the other side doesn't tell you until the same day
7 that suddenly their day's cross-examination has turned
8 into two hours, and when the cross-examination the day
9 before had, and we are not playing a game either, here,
10 in trying to be difficult. We are attempting to keep
11 this contention alive under circumstances where a day
12 and a half is involved. I think that something short of
13 that, we can go into all of these "Who struck John's,"
14 but the fact is, as we see it, we would like to be able
15 to litigate this contention, and whatever the facts are,
16 they have converged into a situation that makes it
17 impossible for us to begin this week. We are sorry
18 about that and we would like the Board to reconsider.

19 JUDGE BRENNER: Well, I won't belabor what we
20 discussed earlier. The facts haven't converged. The
21 County has caused the convergence on itself through the
22 series of things we discussed. We didn't know any more
23 than you did the end of last week or the beginning of
24 this week as to precisely how long the examination would
25 be, but we were under the assumption that we would start

1 environmental qualifications this week, and I also
2 expressly said we would revisit that subject this week
3 just to double-check. Notwithstanding that express
4 discussion, the County was silent as to the steps it
5 took to put itself in this position.

6 [Board conferring]

7 We resent being put in this difficult position
8 by the County's difficulty, so it is not only the
9 difficulties visited upon itself by the County, it is
10 the difficulties visited upon the Board. We are not
11 going to lose this hearing week. We are sitting here. I
12 assure you that I had other things I could have done
13 this week. We have eight witnesses sitting here. They
14 are entitled to some equities, too.

15 If it will make a difference towards your
16 starting tomorrow, towards Ms. Letsche being here
17 tomorrow, we will on our own give you a short extension
18 of the findings until Monday, but we will start this
19 issue tomorrow, given what you have told us now of the
20 particular problems with respect to Ms. Letsche being
21 here. I will say again, tomorrow is the due date for
22 the findings. I just cannot imagine that there is that
23 much left to do that she couldn't be here with that
24 date.

25 But it seems to us that if we wanted to

1 accommodate you, and we are trying to do that now
2 notwithstanding our strong unhappiness with the
3 situation, it would not be fair to the other parties
4 with all their other witnesses sitting here nor to our
5 schedules, with us sitting here, to put the flexibility
6 in terms of deferring the contention. So it is our hope
7 that by deferring the findings until Monday, we can
8 assist the difficult situation that the County has
9 placed itself in to enable us to go forward with the
10 litigation tomorrow.

11 Why don't you have somebody call her up and
12 then let us know, because if we otherwise finish this
13 issue, I don't want to show up here tomorrow morning and
14 then find out that you are going to default in any
15 event. We will adjust the other findings dates if it
16 turns out that is the case. Now, if that isn't enough
17 to assist the County to be here tomorrow, then we will
18 keep the original findings date.

19 MR. IRWIN: Judge Brenner, if LILCO may be
20 heard, I am not going to revisit any "Who struck John's"
21 about phone calls yesterday afternoon. I don't think it
22 was my obligation to leave any explicit message with Ms.
23 Letsche.

24 JUDGE BRENNER: That played no part in our
25 ruling.

1 MR. IRWIN: LILCO is prejudiced even by a
2 four-day extension of findings. We have written
3 testimony, litigated issues and filed findings on our
4 own simultaneously. We have labored under these burdens
5 all at the same time, and the quality of our work
6 product, whatever it may have been, has reflected our
7 simultaneous activities. We have planned, we have met
8 schedules which the County forced us to agree to, and we
9 feel at least as strongly as the Board about this
10 particular situation.

11 JUDGE BRENNER: Well, you have said your
12 piece. This was not an eager offer of relief on the
13 part of the Board, and we understand and agree with what
14 you just said; but nevertheless, we are willing
15 reluctantly to offer that safety valve. We are not
16 convinced that that safety valve was necessary for Ms.
17 Letsche to be here tomorrow and you have not shown good
18 cause for that, in our view, for the reasons we
19 discussed; but nevertheless, if this helps, we can offer
20 you that limited flexibility. We will in the future
21 think twice before readily granting an extension which
22 may someday be used to create other problems.

23 MR. IRWIN: Judge Brenner, may we request, if
24 it is possible, if the County is going to file its
25 findings on Monday, that we have them at the beginning

1 of the business day rather than at the end of the
2 business day? We have been trying to get together with
3 our people to reply to them, and that day would be
4 helpful.

5 JUDGE BRENNER: Well, we will change the date
6 for the reply findings. We have better things to do
7 than pull out the calendar and adjust things by a day or
8 two. All right. If we are talking about January 31st,
9 if we make this change, and whether we make this change
10 depends upon whether the County is going to be here
11 tomorrow to litigate environmental qualifications, the
12 County's findings would be due on January 31st. Then the
13 Staff's findings would be due on the 10th.

14 MR. IRWIN: Wouldn't that be the 11th, Judge
15 Brenner?

16 JUDGE BRENNER: No, it is the 10th. Ten days.

17 MR. IRWIN: I was calculating four days'
18 slippage.

19 JUDGE BRENNER: Well, the weekend before -- I
20 am going back to the original schedule, that is, of
21 essentially a ten-day gap. The reason the Staff's
22 filing was on the 7th was because the tenth day was the
23 6th originally. Maybe I counted it wrong the first
24 time, but ten days from the 31st is February 10th, right?

25 MR. IRWIN: That is correct.

1 JUDGE BRENNER: And then I think you are going
2 to get a weekend. That assists you in any event, Mr.
3 Irwin. Then another five days.

4 MR. IRWIN: Our date, I believe, was the 14th.

5 JUDGE BRENNER: Yes. You don't get helped by
6 the schedule very much when the weekends get changed
7 around.

8 MR. IRWIN: We sure don't.

9 JUDGE BRENNER: You end up with the 15th
10 instead of the 10th.

11 MR. IRWIN: Judge Brenner, that is doubly
12 prejudicial.

13 JUDGE BRENNER: I agree. All right, we will
14 do it the other way. We will add four days to every set
15 day. This is starting to impact the Board's work now,
16 and one reason for having the findings filed on the
17 schedule they were filed was so the Board and those
18 assisting the Board could be working on this.

19 MR. IRWIN: So, Judge Brenner, if we can make
20 sure that we understand that this is a four-day slip in
21 each of the filing dates?

22 JUDGE BRENNER: Yes, and the dates then would
23 be January 31st for the County, February 11th for the
24 Staff, February 18th for LILCO's reply findings.

25 Where do you want LILCO's findings served on

1 counsel -- I'm sorry, the County's filings served on
2 counsel for LILCO? Here, in Virginia, or both?

3 MR. IRWIN: We would prefer it both if
4 possible, Judge Brenner. If it has to be one place, we
5 would prefer it in Richmond, but we would prefer both.

6 JUDGE BRENNER: We will order it both given
7 this extension.

8 What about the Staff?

9 MR. BORDENICK: Since the new date is now
10 Friday, it will ostensibly be in Bethesda since the
11 hearings will only be Monday through Thursday.

12 JUDGE BRENNER: I'm sorry. The new date will
13 be Monday, then, the 31st.

14 MR. BORDENICK: Oh, I'm sorry. As I said
15 earlier, Bethesda.

16 JUDGE BRENNER: All right. Bethesda for the
17 Staff. For the Board, the same as we have said all
18 along. Our individual copies in Bethesda, courtesy
19 copies here as soon as you can catch up after the filing
20 date if you cannot make it on the exact filing date. You
21 can miss a day for us. However, in this case that
22 wouldn't pertain since you have to get LILCO's copy here
23 anyway. We won't set a time early on the 31st, just
24 within normal business hours on the 31st: that is, by
25 around 5 o'clock. It would obviously assist LILCO if

1 you could get it here earlier, and we would encourage
2 that but not require it

3 The effect of this, as we have just seen now,
4 is as always happens in a complicated proceeding, has
5 been to move other dates off beyond the normal 10, 20,
6 30, 35 days which had already been adjusted for
7 weekends, which was then adjusted by the week, which now
8 has been adjusted on a different basis than the normal
9 gap, and on and on.

10 All right. Having said all that, we hope that
11 this assists the situation, and we certainly hope we
12 don't have to face a situation like this again.
13 Part of our reason for the relief is the problems with
14 these last few issues, particularly environmental
15 qualifications, have been an aberration in the County's
16 approach in that a lot of work has been done by all
17 parties, including the County, in proper time frames,
18 and we appreciate that, and to some extent that
19 background as inured to your benefit here.

20 But the problems on this issue, and it wasn't
21 just the start of litigation, and I don't want to repeat
22 it, but every filing -- not every filing, but other
23 matters related to this issue have given us problems,
24 including the lackadaisical negotiating process, which
25 we commented on some time ago, and the lackadaisical

1 response to settlement drafts and so on. I am not
2 talking about the substance of the response. If there
3 was no agreement, fine. I am just talking about the way
4 the process went on and on and now here we are on the
5 eve of litigation still worrying about negotiations on
6 containment isolation and we are worried about the date
7 for starting things. We certainly expect that these
8 things will not occur again.

9 Let us know this afternoon whether that allows
10 the County to start the litigation tomorrow, and I warn
11 you, we expect to efficiently start the litigation
12 tomorrow. We don't want somebody here just taking up
13 time in order to meet our order. We expect the same
14 efficient cross-examination as we always insist on.

15 All right, let's continue the
16 cross-examination.

17 [Discussion off the record]

18 JUDGE BRENNER: I'm sorry. Did I miss
19 something?

20 MR. IRWIN: Judge Brenner, I have just two
21 brief remarks I must make, and forgive me.

22 JUDGE BRENNER: About the subject we just
23 discussed?

24 MR. IRWIN: Yes, sir. The first is, LILCO is
25 also troubled about negotiation processes that have

1 taken months. I will not go into it here without other
2 principals who have been involved in this process not
3 present, but it has not been LILCO that has been
4 dragging its feet. That is point one, and I can back
5 that up.

6 Point two, as Mr. Ellis pointed out, we think
7 that the County is now in better shape, given these
8 delays, than it would have been had they met the
9 deadlines originally because they haven't had to do the
10 simultaneous job that we have had to do. They have
11 gotten extension after extension.

12 JUDGE BRENNER: I agree. We could have held
13 the County in default and we didn't do it, and I said
14 expressly, and I will say again, the relief we just
15 granted was not on the basis of good cause shown by the
16 County; it was to the contrary. If that makes you feel
17 any better, you are entitled to that statement.

18 Incidentally -- let's do this off the record.

19 [Discussion off the record]

20 JUDGE BRENNER: Let's go back on the record.

21 Whereupon,

22 RICHARD B. HUBBARD and

23 DR. FRANCISCO J. SAMANIEGO,

24 witnesses previously on the stand, having been sworn
25 under oath, resumed the stand and were examined and

1 testified further as follows:

2 CROSS-EXAMINATION -- continued

3 BY MR. CARLEY:

4 Q Dr. Samaniego, I would like to go back to
5 something you said this morning. I believe that we were
6 discussing bias. You said that in order to avoid bias,
7 you could exclude inaccessible items from your sample
8 but that then you couldn't draw any inferences about
9 those inaccessible items. It is fair to conclude, then,
10 that there are many things in a nuclear plant that you
11 wouldn't be able to use statistical methods or random
12 sampling to draw conclusions about; isn't that true?

13 A (WITNESS SAMANIEGO) The process of
14 statistical inference is, of course, constrained to
15 inference about the sample population, and if it is
16 impossible to sample a certain segment of a population
17 of interest, then in fact statistical process doesn't
18 apply to that segment. On the other hand, any method,
19 whether it be engineering judgment or whatever you want
20 to call it, is going to have difficulty with a portion
21 of the population that cannot be reviewed.

22 Q Well, have you made any determination as to
23 how many items in a nuclear plant might be inaccessible
24 so you couldn't draw any statistical inference about
25 them?

1 A (WITNESS SAMANIEGO) No, I have not.

2 Q Do you know how much rebar there is in a
3 nuclear power plant?

4 A (WITNESS SAMANIEGO) I think it might be
5 worthwhile mentioning in connection with issues brought
6 up in my deposition, and that is --

7 MR. EARLEY: Judge, could I get an answer to
8 my question first?

9 WITNESS SAMANIEGO: The answer is no. The
10 specific technical issues involved in a nuclear power
11 plant are largely -- well, they are not within the
12 domain of my expertise, and I am happy to put that on
13 the record. It has been part of the record in the
14 deposition. My testimony primarily addresses
15 methodology, and methodology regarding sampling and
16 conclusions drawn from sampling procedures.

17 JUDGE BRENNER: Let's go off the record.

18 [Off the record]

19 JUDGE BRENNER: Let's go back on the record.

20 BY MR. EARLEY: (Resuming)

21 Q Doctor, what I am trying to probe is that I
22 believe in your deposition and your prefiled testimony
23 you testified not only that statistical random sampling
24 methods were applicable to nuclear plants, they were the
25 only methods that should be applied, and that they were

1 cost-effective and yet you don't know the details of
2 things such as the number of items that would be
3 inaccessible in a nuclear power plant. Isn't that
4 correct?

5 A (WITNESS SAMANIEGO) It is certainly correct
6 that I don't know the number of items that would not be
7 accessible in a nuclear power plant. Inaccessible
8 items, of course, are, as I mentioned, difficult to
9 include in any study irregardless of the approach.

10 A (WITNESS HUBBARD) I would like to add to
11 that, Mr. Earley, that Torrey Pines did have some
12 inaccessible items on the list of items they were going
13 to look at, and I recall looking at one DR where they
14 came upon these inaccessible items and so they therefore
15 closed out that DR without going any further. So this
16 is something that Torrey Pines did confront, but then
17 the conclusion was that there was nothing they could do
18 about it.

19 Q Dr. Samaniego, let's go back to the original
20 hypothetical we were discussing. Suppose you did do an
21 independent verification using a random sampling method,
22 and you generated the list of items to be checked in the
23 plant. Now, it is true, isn't it, that when the
24 inspector went out to check the items, he couldn't look
25 at additional items that were not on this list; isn't

1 that true?

2 A (WITNESS SAMANIEGO) No, that is incorrect.

3 Q Well, wouldn't that introduce bias into a
4 sample if you did that?

5 A (WITNESS SAMANIEGO) The process of
6 extrapolating to the population would use only the items
7 included in the random sample, but other leads and other
8 items that would be inspected for any reason could be
9 part of an overall study. It would be erroneous to add
10 items selected in a nonscientific and ad hoc manner to
11 an entire collection that constitutes the sample.

12 Q So judgment would have to be applied in the
13 process of conducting that study, determining what
14 should and shouldn't be added to the sample population
15 or the population of things reported upon; isn't that
16 correct?

17 A (WITNESS SAMANIEGO) Good judgment is always
18 part of a well-designed statistical study.

19 A (WITNESS HUBBARD) Mr. Earley, I think that is
20 really what was discussed yesterday too, that in no way
21 would the use of statistics preclude the inspector from
22 writing down whatever he saw at any particular time as
23 he was walking through the plant. And so we would be
24 totally unsupportive of what Mr. Johnson mentioned
25 yesterday, that anything the inspector sees should be

1 written down. However, as Dr. Samaniego says, if one
2 were drawing inferences about total populations from
3 samples, that should be based upon the random samples.

4 [Counsel for LILCO conferring]

5 Q Well, let me see if I have got this clear,
6 though. In using the population from which you are
7 going to draw inferences, items that were picked up
8 outside the scope of your original list could not
9 properly be included within the population that you are
10 going to extrapolate from; is that correct?

11 A (WITNESS SAMANIEGO) I assume you meant
12 extrapolate from a sample rather than from a population,
13 as you stated.

14 Q Extrapolate from a sample.

15 A (WITNESS SAMANIEGO) The process of
16 extrapolation that is scientifically valid and can be
17 rigorously established involves random sampling and
18 extrapolation from the sample so selected. If other
19 items are inspected, and often they will be and with
20 good reason, they wouldn't be part of the extrapolation
21 to the population, but they still might be informative
22 and useful.

23 Q And so in drawing your overall conclusions,
24 you would have to take into account the items that were
25 picked up outside the statistical process as well as

1 those results from the statistical process; is that
2 correct?

3 [Panel of witnesses conferring]

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1 A (WITNESS SAMANIECO) The overall conclusion
2 would naturally involve all of the evidence that is
3 uncovered in the process of the study. Part of that
4 evidence would be useful in extrapolating to discover
5 overall population characteristics. Perhaps other
6 pieces of evidence that weren't part of the random
7 sampling process would be useful for discovering a
8 single or several very important flaws. And that would
9 certainly be an important part of forming a judgment or
10 a conclusion.

11 But for the process of drawing general
12 inferences about a population from a sample, it is
13 essential that the sample be drawn randomly.

14 Q Going back to the discussion we had on bias,
15 isn't it true that you can't tell whether -- which
16 direction the statistical result varies from the actual
17 number in the population, or the particular
18 characteristic of the population you are looking at?

19 A (WITNESS SAMANIEGO) It is very difficult to
20 know in advance or with the information that has been
21 provided under the general coverage term of "engineering
22 judgment" what exact biases might be present in the
23 process. But the very fact that a valid scientific
24 methodology for insuring the absence of bias has not
25 been used renders the results from the current process

1 impossible to interpret.

2 Q When you say impossible to interpret, you mean
3 impossible to draw statistical inference from; isn't
4 that correct?

5 A (WITNESS SAMANIEGO) That is right.

6 JUDGE BRENNER: I'm sorry, was that a yes?

7 WITNESS SAMANIEGO: Yes, sir.

8 BY MR. EARLEY (Resuming):

9 Q Well, is it true, then, in using random
10 sampling half the time the results will under estimate a
11 particular parameter, and half the time the results will
12 over estimate that parameter? Isn't that true?

13 A (WITNESS SAMANIEGO) That is not technically
14 correct. It is sometimes useful to think about as an
15 approximation of what happens, but there will be --
16 there is some -- well, there is a probability
17 distribution involved for the behavior of estimates
18 computed from a random sample. And part of that
19 distribution lies above the characteristic, and part of
20 it lies below the characteristic of interest. And the
21 unbiasedness property is simply saying that distribution
22 is centered on the characteristics, so that on the
23 average, you are confident that you are estimating
24 without bias, without deviation from the characteristic;
25 that is, systematic tendency to be above or to be below.

1 Q Well, in the context of looking at a nuclear
2 power plant, if you wanted to be sure that you had a
3 conservative estimate of the number of potential
4 deviations in the plant from required conditions, you
5 might want to affirmatively try and introduce bias into
6 the result, wouldn't you, to insure that conservative
7 result?

8 (Panel of witnesses conferring.)

9 MR. EARLEY: Judge, can I have Dr. Samaniego's
10 answer?

11 JUDGE BRENNER: Yes. Mr. Hubbard, you can add
12 afterward on the record. Do you want to continue with
13 that approach? It wasn't clear to me that you were.

14 MR. EARLEY: Yes, sir, I would like to
15 continue with it.

16 JUDGE BRENNER: All right. In fairness, to
17 the witnesses, I'm sure that wasn't clear to them,
18 either. Dr. Samaniego?

19 WITNESS SAMANIEGO: Could I have the question
20 repeated, please?

21 JUDGE BRENNER: Yes.

22 BY MR. EARLEY (Resuming):

23 Q In the context of a nuclear power plant, if
24 one wanted to be sure that the estimate of the number of
25 deficiencies or discrepancies from required conditions

1 was a conservative estimate, wouldn't you want to
2 affirmatively introduce bias into the results?

3 A (WITNESS SAMANIEGO) I would say that that is
4 certainly -- that that is not a standard approach, and I
5 consider it to be a dangerous approach because the size
6 of the bias is very often difficult to estimate. But
7 given that that were the case, it is statistically
8 possible to analyze a random sample that produces
9 estimates with bias, and to deal with that in the
10 statistical analysis.

11 The essential ingredient of random sampling is
12 still present; it must be present in order for valid
13 inferences to be drawn.

14 Q Doctor, is it your testimony that it is a
15 dangerous approach to try and introduce conservatisms
16 into the review of a nuclear plant?

17 A (WITNESS SAMANIEGO) No. My testimony is that
18 it is a dangerous approach to attempt to introduce
19 systematic bias into an attempt to estimate population
20 characteristics.

21 Q And that would be your testimony, even if that
22 systematic bias was in the conservative direction? In
23 other words, including more things than may have been
24 necessary?

25 A (WITNESS SAMANIEGO) If bias were going to be

1 designed into a study, then certainly, bias in the
2 conservative direction would be a favored approach,
3 rather certainly, over bias in the other direction.
4 That still -- the handling of that bias still requires
5 the kind of methodology that I have testified is
6 necessary here; namely, random sampling and valid
7 statistical methods of extrapolation for estimating the
8 bias and estimating the parameters of interest.

9 Q One of the ways you would introduce, or
10 attempt to introduce, conservative bias would be to
11 apply experience and judgment and select those items
12 that would most likely have deficiencies based on their
13 complexity or whatever other relevant factor that
14 experienced person thought should be included. Isn't
15 that true?

16 A (WITNESS SAMANIEGO) A conservative approach
17 would involve identifying segments of the population and
18 a subgroup of the population that tended to have
19 characteristics that were either larger or smaller than
20 the overall population characteristics; whichever the
21 direction of bias that is relevant in a particular case
22 might be.

23 From that perspective, it would still be
24 necessary to attempt to estimate what the general
25 population characteristics are. In the context of the

1 TPT report, the report has a considerable number of
2 conclusions that make statements about the general
3 characteristics of the plant, and the underpinnings of
4 these conclusions do not include random sampling
5 techniques. So the conservatism of the approach, if
6 indeed it is present, does not legitimize the
7 conclusions.

8 Q So the record's clear, you don't have any
9 basis to comment on whether or not the approach in
10 selecting components in the Torrey Pines study was or
11 was not conservative, since you are not familiar with
12 the details of a nuclear plant. Correct?

13 A (WITNESS SAMANIEGO) I am not in a position to
14 say that it was or was not conservative.

15 Q Would another way to introduce conservative
16 bias be to instruct walkdown teams to include any item
17 that they found to be discrepant, whether or not it was
18 within the original scope of their sample?

19 A (WITNESS SAMANIEGO) It seems to be consistent
20 with usual usage of the word "conservative" to attempt
21 to include all possible deficiencies that are
22 encountered.

23 A (WITNESS HUBBARD) As it relates to the Torrey
24 Pines report, though, it is not obvious that there were
25 a large number of discrepancies that were noted in the

1 report. There were things other than that that were
2 directly being looked at, and there may even be evidence
3 to the contrary, particularly in the housekeeping area,
4 that other reports by the NRC and by the internal audits
5 have demonstrated a number of deficiencies in
6 housekeeping over time, while in the Torrey Pines report
7 there didn't appear to be a major indication of that.

8 Q Mr. Hubbard, you don't have any basis for that
9 conclusion, do you?

10 A (WITNESS HUBBARD) I believe I do.

11 Q Do you have a basis for stating that you know
12 that there were not a number of items included in the
13 Torrey Pines results that were not in the initial scope
14 of a particular walkdown or a particular task?

15 A (WITNESS HUBBARD) That is partially right and
16 partially wrong, Mr. Earley. Yesterday, Mr. Johnson
17 testified that there were a couple of examples that came
18 to his mind that were beyond the original scope, and
19 that was in the transcript. I have not had a chance to
20 look at the detailed checklist, so you are correct
21 there. I haven't been able to see how many things were
22 written up that were not on the original checklist.

23 However, in evaluating how much Torrey Pines
24 looked beyond the checklist, it seems to particularly in
25 an area like housekeeping, that other reviewers have

1 come to different conclusions than Torrey Pines. So
2 then, that leads me to one of two conclusions. One is
3 that Torrey Pines didn't look at housekeeping; or, two,
4 that they didn't -- it wasn't on their checklist and
5 then they didn't write it up.

6 Q I take it you did hear Mr. Johnson's testimony
7 that they did look at the housekeeping, didn't you?

8 A (WITNESS HUBBARD) I heard his testimony to
9 that, but I still formed a judgment that there seems to
10 be a difference of what Torrey Pines detected in that
11 area and other reviewers have detected and what I
12 personally observed when I toured the plant.

13 MR. EARLEY: Judge, I'm going to move on to
14 Item 1B of the cross plan.

15 BY MR. EARLEY (Resuming):

16 Q Dr. Samaniego, in your deposition, --

17 JUDGE BRENNER: Give us one moment, please.

18 (Board conferring.)

19 JUDGE BRENNER: Go ahead, Mr. Earley, I'm
20 sorry.

21 BY MR. EARLEY (Resuming):

22 Q Dr. Samaniego, in your deposition I believe
23 you said that statistical methods can be and should be
24 applied to an effort such as the Torrey Pines
25 independent verification, and that they are always a

1 practical or cost-effective method of doing such a study.

2 A (WITNESS SAMANIEGO) Could you give me an exact
3 reference?

4 Q Do you recall that?

5 A (WITNESS SAMANIEGO) I recall a discussion in
6 that general area. I would like to see the quote in
7 context.

8 Q Well, I wasn't quoting you. Is that your
9 opinion? That statistical methods can always be
10 practically applied to independent verifications of
11 nuclear power plants?

12 A (WITNESS SAMANIEGO) It is my testimony that
13 statistical methods are applicable in this particular
14 verification effort.

15 Q And they are always a cost-effective means of
16 doing an independent verification?

17 A (WITNESS SAMANIEGO) Cost-effectiveness is a
18 relative term. If there is a fixed budget, it is
19 possible that budgetary constraints could restrict the
20 scope of the study, and I am not prepared to comment
21 generally about statistical methods always being cost
22 effective. It is possible that in a particular
23 circumstance, an individual would like to do a
24 statistical study and can't afford to do one, for a
25 variety of reasons.

1 However, in the context that is relevant here,
2 there are a myriad of examples of sampling from a
3 variety of populations. And it has also been testified
4 to that the samples, when a sample is identified as
5 being of interest, the samples were not selected
6 according to a random mechanism but were selected using
7 the judgment of the personnel involved.

8 So the context in which the commentary that
9 you've referred to came up was in the context of the
10 actual sampling process as used by Torrey Pines. And
11 the factor that is missing in the Torrey Pines study
12 that would be and should be added is simply the random
13 selection of samples, rather than the selection
14 according to non-random and informal kinds of
15 judgments. And in general, that process is not
16 particularly costly, and could well be implemented in my
17 judgment, in this particular case.

18 Q Torrey Pines didn't develop a list of all
19 equipment in the plant, did they?

20 A (WITNESS SAMANIEGO) I am not aware that they
21 did.

22 Q And they didn't develop a list of equipment
23 that was inaccessible, did they?

24 A (WITNESS SAMANIEGO) I am not aware of any such
25 list.

1 Q And that process would be a time-consuming and
2 a costly process, wouldn't it?

3 (Pause.)

4 A (WITNESS SAMANIEGO) It would take a certain
5 amount of time and effort to identify the factors that
6 would be involved in a statistical study, and in
7 particular in handling the question of inaccessibility
8 that you raised. But in the context of the budget for
9 this particular study, I believe that it could be very
10 adequately addressed.

11 Q Could you tell me what the basis for that
12 belief is?

13 A (WITNESS SAMANIEGO) The basis for the belief
14 is the experience that I have in developing sampling
15 plans in various contexts, and secondly, my reading of
16 the Torrey Pines report.

17 Q But you don't know how difficult it would be
18 to develop a list of accessible equipment or
19 inaccessible equipment for a nuclear power plant.

20 A (WITNESS SAMANIEGO) I don't know what would be
21 -- what the exact effort that would be involved in that
22 particular project. I do know that there is a
23 considerable amount of information in the Torrey Pines
24 report that already lays the foundation for a
25 statistical sampling approach, and I refer specifically

1 to a stratification by system and component in the
2 electrical and chemical areas, from which sampling was
3 done. And that stratification, for example, already
4 identifies the collection of populations of interest,
5 and, in fact, the populations that were sampled in the
6 course of the TPT study.

7 Q Now, that was all done applying experience and
8 engineering judgment, and that is an appropriate
9 application of experience and engineering judgment,
10 isn't it?

11 A (WITNESS SANANIEGO) Yes, it is. In the design
12 of the statistical study it would always be the case
13 that experts in the field would help identify
14 sub-populations of interest and assist the statistician
15 in the process of stratifying the population into
16 sub-collections that could be sampled.

17 Q Are diversity and complexity important
18 considerations in making a determination as to whether a
19 statistical methodology is appropriate for a particular
20 application?

21 (Pause.)

22 JUDGE MORRIS: I'm not sure I understand that
23 question, Mr. Earley. Could you try and narrow that a
24 little?

25 BY MR. EARLEY (Resuming):

1 Q Doctor, what I'm asking for is a determination
2 or is some knowledge of the complexity and diversity of
3 a particular population to be sampled; a consideration
4 in determining whether it is appropriate to apply the
5 statistical or random sampling technique.

6 A (WITNESS SAMANIEGO) Let me talk about
7 diversity if I may for a moment, and separate this into
8 two parts. By diversity I assume that you mean there
9 would be a variety of items, types of items in a
10 collection that you wanted to survey, and the question
11 is, what an issue in determining the applicability of
12 statistical methods.

13 Well, the fact is that a diversity issue has
14 an impact on the approach that would be taken within the
15 framework of a statistical sampling plan. When a
16 population is very diverse or heterogeneous, one can, by
17 virtue of dividing the population into strata, separate
18 the population into subpopulations that are of interest,
19 and have a somewhat higher degree of homogeneity.

20 One can gather information about such
21 subpopulations; that information obtained from random
22 sampling from the subpopulations will generate
23 statistically valid estimates of the characteristics of
24 those subpopulations. And when it is appropriate to do
25 so, the information obtained separately from

1 subpopulations can be combined to get an overall measure
2 of some of a subpopulation characteristic.

3 It obviously doesn't make any sense to combine
4 a measurement on some written document with a
5 measurement on some mechanical object and a measurement
6 on some electrical equipment. Some combinations don't
7 make any sense, and after all, statistics is a rational
8 science, and it attempts to shed light on a population
9 under study rather than obscure its characteristics.

10 In the question, in situations where one is
11 sampling an attribute like whether something is correct
12 or wrong, it may be feasible and appropriate to combine
13 estimates of subpopulations, combine them rather
14 globally. In other situations it is not appropriate.

15 In general then, coming back to your question
16 on diversity, there are well-defined statistical methods
17 for sampling from a heterogenous population, and
18 obtaining statistically valid conclusions from such a
19 study.

20 The complexity issue, if I may turn to that
21 second issue that you've raised, the complexity of an
22 item might, in fact, lead a group of individuals
23 studying a particular process to want to sample that
24 item heavily, perhaps because there are a variety of
25 modes to failure for other reasons. And within the

1 context of stratified sampling, it is possible to
2 identify categories that are more complex than others
3 and that one might want to sample more heavily.

4 There is nothing precluding the possibility of
5 sampling with different emphases from different
6 categories. And the issue of complexity, as I
7 understand the issue that you have raised, does not
8 preclude the application of statistical methods.

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1 Q But there are many decisions and
2 considerations that would have to go into what you just
3 described; isn't that true?

4 A (WITNESS SAMANIEGO) Undoubtedly.

5 Q Going back to your comment that you would
6 combine the results or attempt to combine the various
7 results, you would then apply judgment and experience in
8 combining those results to reach an overall conclusion,
9 wouldn't you?

10 A (WITNESS SAMANIEGO) The statistical process
11 is an iterative process. The role of statistics proper
12 is to shed light on populations or subpopulations of
13 interest, and once that light has been shed, an
14 individual or group who has conclusions to make or
15 judgments to make would take a scientifically valid
16 information that has been accumulated in a statistical
17 study and use judgment and other factors, other
18 information perhaps in reaching a variety of conclusions.

19 Q You mentioned various strata that would have
20 to be developed to create subpopulations. You don't
21 know how many subpopulations would have to be developed
22 for a plant such as Shoreham, do you?

23 A (WITNESS SAMANIEGO) I don't have specific
24 knowledge, but in the process of developing a sampling
25 plan jointly with experts in the nuclear area, a

1 statistician would use that expertise, the expertise of
2 individuals involved with the plant operations to
3 identify the subpopulations of interest. In fact, a
4 consulting statistician will invariably begin his
5 consultation with a client with such a discussion.

6 Q And you also don't know how many items would
7 be within each subpopulation, do you?

8 A (WITNESS SAMANIEGO) Again, in the design of a
9 sampling study, I would seek to determine that factor.
10 I don't happen to have present knowledge of it.

11 Q And if you had a large number of
12 subpopulations with a small number of items in each
13 subpopulation, the usefulness of random sampling might
14 be somewhat limited, wouldn't it?

15 A (WITNESS SAMANIEGO) Regardless of the size of
16 the population and the number of subpopulations and
17 their size, the contribution of using random sampling
18 techniques, essentially that of probability theory, can
19 be developed for errors made in the extrapolation
20 process, and that advantage of statistical methodology
21 would always be present regardless of the relative sizes
22 of various components in the study.

23 Q Well, my question was that as the number of
24 items within a particular subpopulation decreases, the
25 usefulness of the random sampling technique becomes

1 somewhat limited; isn't that true?

2 [Pause]

3 A (WITNESS SAMANIEGO) It would be correct to
4 say that the sample size required to get precise
5 information in a statistical study of that sort of
6 population would be larger.

7 A (WITNESS HUBEARD) I think we need to get back
8 to the Torrey Pines report, though, Mr. Earley. For
9 example, at Torrey Pines they looked to welds and they
10 picked a couple of characteristics like part of the PSI
11 program and accessible, and those were the two criteria
12 for that subgroup, and likewise for Task B. In the 45
13 items selected there, there were certain criteria. So
14 as far as it relates to Torrey Pines, there were just a
15 couple of subgroups that were selected.

16 In any case, if you went to the type of
17 approach used by Torrey Pines, which I will call
18 judgment, if you had identified this inordinately large
19 number of subpopulations, then I would assume you would
20 have the same problem with the judgment that you would
21 need to take a sample from all of the subpopulations if
22 you were to reach a conclusion about the total
23 population. So you would have the same problem in your
24 hypothetical.

25 Q So the decision to set up subpopulations is

1 based solely on engineering judgment and experience of
2 the personnel involved; is that correct?

3 A (WITNESS SAMANIEGO) Is that addressed to me,
4 Mr. Earley?

5 Q Mr. Hubbard. Excuse me.

6 A (WITNESS HUBBARD) I think that no would be
7 the answer to that, and then I think one would need to
8 talk to a statistician, for example, the Task D of
9 Torrey Pines that looked at welds but only looked at
10 ones that were accessible and had been handled by PSI. I
11 think a statistician might tell me that I could then not
12 extrapolate my results to welds that were not
13 accessible, that were not part of PSI, possibly; I could
14 only extrapolate from the type of population in my
15 sample, and then based on that I might decide to pick my
16 sample in a different method.

17 So once again, we are talking about an
18 iterative process between the engineer and the
19 statistician and deciding the best way to go about using
20 random sampling.

21 MR. EARLEY: Judge, for the Board's
22 information, I am going to move on to Items C and D,
23 which are really going to be combined in my questioning.]

24 JUDGE BRENNE: All right.

25 BY MR. EARLEY: (Resuming)

1 Q Dr. Samaniego, in your prefiled testimony at
2 the bottom of page 30, you state that the validity of a
3 statistical study is dependent on whether a sample is
4 representative. Does that mean that a random sample
5 will always be representative?

6 A (WITNESS SAMANIEGO) It is representative in a
7 probabilistic way in that it provides a method of
8 extrapolation which gets an accurate picture of the
9 population under study.

10 Q But, for example, if you were to randomly
11 select from a deck of card four cards, you might end up
12 with four spades, wouldn't you? That is a possibility?

13 A (WITNESS SAMANIEGO) That is correct.

14 Q And that wouldn't be a representative sample
15 of that deck of cards.

16 A (WITNESS SAMANIEGO) Well, sir, that
17 interpretation of representative is not the way the term
18 is used in a technical sense. If used in your sense, no
19 sample of four cards could be thought of as
20 representative of the deck.

21 Q Well, if you knew something about the
22 particular deck and then exercised judgment to pick one
23 from each suit, that certainly would be more
24 representative than the possibility of getting four of
25 one suit.

1 A (WITNESS SAMANIEGO) Is that a question?

2 JUDGE BRENNER: I think he meant put "wouldn't
3 it?" at the end.

4 WITNESS SAMANIEGO: We are really talking
5 about a factor that is very well accommodated by
6 statistical design, and that is in many circumstances we
7 wish to guarantee the presence of a particular kind of
8 item, a particular subpopulation, and so we use the
9 method of stratified sampling to guarantee a
10 representation from that particular subpopulation. And
11 in fact, that is undoubtedly the technique that will be
12 used in applying statistical methods in the current
13 study.

14 By representative, we are really talking about
15 the probability distribution that can be derived for
16 estimates of general characteristics of the population,
17 and it is possible to develop estimates of the size of
18 the error in such estimates and to study the behavior of
19 the estimates in the sampling process, something that in
20 fact is not possible with a judgment sample or sample
21 selected in a nonrandom fashion.

22 Q Isn't that the heart of it, that with a
23 judgmental sample you just can't design a probability
24 distribution or calculate the size of an error? Isn't
25 that your concern?

1 A (WITNESS SAMANIEGO) I would put it as
2 follows: that without random sampling, without the
3 element of randomness in the sampling process, it is
4 impossible to assess the reliability of the
5 extrapolation process to the population. One cannot
6 make any probability statements regarding the error
7 involved in that extrapolation, and consequently, it is
8 impossible to have confidence in a scientific sense in
9 such a process.

10 Q Now, when you say not possible or impossible,
11 you are talking about it is not possible to draw what
12 you call, I believe, statistically valid inferences in
13 your testimony; isn't that what you are referring to?

14 A (WITNESS SAMANIEGO) Yes, it is.

15 Q But it is possible to draw conclusions about
16 the whole population looking at a sample from that
17 population that may not be a statistically valid
18 conclusion but certainly is a reasonable conclusion;
19 isn't that correct?

20 A (WITNESS SAMANIEGO) It is impossible to
21 assess whether that conclusion is correct or not
22 correct. All of us in our daily lives use data
23 informally to make decisions. We don't attempt to
24 assess the magnitude or the possible magnitude of the
25 error of those decisions. We don't pretend that it is a

1 scientific process. But if we want or if we have the
2 ability to carry out a scientific study, then the
3 strength of those conclusions is enormously more
4 powerful, and in the current context, there is a
5 substantial qualitative difference between the
6 credibility that the conclusions would have if one or
7 the other method was used.

8 Q Well, look, if you will, on page 28 of your
9 prefiled testimony, and there you indicate that Torrey
10 Pines, the Torrey Pines study could not form the basis
11 for some of the conclusions stated, and I believe there
12 in footnote 29 you quote Mr. Johnson's testimony that
13 says TPT thus believes it very reasonable to conclude
14 that the hardware not inspected by TPT, which was built
15 under the same construction controls and QA program, is
16 also satisfactorily built to the engineering
17 requirements.

18 Now, you would agree that that is a logical
19 inference that he drew, isn't it?

20 A (WITNESS SAMANIEGO) It is an opinion based on
21 information that has been gathered, and my assertion in
22 the testimony which I am here to defend and repeat is
23 that that conclusion has no scientific validity.

24 Q He drew a logical inference or a conclusion,
25 didn't he?

1 A (WITNESS SAMANIEGO) I think it is eminently
2 clear that he believes it to be a logical conclusion.
3 My problem with it is that it is not a verifiable
4 conclusion and there are no known methods for assessing
5 the validity of that conclusion.

6 Q Do you believe it is a logical conclusion?

7 A (WITNESS SAMANIEGO) I have no comment about
8 the conclusion as such. I am here to comment on the
9 methodology used to reach that conclusion, and I assert
10 that the methodology is flawed.

11 Q Well, you don't think it is an illogical
12 conclusion, do you?

13 A (WITNESS SAMANIEGO) I have no comment on the
14 conclusion itself.

15 A (WITNESS HUBBARD) Dr. Samaniego did speak
16 that when you are doing even a statistical study, you
17 only draw inferences about that which you study. And
18 Mr. Johnson when he drew this conclusion is drawing
19 conclusions about things that were not necessarily
20 included in the items he studied, and so not only has he
21 extrapolated within populations but he has extrapolated
22 to the whole plant without looking at the items from the
23 whole plant. I think that Dr. Samaniego's testimony
24 before would go to that.

25 Q Dr. Samaniego, staying with your prefiled

1 testimony, take a look at page 27, about the middle of
2 the page. There you indicate that a determination of
3 the status of Shoreham vis-a-vis any fixed measure of
4 quality or safety is very definitively a statistical
5 matter. Does the NRC have any fixed measure of quality
6 or safety that you are aware of?

7 [Pause]

8 A (WITNESS SAMANIEGO) There are regulatory
9 requirements, regulatory requirements that control plant
10 construction, and those requirements could be thought of
11 as a basis for judging the adequacy of construction and
12 other issues, so that comparison to regulatory
13 requirements on an item-by-item basis is a kind of
14 measure that would satisfy this description.

15 Q Well, does Appendix B set out quantitative
16 standards? Doctor, I would like your answer before Mr.
17 Hubbard answers.

18 A (WITNESS SAMANIEGO) I am not an expert on
19 Appendix B.

20 Q Do you know what I am referring to when I am
21 referring to Appendix B?

22 A (WITNESS SAMANIEGO) Yes, I do.

23 Q What is it?

24 A (WITNESS SAMANIEGO) It is a set of
25 requirements that processes within a nuclear plant are

1 compared to for conformance.

2 A (WITNESS HUBBARD) I would like to add to
3 that, Mr. Earley, that in terms of the fixed measure of
4 quality, Criterion 12 talks about calibration of
5 measuring and test equipment, so that would be a fixed
6 measure. You can go and see if a particular device like
7 a torquing device is included in the calibration and
8 measuring system. Likewise, there is a fixed measure of
9 quality, for example, on design control, where it says
10 you will have a design review process. You can go see
11 was an item included in that or not. So I think you can
12 go through about each of the 18 criteria in Appendix B
13 -- for example, records, audits and so on -- to see
14 either it was or it was not implemented.

15 And there are standards that are set forth in
16 both the regulations, and then, for example, in the
17 quality area, the ANSI standards back that up, those
18 particular regulations. Those, in fact, were the
19 criteria that were used by Torrey Pines in their
20 inspection.

21 Q Mr. Hubbard, isn't it true that there are a
22 whole range of qualitative judgments that have to be
23 made about the extent to which any given criteria in
24 Appendix B is applied?

25 A (WITNESS HUBBARD) Not necessarily. I think

1 for a safety-related item all of the criteria of
2 Appendix B apply.

3 Q Mr. Hubbard, I said the extent to which or the
4 rigor to which any given criterion would be applied
5 varies based upon subjective judgments; isn't that true?

6 A (WITNESS HUBBARD) I think that is true. For
7 example, in a calibration system you might have a
8 minimum time of looking every three months. You might
9 decide to look at it every month and a half or something
10 of that sort. So you do use judgment. But the
11 regulations require that you have a system to in fact,
12 for example, do calibration and maintenance.

13 Q Dr. Samaniego, let me go back to you. Do you
14 know whether the NRC uses statistical sampling
15 techniques to draw conclusions about the quality and
16 safety of nuclear power plants?

17 A (WITNESS SAMANIEGO) The NRC sponsors a
18 publication series, which are usually called NUREGS,
19 which consist of studies commissioned by various firms,
20 laboratories, consulting groups, et cetera. In many of
21 those studies are statistical or probabilistic studies
22 in various areas of nuclear power plant safety and
23 operation and quality.

24 Q So it is your testimony that the NRC, through
25 their I&E Branch, uses statistical techniques in order

1 to draw conclusions about the quality and safety of a
2 nuclear power plant?

3 A (WITNESS SAMANIEGO) I am not in a position to
4 say what use the NRC makes of the publication series
5 that I mentioned, but it is clear that they have an
6 awareness of a statistical methodology and its relevance
7 to the nuclear area generally.

8 Q They don't use them, do they, Mr. Hubbard?

9 A (WITNESS HUBBARD) That is not completely
10 true, Mr. Earley. I would agree with you that the I&E
11 program, as we previously discussed in this proceeding,
12 doesn't make as much use of statistics as it could.
13 However, also as we discussed in the deposition, the NRC
14 has used statistics as part of their measurement of
15 acceptability. The example I gave before was at the
16 Marble Hill plant there were some questions about the
17 validity of the concrete, and there the NRC asked
18 Sargent Lundy to do a statistical study of the
19 concrete. So the NRC is beginning and has used
20 statistical techniques. In my opinion, they haven't
21 used them as much as they could have.

22 Q Mr. Hubbard, that is a very specific
23 application in a very limited case, isn't it?

24 A (WITNESS HUBBARD) It is a very specific
25 example of how it could be used, and I'm not sure I

1 would say it is limited. It went to the concrete of a
2 structure, a number of structures, so I think they drew
3 a rather broad conclusion from that.

4 Q Well, you are not saying that the NRC requires
5 every plant to do that sort of statistical analysis, are
6 you?

7 A (WITNESS HUBBARD) No, I'm not, Mr. Earley,
8 though I think it might be a good idea.

9 Q We understand that.

10 Dr. Samaniego, given that the NRC does use
11 experience and judgment in selecting samples for its I&E
12 program to review and then draw conclusions about the
13 safety and quality of nuclear power plants, is it your
14 view, then, that they don't have any valid basis for
15 drawing conclusions about safety and quality of plants?

16 A (WITNESS SAMANIEGO) I would have to become
17 more familiar with NRC procedures in order to criticize
18 them. I have rendered the testimony that I have on the
19 basis of a study of TPT methodology. I would make the
20 general comment that in any circumstances where the
21 process of inference from samples to populations takes
22 place without appropriate application of random sampling
23 methods, any such circumstance, the general conclusions
24 that might be stated from such study would not be
25 founded on a firm, scientific basis.

1 Q Well, let's assume that the NRC used the same
2 approach Torrey Pines used, and that is they used their
3 experience, they used their judgment to select what they
4 believed was a representative sample of items in a
5 nuclear power plant and then they sent their inspectors
6 out there to review those items. They had the results
7 of those reviews and then they applied judgment and
8 experience then to draw conclusions about the adequacy
9 of the quality and the safety of the plant.

10 MR. DYNNER: Objection. The question calls
11 for the witness to speculate and is not grounded on any
12 facts.

13 JUDGE BRENNER: I am going to overrule that
14 because of the nature of the witness' testimony. That
15 is supported by the deposition. I don't want to label
16 his testimony speculation, but he has testified that he
17 could make some generally valid judgments. In fact,
18 that was part of the dispute on the motion to strike the
19 testimony, and we ruled in the County's favor on that,
20 so we are entitled to hear some probing.

21 Now, if the witness can't answer a question,
22 that is something else and that may be worth something,
23 too, on the record.

24 MR. EARLEY: Let me repeat it because I didn't
25 finish the whole question. I was interrupted.

1 BY MR. EARLEY: (Resuming)

2 Q Dr. Samaniego, assume, if you will, that the
3 NRC applies the same methodology that was used in the
4 Torrey Pines study, and that is they applied their
5 experience and their judgment in selecting items to be
6 looked at in a nuclear power plant from the whole
7 population. They went out and they reviewed those
8 items. They got the results of that review and then
9 again applied engineering judgment and experience to
10 draw overall conclusions about the quality and the
11 safety of nuclear power plants.

12 Would it be your view, then, that the NRC has
13 no basis for drawing those conclusions: that is, that a
14 particular plant is built safely or the quality is
15 acceptable?

16 A (WITNESS SAMANIEGO) Yes, that would be my
17 testimony. What I'm saying is that anyone who followed
18 the same model for studying this process or similar
19 processes would be subject to the same criticism.

20 MR. EARLEY: Judge, I am finished with that
21 section of the cross plan and am ready to move on to
22 Item 2. I think that Mr. Irwin has something that he
23 would like to say before the break.

24 JUDGE BRENNER: Let's do it after the break.
25 We were going to interrupt you in a moment anyway. We

1 will take a break until 3:40. The Board is going to ask
2 questions on this subject before you continue on your
3 other subject. I forget what your original time
4 estimate was. I think you said something in the nature
5 of about two hours. Is my recollection correct?

6 MR. EARLEY: Yes, sir, and I probably have 10
7 or 15 more minutes.

8 JUDGE BRENNER: All right. Maybe this will
9 assist your timing. When you consider items 3 and 4 of
10 the cross plan, consider the dialogue that took place on
11 pages 17,624, approximately, to 17,632, approximately,
12 particularly 17,625. I am not saying it precludes it
13 necessarily, but it raises that concern in my mind.

14 MR. EARLEY: I have considered it. That is
15 why my time estimate is only 10 or 15 minutes.

16 JUDGE BRENNER: Apparently you are ahead of
17 me. All right. There was a limited area that we said
18 was acceptable, and maybe you are going to ask questions
19 in that limited area. I don't know. We will come back
20 at 3:40.

21 [Recess]

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1 JUDGE BRENNER: Every time Mr. Irwin walks
2 into the room with the regulations in his hand, I am
3 afraid to give him the chance to speak. But I guess I
4 will.

5 MR. IRWIN: I left them behind this time,
6 Judge. When the County indicated today after having
7 decided that it was not going to do those things which
8 it had agreed to do and that it had no intention of
9 doing them, the Board tried to salvage the situation.

10 JUDGE BRENNER: I am sorry, I guess your
11 reference was just a little too vague.

12 MR. IRWIN: The County indicated today that it
13 did not intend to proceed with the cross-examination of
14 witnesses on an issue which had been initially scheduled
15 for yesterday, and I was just trying to condense a lot
16 of history.

17 JUDGE BRENNER: Well, I haven't heard that
18 from them yet.

19 MR. IRWIN: That is true. I suppose I ought
20 to wait until Mr. Dynner indicates what the County
21 intended to do, although he indicated informally to me
22 that the County intended to go ahead.

23 MR. DYNNER: Well, I thought I said to you,
24 Mr. Irwin, I would probably go ahead, but I indicated I
25 would have to make a telephone call over the break,

1 which I have now made.

2 And, Judge Brenner, it is now our intention to
3 proceed. Ms. Letsche is on her way here. We have been
4 successful in contacting Mr. Minor, and he is coming
5 back from New Mexico and will be arriving very late
6 tonight. And the County will be prepared to proceed,
7 and I would like to express on the County's behalf our
8 appreciation for the Board taking these unfortunate
9 factors into consideration.

10 JUDGE BRENNER: All right. Good. That is the
11 result we hoped we would end up with, and that is why we
12 did what we did, although we also expressed the
13 judgments as to not being happy with the situation. Now
14 that that is behind us, and as we said, we hope we don't
15 have to do something like that ever again in this
16 proceeding with any party, we will adopt the revised
17 findings dates. I take it the County does need that
18 extension on its findings.

19 MR. DYNNER: Yes. Thank you.

20 JUDGE BRENNER: All right. And so the new
21 dates that we had ordered are in fact the dates.

22 Now, Mr. Irwin, you know something I didn't
23 know.

24 MR. IRWIN: What I didn't know at the time --
25 and I unfortunately am not very quick on my feet

1 sometimes -- was that the Board obviously was confronted
2 with a situation in which it had to try to salvage a
3 difficult situation and do rough justice. And that is
4 what it has done. The difficulty is that by taking two
5 lawyer-days' time away from findings, it has in fact
6 given the County 4 days.

7 I don't know how many lawyers they have
8 actively working on findings. There are seven lawyers
9 for which notices of appearance have been filed. In
10 effect, what the County has done has given the County an
11 extra lawyer-month to work on its findings. We are not
12 going to rehammer that at this point. The Board has
13 ruled, but I think I was sort of incoherent about my
14 feelings that LILCO had been prejudiced before. That is
15 one measure of the extent of the prejudice.

16 JUDGE BRENNER: I guess you lost me. We gave
17 them 4 days.

18 MR. IRWIN: Let us assume the County brings
19 its lawyers home this weekend to work on findings. We
20 know of seven lawyers who have filed notices of
21 appearance. I don't know whether all of them will be
22 working. Even if Ms. Letsche were the only lawyer, they
23 have gained 2 days. If there were two lawyers, they
24 would have gained 6 days. If there were three lawyers,
25 they would gain 10 days.

1 We live in a finite world. And that may sound
2 trivial, but it isn't.

3 JUDGE BRENNER: I know we gave them additional
4 time. The additional time is a number of days. And we
5 have expressed why we did it, and I guess you have lost
6 me in some of the detail. And I just don't want to go
7 into it anymore.

8 MR. IRWIN: But my point is they defied the
9 Board, then they came out ahead.

10 JUDGE BRENNER: Well, I agree with your last
11 statement. That is correct. But the detail, your
12 method of calculation of how they came out ahead is
13 interesting. But you are entitled to it for yourself.

14 MR. IRWIN: It is very easy, Judge Brenner.
15 There is still Friday, Saturday, and Sunday are all
16 extra workdays. If you subtract -- if you added one
17 lawyer-day for each day times the number of lawyers,
18 that is the number of lawyer-days you have got for
19 findings. Ms. Letsche will have to be here 2 days to
20 work on this hearing this week. Subtract 2 from the
21 number of lawyer-days and you have the number of gained
22 net days. It is very simple.

23 JUDGE BRENNER: I will just repeat, they came
24 out ahead in this situation where they had every --
25 where they deserve to come out behind. And I will leave

1 it at that.

2 MR. IRWIN: I don't want to put the Board in
3 an unfair position. In difficult situations of this
4 kind, the solutions aren't often symmetrical. And this
5 is one where I think that has been the case.

6 JUDGE BRENNER: Well, I don't want to belabor
7 it either, but the other options were to dismiss the
8 contention or to defer it until next week. I assure you
9 we were capable of implementing the first option, as you
10 have seen in other instances in this case, but felt that
11 in this one instance that this was a better balance, not
12 necessarily a perfectly fair balance.

13 All right, you have completed item 1.
14 Correct, Mr. Earley?

15 MR. EARLEY: Yes.

16 JUDGE BRENNER: Judge Carpenter will start our
17 questions.

18 BOARD EXAMINATION

19 BY JUDGE CARPENTER:

20 Q It would make a better record having the same
21 general questions in the same subject area next to each
22 other. I would like to follow along with the kinds of
23 questions you had been getting, or I would like to back
24 up a little bit. Just to orient you to start with a
25 very broad one I would like to ask were both on the same

1 wavelength.

2 In your opinion, what kind of questions can be
3 examined using statistical methods?

4 A (WITNESS SAMANIEGO) The context in which
5 statistical methods are applicable involve general
6 characteristics of a population; that is, population
7 parameters which could be known with certainty, the
8 entire population could be reviewed.

9 The second factor would be a sample drawn from
10 that population; and finally, the process of inference
11 which develops a link between the characteristics of the
12 sample and the unknown characteristics of the population
13 which are of interest.

14 There are other statistical methods that
15 perhaps aren't so simply included in that framework.
16 For example, regression methodology is a reason in the
17 last couple of weeks. At least one question was asked
18 with regard to the applicability of regression methods
19 in a particular phase of the study. There would be an
20 example of a statistical technique in which a structural
21 relationship exists in the population, and that
22 structural relationship is investigated by means of a
23 sample again.

24 So in broad terms, from the initial framework
25 that I mentioned, could include methods like regression

1 analysis which may not at first glance be thought of in
2 that light.

3 Q That identified some of the ones that you
4 think can be. Can you give me examples of the kinds of
5 questions that cannot be, so I can see the distinction?

6 A (WITNESS SAMANIEGO) Well, I see the kinds of
7 problems in which statistics has a relevance are
8 problems in which a complete census is taken. That is,
9 if you have access to the entire population, then the
10 process of inference is unnecessary and, in fact, is
11 absent.

12 So if we want to restrict our attention to the
13 process of developing information about population of
14 objects and one wants to determine when statistical
15 methods are applicable, then I think the best way to
16 view it is simply to say that statistical methods are
17 applicable whenever the entire population can't be
18 reviewed. And thus, decisions or information about the
19 population must be made on the basis of inspecting a
20 smaller group, a subgroup of the population.

21 (Witnesses conferred.)

22 Q I take it you limited your response in both
23 cases to situations in which numerical data could be
24 obtained. Is that correct? You made the distinction
25 between a sampling situation and a total census

1 situation.

2 A (WITNESS SAMANIEGO) That is right. The
3 numerical data might, in fact, be count data. It might
4 be attribute data; for example, the answer to a
5 yes-or-no question about items that are under
6 inspection. But whether the data is continuous or
7 discrete, there would be numerical information collected
8 on the sample and the process of extrapolation using
9 that information to gain insight into the population.

10 Q In the context of this proceeding, in terms of
11 administrative law and the point that we have been
12 looking at the regulation and we have been looking at
13 the detail for some months, Part 50 Appendix B, have you
14 read Part 50, Appendix B?

15 A (WITNESS SAMANIEGO) I think I have seen
16 quotations from it, but no, I haven't read it in its
17 entirety.

18 A (WITNESS HUBBARD) I have tried to review
19 Appendix B for Dr. Samaniego. We agreed early on that
20 he wasn't going to be an expert in Appendix B
21 interpretation and that I would make use of him for his
22 statistical knowledge.

23 Q Mr. Hubbard, having done that review, did you
24 report to him any numerical guidelines in Appendix B?
25 There are many parts of the Code of Federal

1 Regulations. For example, the dose radiation an
2 individual can receive that are prescribed by a
3 numerical value. And I think you can see where I am
4 headed. I am having a lot of problem with the question
5 before us because I am having trouble seeing how to look
6 for compliance with a regulation which doesn't provide
7 me with numerical guidance using numerical methods.
8 That is one of my first problems.

9 A (WITNESS HUBBARD) I can believe -- possibly
10 we had a discussion on this a couple of months ago, and
11 at that time, as I recall, we looked at the words in
12 Criteria 18 of Appendix B, and I would be the first one
13 to say that there hasn't been a numerical expression of
14 what it means to say effectiveness of the program like
15 you would do audits to see if the program is effective.

16 But my testimony I believe at that time was
17 that that is where one would use engineering judgment to
18 say if you do do samples, you would set up some criteria
19 in advance on what it means to be effective. For
20 example, if you are at signatures on a drawing, you
21 might say I expect 98 percent of the time that those
22 signatures will be there, and that will be my acceptance
23 criteria.

24 But it seems to me if you are going to run an
25 experiment, you have to some criteria for acceptance.

1 And that has really been what I have discussed with Dr.
2 Samaniego about, if one were to run an experiment -- and
3 that is really what TPT is to do, an inspection --
4 wouldn't you want to have some numerical acceptance
5 criterion in advance to say what is acceptable or what
6 isn't?

7 And I guess I would add that many people could
8 then disagree. I mean one group could come in and say,
9 well, we think it ought to be 90 percent confident, some
10 less than 10 percent there is; and somebody else could
11 say, 99 and 1. But then you would have a scientific
12 disagreement. But when you use words like "adequate"
13 and "satisfactory," it is a little hard to be able to
14 have a quantified discussion about that.

15 Q Or even the word "reasonable"?

16 A (WITNESS HUBBARD) Or "reasonable," yes.

17 Q In your discussions, Mr. Hubbard, you just
18 mentioned, you made a statement which I would take to be
19 a notion that you understand very clearly the
20 probability theory that you would use in such an
21 evaluation. Did you express it in getting some advice
22 about the use of numerical techniques or statistical
23 methods with respect to the kind of inspection that
24 Torrey Pines did?

25 A (WITNESS HUBBARD) I believe I have. I really

1 had, I think, two positions throughout. One is if you
2 are going to do sampling, one should use random
3 sampling. And if at all possible, one would determine
4 acceptance criteria in advance of doing the sampling,
5 such that if you got more than a certain number of
6 errors or whatever it is, discrepancies, one might do
7 additional sampling, or say that that wasn't
8 satisfactory.

9 So those two points on the use of random
10 sampling, if samples are to be used, and then to try to
11 have an acceptance criteria determined in advance is a
12 view I have had for some period of time.

13 Q But coming back to your views as a
14 professional mathematician, Dr. Samaniego, earlier in
15 response to a question, I am not sure I heard you right,
16 but I thought you made the statement that given a
17 particular kind of sampling program, one could come to
18 some conclusions about the probability distribution
19 derived from the sample or the conclusion derived from
20 the sample. Did I misunderstand?

21 A (WITNESS SAMANIEGO) Let me rephrase that, if
22 I may, and perhaps this will be clearer to you. The
23 process of random sampling translates an element of
24 randomness to any statistic that you would compute from
25 that random sample, so that the statistic that is

1 relevant to a particular problem should be considered a
2 random quantity and, in fact, has a probability
3 distribution that distribution being derived from the
4 randomness of the sample.

5 Since the statistical take different values,
6 depending upon which particular sample selected over the
7 range of samples that might be drawn by a random
8 sampling scheme, one can derive a probability
9 distribution for the statistic that one uses in the
10 inference process.

11 So the idea is that one can develop a
12 probability theory for the statistical estimate that is
13 used for drawing inferences about a population, and it
14 is through that probabilistic behavior that is embodied
15 in the probability distribution, but the statistic that
16 one can make statements about, the size of the error in
17 the estimation process.

18 Q Is there only one probability distribution?

19 A (WITNESS SAMANIEGO) The probability
20 distribution depends upon precise way in which the
21 element of randomness is used in the sampling process.
22 For example, if you take a simple random sample from a
23 population and you are interested in the distribution of
24 the mean of that sample as a statistic, it would have a
25 well-defined distribution that one could compute under

1 most circumstances.

2 And if, as another possibility, one were to
3 use stratified random sampling, which is a different
4 kind of sampling plan still based upon random selection
5 but with a different design, the behavior of that same
6 statistic would be somewhat different but still could be
7 described fully.

8 Q As a scientist I am a little surprised in that
9 I thought in general when one set about devising
10 hypotheses and a system for testing them, the
11 probability distribution is part of the hypothesis
12 against which one tests the observational data. Am I
13 mistaken?

14 A (WITNESS SAMANIEGO) The hypothesis that one
15 might want to investigate, the statistical hypothesis,
16 is a statement about the population. It is a statement
17 that is either true or false. It is perhaps a way to
18 quantify a conclusion one wants to draw about the
19 population, like the proportion, effective in a
20 particular population, is no larger than .05. That is a
21 statistical hypothesis. It is a statement about the
22 population.

23 The random sampling scheme that one might use
24 to investigate that hypothesis will, in turn, give rise
25 to a probability theory for an appropriate estimate of

1 the population proportion of interest, and that
2 distribution is quite independent from the hypothesis
3 which is a statement of fact.

4 The probability distribution of the statistic
5 does depend upon the true value of the population
6 parameter. For example, if the proportion defective is
7 very big, then the statistic is likely to be very big
8 since it is in general an estimator and serves to
9 approximate the values of the population parameter.

10 But the hypothesis that you are trying to test
11 -- that, is whether this parameter is small, say, less
12 than .05 -- that hypothesis has no influence on the
13 distribution of the statistic involved.

14 Q Does one in general in evaluating something
15 based upon sampling have a large enough sample to make a
16 conclusion about the nature of the distribution function?

17 A (WITNESS SAMANIEGO) The probability theory
18 for the statistic that one might derive from a sample is
19 an item -- that is, the distribution is an item -- that
20 can be derived theoretically. That is to say from the
21 assumption that a sample is drawn at random, one can
22 make certain assertions about the behavior of a given
23 statistic; for example, the mean of the sample drawn.
24 That distribution can be derived for any fixed sample
25 size.

1 Q With no presuppositions?

2 A (WITNESS SAMANIEGO) With -- the
3 presupposition is that the sampling scheme has been
4 completely specified. Let me describe in a broader
5 context, if I may, what probability-based sampling
6 amounts to. A probability sample is a sample that is
7 drawn in such a way that the specific collections that
8 can be drawn from the population are specified and the
9 probability of drawing each particular collection is
10 specified.

11 Simple random sampling is a process of
12 sampling that is widely used because it gives every item
13 in the population a chance of being drawn, and in fact,
14 an equal chance at being drawn. But there are other
15 schemes of random sampling which can be used. And the
16 essential feature that is necessary for deriving the
17 distribution of the statistic is to have a fixed random
18 sampling scheme.

19 Once you have specified the samples that can
20 be drawn and the associated probabilities of those
21 proximal samples, then one can, at least in theory,
22 derive the probabilistic behavior of statistics you
23 would compute from that sample.

24 Now, in some very unusual sampling plans, it
25 might take a fair amount of effort to identify the

1 probability distribution. In the case of simple random
2 sampling that probability distribution is easier to
3 obtain. It is partly because the problem has been very
4 widely studied and also because certain very good
5 approximations exist when the sample size is
6 sufficiently large. For example, sample means and
7 proportions tend to be approximately normally
8 distributed provided a certain minimal sample size is
9 achieved.

10 Q And how do you decide that the minimal sample
11 size was achieved?

12 A (WITNESS SAMANIEGO) Well, there are a
13 multitude of guides for determining what sample size is
14 acceptable in practice.

15 Q Well, in choosing from the multiple guides,
16 how does one go about making that choice?

17 (Witnesses conferred.)

18 A (WITNESS SAMANIEGO) Well, the particular
19 methods of analysis that are appropriate for continuous
20 data and others for discrete data. In the case of
21 attribute data, I am sure you are aware of the fact that
22 the distribution of a sample proportion is the exact
23 distribution of a sample proportion is known. It is
24 under a random sampling scheme from a finite
25 population. The appropriate probability distribution is

1 called a hypergeometric distribution. In a large
2 approximation, a very good approximation of that is the
3 binomial distribution.

4 So in attribute data the exact distribution of
5 proportions, sample proportions, is known. And in fact,
6 these distributions are widely tabled and very easy to
7 use.

8 Q I have a number of them in the books in my
9 library. Where I have a problem is choosing without
10 asserting that I assume the probability distribution
11 because of the size involved is of a particular form
12 vis-a-vis deducing it from a limited number of
13 observational data.

14 I struggled before I hit this occupation with
15 sampling from the ocean where we have struggled with
16 continuous distributions. And I can't help but wonder
17 whether defects in a construction process might not have
18 contagious distributions and the sampling problems
19 become intriguing with those kinds of distributions.

20 That's why I wanted to explore whether you
21 felt that the distribution was revealed by the sampling
22 vis-a-vis that the investigator had to understand the
23 nature of what it was that was being sampled vis-a-vis
24 the appropriate distribution, which then I think is
25 reflected very strongly in the appropriate statistical

1 tests.

2 The reason I am trying to get at this -- and
3 Judge Brenner keeps cautioning about testifying -- but I
4 am trying to jump a few questions because it's going
5 tediously. You are back in the very middle of the
6 problem, and I am trying to get back to the front end,
7 is where I think we are not communicating very well,
8 back at what would have to be asserted as a
9 presupposition of the hypotheses in evaluating the
10 performance of construction in a nuclear power plant.

11 Since I don't find in Appendix B any numerical
12 tolerances, do you feel a sampling program which has as
13 its goal the determination of some numerical values is
14 ever inherently going to allow one to evaluate whether
15 or not Appendix B is being complied with?

16 A (WITNESS SAMANIEGO) Well, let me indicate
17 what I believe the contribution of the statistical
18 approach is in the context of this study under
19 discussion.

20 Q I am sorry, I want to give you a perspective.
21 The study under discussion, I am not sure why we are
22 looking at because it wasn't made as an attempt to
23 comply with any regulation. It does relate to an
24 attempt to evaluate the construction process, which we
25 will come to in a minute.

1 But I am back exploring the more general
2 proposition that we should be using numerical methods in
3 administrative law. And therefore, statistical
4 techniques would be a valuable adjunct. That is what I
5 was trying to get a feel for, and absent those, how this
6 Board can really use the study statistical methodology
7 or non-statistical methodology.

8 A (WITNESS SAMANIEGO) Well, let's take a very
9 simple domain to get some ideas. Let's suppose we have
10 a population of items that we can all agree are similar
11 items and we are interested in describing the population
12 of items, that we are going to take a sample of those
13 items to determine what the characteristics of the
14 population might be.

15 Well, statistical approach to that problem
16 would enable you to describe relevant parameters of that
17 population. Well, what about the requirements of
18 Appendix B and other relevant regulations? Well, a
19 statistical analysis has provided you with an
20 understanding of the characteristics of the population
21 that we are concerned with. And armed with that
22 knowledge, one would then have to seek to answer the
23 question, is a population with these characteristics
24 acceptable according to the criteria?

25 Now, if you don't have any valid methodology

1 for describing characteristics of the population, then
2 the comparison with numerical regulations is terribly
3 informal. Statistics isn't going to make the decision
4 for you, it is not going to simplify that final task of
5 determining whether something is acceptable or not. But
6 it is going to arm you with reliable information about
7 the population that you are concerned about.

8 On the basis of that information gathered in a
9 scientifically rigorous way, you are better able to make
10 a rational decision.

11 Q Well, you see, this is not a legislative body,
12 this is a regulatory body. This is my point. We are
13 trying to look at Appendix B and look to see whether
14 this construction activity has complied with it. And
15 absent any numerical instructions, there are other cases
16 in administrative law and administrators just love
17 numerical values because they are very straightforward.

18 In this case, I don't see them, you see. I am
19 having trouble coupling all this discussion we have had
20 about statistics to Appendix B.

21 A (WITNESS HUBBARD) Judge Carpenter, if I may,
22 I would like to add something. There is a new ANSI-ASME
23 standard QA-1-1979. It is a quality assurance standard
24 that was written to take the place of most of the ANSI
25 standards that have been discussed, the N-45-2 series.

1 And as part of that, under Criterion 10 there is a
2 section which has to do with inspection. There is a
3 Section 10S-1. It is supplemental information.

4 And if you look at the Torrey Pines report, it
5 is primarily an inspection. I mean Task C was. They
6 went around and inspected a number of things to see if
7 they were there. Well, the ANSI standard has something
8 that is relevant to that and really quite relevant to
9 our testimony.

10 And there is a paragraph in the ANSI standard
11 that says "Sampling." Where a sample was used to verify
12 an acceptability of a group of items, the sampling
13 procedure shall be based upon recognized standard
14 practices. And that is not as definitive as I might
15 like it. But what it does say is that when you do
16 inspections, sampling is a way to do that. But if you
17 are going to do sampling, then you should use the
18 recognized standard practices.

19 I interpret that to mean standard mathematical
20 practices. So people, in terms of nuclear plant
21 inspection, people have been thinking about that. We
22 have been doing it at receiving inspection for years,
23 that we would have to make a judgment if, say, a
24 thousand transistors were coming in, we would have to
25 make a certain standard of acceptance for those, and we

1 would make an engineering judgment as the quality
2 assurance measure of what was acceptable into the
3 process.

4 Q But isn't it true, Mr. Hubbard, that for
5 Shoreham at the present time suitable numerical
6 standards for all categories that you might feel are
7 desirable and that may appear in my lifetime or sometime
8 in the future don't exist?

9 A (WITNESS HUBBARD) I think they exist, but
10 they haven't been expressed numerically. People say
11 something is acceptable or satisfactory or reasonable.
12 That all sets a standard. They just have not expressed
13 it mathematically.

14 Q In the area of quality control I think one can
15 either look at the quality of a product or at the
16 character of the process that is producing the product.
17 And Torrey Pines, I don't know whether you have been
18 keeping up with the transcripts, but Torrey Pines has
19 stated more clearly on the stand than he did in the
20 report that their emphasis was on looking at the
21 process.

22 I am not sure how I see to formulate, nor did
23 they identify having talked to people even trained in
24 mathematics and statistics, a way of setting that up, of
25 looking at the process with numerical standards,

1 guidelines for numbers of deficiencies.

2 Earlier I asked Mr. Johnson the same
3 question. I would like to ask it of you, sir. The
4 problem I have is I don't see how these numerical
5 standards would work in the following sense, given two
6 nuclear power plants -- and this is very hypothetical --
7 that were similar -- that is very hypothetical.

8 And for someone to report to me that they have
9 served 100 deficiencies in each of the plants, I don't
10 think I can come to any conclusion about the quality of
11 those plants, because each of those elements you see are
12 of a very different nature, each of the 100. So I don't
13 see how your thinking goes that numerical methods would
14 provide a good basis for judgment vis-a-vis looking at
15 the nature of those, what they show about the process,
16 et cetera, on an item-by-item basis rather than simply
17 assuming them.

18 A (WITNESS HUBBARD) I think you need to look at
19 what it is you are looking at. For example, if you
20 wanted to look at ASME welding, for example, Task D-1,
21 you could come up with some numerical ways of comparing
22 plants there. If you went in and took a sample of so
23 many welds and so many of the welds were defective that
24 would give you some feel as to how welding was done at
25 the site.

1 Q But how many deficiencies in welding are
2 permissible?

3 A (WITNESS HUBBARD) That is a separate
4 question. The first question was can you compare
5 plant-to-plant. And I can say that, well, there are
6 certain things that I think are important or this is one
7 where I might make a judgment. You look at location of
8 pipe support hangers might be one, electrical cable
9 separation might be another. Quality of welding might
10 be a third.

11 We can come up with a finite list of things we
12 thought might be important, and then one could say, if I
13 wanted an opinion about that, I could go take a sample.
14 And that way you would have evidence when you turned to
15 the Staff or to anybody else. You would say, well, how
16 good a job was done? And if somebody said, well, I went
17 and sampled 100 of these and this is what I got, then
18 very closely or quickly you would begin to get a figure
19 of merit.

20 Now, other things might not be as simple.
21 For example, looking at the program itself, for example
22 like Task A in the Torrey Pines report. So I would
23 quickly say that some things sort of lend themselves to
24 taking a complete look. But if you are going to take
25 samples to draw inferences about a whole population,

1 what we have been really saying here is it would make
2 sense to use random sampling.

3 And I guess I add to what Dr. Samaniego said,
4 that my own personal preference is that before you do
5 that, you also set an acceptance criteria such that two
6 scientists could discuss what is an acceptable
7 acceptance criteria rather than to have a disagreement
8 over the word "satisfactory."

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1 Q Well, you see, this is kind of sterile because
2 we are absent such acceptance criteria. You see, I
3 don't get in Appendix B any instructions, nor in any of
4 the NUREGs, with respect to construction practice.

5 A (WITNESS SAMANIEGO) Judge Carpenter, the fact
6 remains that the, -- I think you perhaps would subscribe
7 to the general principle that the better quality
8 information you have in decisionmaking, the more
9 reliable your decisions are going to be. And the
10 statistical approach provides you with scientifically
11 valid, verifiable information that can be the basis for
12 decisionmaking.

13 Now, without a statistical study, we are
14 really in the realm of opinion, and we will assess what
15 a variety of experts might think on the subject and
16 maybe follow majority rules in our decisionmaking. But
17 there is a scientific basis for making judgments, and
18 that involves statistical methodology in any situation
19 where sampling is going to be employed.

20 The setting of criteria and the decision to
21 meet criteria would always have to be argued, and if the
22 two parties, even if -- well, say if two parties have
23 the same data in hand, the same information based upon a
24 perfectly valid procedure, instead there still might be
25 differences in interpretation. One might feel that it

1 is acceptable and another might feel that it is not, and
2 they would have to hash that matter out separately.

3 It is not really a statistical question; it is
4 a question that would have to be heard, and the
5 arguments would be on a different basis. But still, the
6 quality of the information would give one a basis for
7 trying to make a rational decision.

8 Q I guess I'm still struggling with the sampling
9 notion. If someone earlier -- you referred to an
10 investigative study. If one's investigating something
11 and does not pursue all avenues that could be pursued,
12 then clearly, less than the total has been looked at.
13 But that may not represent a sampling in any rational
14 way. I'm thinking in particular of the NRC
15 inspections. They did not choose to sample in a
16 statistical sense in the sense of having some numerical
17 guidelines, but chose to investigate things that they
18 see, things that they think are important. And I think
19 that is the reason.

20 A (WITNESS SAMANIEGO) I think I stated in my
21 testimony that a sample based on judgment can serve some
22 useful purposes, and I am not here to say that it is
23 useless and totally inappropriate for any purpose
24 whatever.

25 What I have said is that in extrapolating to

1 the population, in describing the population such
2 methods cannot yield valid results. Suppose -- well, to
3 discuss the NRC inspection that you just brought up,
4 perhaps -- I don't know for certain, but let me just use
5 this as a sort of hypothetical.

6 In a situation where an inspection is done for
7 the purpose of troubleshooting and finding as many
8 deficiencies in a short period of time with limited
9 resources, one can troubleshoot very effectively by just
10 following one's intuition and looking at areas that look
11 the most vulnerable, and so forth. And that can be a
12 perfectly useful activity.

13 And it is not just harmless activity; it
14 actually produces a positive and useful result. But it
15 cannot be used as a basis for extrapolation. So when I
16 see general conclusions in the TPT report that do
17 purport to describe the population as a whole as being
18 satisfactory in various respects, it is precisely that
19 kind of statement that I take issue with.

20 A (WITNESS HUBBARD) Dr. Carpenter, the other
21 view of that might be in this NRC inspection 83-02, the
22 NRC looked at nine table tray supports, which had been
23 through final QC, and found that four of them didn't
24 conform to drawings; four out of nine.

25 Now, if I came to you and said well, that says

1 to me that 50 percent of the cable supports in the whole
2 plant aren't going to conform to drawings, I think you
3 would question my judgment in drawing that conclusion.

4 Q Yes, I would.

5 A (WITNESS HUBBARD) But I think if somebody had,
6 based upon that had gone out and then done some
7 statistical sampling, then they could take it the next
8 step and say okay, based upon this sort of information
9 we did a random sample of 100 and here is what we got,
10 and then you would either feel good about it or not so
11 good.

12 But when somebody just says four out of nine
13 don't conform, you and I don't really know what that
14 means in terms of the significance, though we might each
15 interpret it.

16 Q Well, do you think we should have laws that
17 provide guidance, regulations?

18 A (WITNESS HUBBARD) Well, I do think we have
19 regulations that give guidance, and back to, again, our
20 point. If people are going to take samples and apply
21 them to the whole population, we suggest that one ought
22 to use random samples. That is all.

23 And then I have added the thing that really
24 says that it has to make sense to look at the acceptance
25 criteria on a mathematical basis. That would be part of

1 the judgment that might one apply on what is or is not
2 satisfactory.

3 Q Well, this is my problem, Mr. Hubbard. I
4 think that the acceptance criteria are not mathematical
5 constructs, but are the policy statements. That is, the
6 judgment, the pre-judgment, the pre-suppositions are
7 stated in those criteria that have come out in the
8 mathematics.

9 I think I will stop there.

10 BY JUDGE MORRIS:

11 Q I think Judge Carpenter has been trying to
12 examine this question in a somewhat academic fashion,
13 and he has had more experience in statistics than I
14 have, and I won't try to pursue that particular line,
15 but try to see if I understand your conclusions.

16 And I understand, first of all, that you don't
17 think that the conclusion Torrey Pines drew is justified
18 on the basis of statistical inference. Is that correct?

19 A (WITNESS SAMANIEGO) Torrey Pines claims not to
20 have used statistical methods in reaching their
21 conclusions, but in any case, general conclusions were
22 stated regarding the plant based upon inspection of
23 samplings. And I considered those conclusions to be
24 unjustified because of a flawed methodology.

25 Q And in particular, the fact that they didn't

1 use the statistical method?

2 A (WITNESS SAMANIEGO) That is right. I see it
3 as a statistical problem, there being a population of
4 interest and samples taken from that population and the
5 inference process being present as well. But being a
6 statistical problem, the tack Torrey Pines pursued did
7 not use appropriate principles of statistics, and is,
8 therefore, inappropriate.

9 Q Well, it is a given they didn't use the
10 technique and, therefore, you can't justify the
11 conclusion using the technique they didn't use. Correct?

12 A (WITNESS SAMANIEGO) They used a sampling
13 methodology.

14 Q Selection.

15 A (WITNESS SAMANIEGO) They used selection, and
16 it is my testimony that there is no justification,
17 scientific justification, for the extrapolation that
18 they made.

19 Q When you use the word "scientific," are you
20 equating that to statistical inference or probabilistic
21 methods, or are you broader in your use of that word?

22 A (WITNESS SAMANIEGO) I am using it in the
23 context of the statistical problem that they addressed.

24 Q Is it your opinion that no knowledge was
25 gained from the Torrey Pines study?

1 A (WITNESS SAMANIEGO) No. That is not my
2 testimony. I am sure that a study of this magnitude
3 would produce some useful and interesting results. My
4 main point is that the study cannot be used as a basis
5 for reaching the general conclusions as stated in the
6 report.

7 Q But do you agree that some conclusions can be
8 reached based upon the information produced by the
9 study? Let me make it simple, real simple. They didn't
10 find zero defects; is that correct?

11 A (WITNESS SAMANIEGO) That is right.

12 Q They found some number of defects, and at
13 least they then reached the conclusion for those that
14 they found, that they found them.

15 A (WITNESS SAMANIEGO) Yes, certainly. They can
16 summarize and provide a complete description of
17 inspected items.

18 Q At the other end of the spectrum, they can say
19 that for everything they inspected, it was not
20 effective. Some things they accepted by whatever
21 criteria they used.

22 A (WITNESS SAMANIEGO) That's right. As far as
23 they don't fully classify the items that were inspected
24 relative to the criteria investigated in that inspection.

25 Q So that the parting of ways I guess is how far

1 can you go beyond those facts and simple conclusions to
2 some level of generalization.

3 A (WITNESS SAMANIEGO) That's right.

4 Q And Judge Carpenter was talking about the
5 difference between looking at the end product and
6 looking at a process, and we have heard from Mr. Johnson
7 many times that he was trying to evaluate the control
8 process. Do you believe that for some number of
9 observations, some of which showed defects, that it is
10 possible to reach any conclusions about the efficacy of
11 the process?

12 A (WITNESS SAMANIEGO) The inspection of the
13 process and the review of the process essentially took
14 place in Tasks A and B of the Torrey Pines report that
15 reviewed the control process and its implementation.
16 And in both of those situations, Torrey Pines has
17 admitted to sampling of selected items. In Task A,
18 those items being the various revisions of process
19 documents that preceded the current control documents.
20 And in Task B, the selection being made from the broad
21 list of items compiled for the Task C walkdowns.

22 So sampling was, in fact, involved in the two
23 tasks that related to your question. And I have also
24 noted that the conclusions related to Task A and Task B
25 are fully general and describe the entire process and

1 its implementation as being satisfactory.

2 And I would like to testify to the fact that
3 the general conclusions stated in those two
4 circumstances are not valid on the basis of any
5 scientific approach.

6 Q Excuse me, again, you are using "scientific"
7 to be equivalent to statistical inference?

8 (WITNESS SAMANIEGO) That is the relevant
9 statistical methodology in the process that TPT is
10 pursuing; there being sampling involved in that process.

11 Q I think your answer went a little beyond my
12 question, but that's fine. I would have gotten there at
13 any rate. But the observations stand for themselves.
14 The observations of the process. But again, you quarrel
15 with the validity of any extrapolation toward
16 generalization based upon those things.

17 A (WITNESS SAMANIEGO) Yes, that is right.

18 Q So your basis for saying that time and again
19 has been that you can't make a valid extrapolation
20 unless you use some kind of statistical inferential
21 method. Am I reading too much into your position?

22 A (WITNESS SAMANIEGO) No, that is my position.
23 That only probability-based sampling has a fully
24 justified and well-understood theory for making that
25 extrapolation.

1 Q So generalizations based upon any other method
2 are invalid, totally?

3 A (WITNESS SAMANIEGO) I would say they have the
4 same validity as opinions that we take into account in
5 our decisionmaking.

6 Q And so, one versed in the technology is more
7 likely to have the right opinion than one who knows
8 nothing about the technology; is that correct?

9 A (WITNESS SAMANIEGO) Among approaches to the
10 study that I would classify as unscientific, there would
11 be a hierarchy of opinions, and I would, as you would, I
12 am sure, prefer the opinion of someone familiar with the
13 area rather than someone unfamiliar with it.

14 Q But I think your testimony speaks for itself
15 on the value of troubleshooting if you are looking for
16 troubles as opposed to a sampling technique. And would
17 you agree that Torrey Pines had an approach parallel to
18 that?

19 A (WITNESS SAMANIEGO) It seems that a byproduct
20 of their approach was to discover certain problems, and
21 addressed those problems in discrepancy reports, et
22 cetera. And so there was a troubleshooting aspect to
23 that report, and undoubtedly, that serves a useful
24 purpose.

25 (Board conferring.)

1 JUDGE MORRIS: Thank you, sir, that's all I
2 have.

3 JUDGE BRENNER: Let's go back to LILCO at this
4 point. I will hold any questions I might have on this
5 subject, in fact, until after the redirect because I am
6 anxious for LILCO to finish its examination today.

7 If you are very close to being done at 5:00,
8 Mr. Earley, we might be willing to go a little later.

9 MR. EARLEY: Judge, let me do this. Let me go
10 on and finish my cross plan. The questioning by the
11 Board stimulated some thoughts and hopefully, I can get
12 through the cross plan quickly and assess whether I want
13 to go back to any of that.

14 CROSS EXAMINATION

15 BY MR. EARLEY:

16 Q Mr. Hubbard, let me go to you. Mr. Hubbard,
17 are you an independent expert?

18 A (WITNESS HUBBARD) You used two words,
19 "independent" and "expert." Expert with regard to what
20 and independent with regard to what? So I think you
21 would have to determine with regard to what sort of
22 matter.

23 Q Mr. Hubbard, are you an independent consultant?

24 A (WITNESS HUBBARD) Yes. Independent in the
25 sense I consult for a number of parties.

1 Q And you consider yourself independent?

2 A (WITNESS HUBBARD) Yes.

3 Q Now, when you were employed by the County, I
4 take it you were selected by the County for employment;
5 correct?

6 A (WITNESS HUBBARD) Yes.

7 Q And generally, the scope of your employment
8 was defined by the County; correct?

9 A (WITNESS HUBBARD) Yes.

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1 Q And you report to the County, correct?

2 A (WITNESS HUBBARD) Yes.

3 Q And you are in daily contact or frequent
4 contact with County personnel, correct?

5 A (WITNESS HUBBARD) Yes.

6 Q So on page 5 of your prefiled testimony where
7 you testify that no engineering consultant can properly
8 be deemed independent when it was selected by LILCO, its
9 job was defined by LILCO, was reported to LILCO, and its
10 personnel were in daily contact with LILCO personnel, is
11 not really correct, is it?

12 A (WITNESS HUBBARD) No; it is correct that in
13 terms -- that is why we went back to what your first
14 question, independent with regard to what? I would not
15 look upon myself as a person who would do an independent
16 audit of a quality assurance program at LILCO, since I
17 am hired by one of the parties.

18 So if you're talking about independence in
19 terms like an independent financial auditor, then I
20 wouldn't meet that criteria, for exactly the reasons you
21 mentioned, that I have been employed by the County and
22 my job has been defined by the County, and I report to
23 the County.

24 Q I take it, though, you are free to reach your
25 own independent technical judgments on issues, isn't

1 that correct?

2 A (WITNESS HUBBARD) Yes.

3 Q And you can do that despite the fact that you
4 are employed by the County, you report to the County,
5 and you are in contact with the County personnel?

6 A (WITNESS HUBBARD) Yes. But I do represent
7 people who have a point of view.

8 JUDGE BRENNER: But you feel free to express
9 your own point of view, don't you?

10 WITNESS HUBBARD: Absolutely.

11 BY MR. EARLEY: (Resuming)

12 Q Mr. Hubbard, in a number of places in your
13 prefiled testimony, and I think I will point a couple of
14 them out, on page 5 down towards the bottom of the page,
15 you indicate there the County was excluded from these
16 matters and prevented from participating in the
17 inspection to insure TPT's independence. I assume there
18 you mean the TPT inspection.

19 And over on page 6 you indicate TPT interfaced
20 only with LILCO, received information and comments from
21 LILCO, reported only to LILCO, could be influenced by
22 LILCO.

23 And I believe if you look on page 3 you have a
24 comment that you haven't had access to underlying data
25 and inspection checklists. That is not entirely correct

1 that the County didn't have an opportunity to have
2 access to some of the underlying data and have some
3 involvement in the inspection, is it?

4 MR. DYNNER: Could we have one question at a
5 time, please?

6 JUDGE BRENNER: Well, in the end I think we
7 got one question.

8 Why don't you answer the last question?

9 WITNESS HUBBARD: I think all of the
10 statements I made are true. I have not had access to
11 the inspection checklists, and I still haven't had
12 access to them. If you would like to go back to the
13 other specific lines in the testimony, I can state the
14 basis why I believe them to be true. I didn't keep a
15 list, Mr. Earley, as you went through the questions.
16 You seemed to jump around.

17 BY MR. EARLEY: (Resuming)

18 Q Well, Mr. Hubbard, is it your testimony that
19 you didn't have the opportunity to have any involvement
20 in the Torrey Pines study?

21 A (WITNESS HUBBARD) We have to get an
22 agreement, Mr. Earley, on the meaning of the word
23 "involvement." As I used it here, I didn't have
24 involvement in the actual inspection process done by
25 TPT. I did prepare comments on some proposals made by

1 Mr. Novarro and presented those to LILCO as an
2 attachment to a May 20, 1982, letter.

3 But in terms of being involved in the actual
4 audit that was done by Torrey Pines, no. I or the
5 County did not have involvement.

6 Q During the conduct of the study and during the
7 conduct of the study it is your testimony that Suffolk
8 County did not have any opportunity to become involved
9 in reviewing or in a more detailed review of that study
10 while it was going on.

11 A (WITNESS HUBBARD) It would be helpful if you
12 would be more specific, Mr. Earley. I can't think of
13 any. I mean, as you are aware, I had a number of
14 discussions with LILCO management related to the
15 settlement of this particular area. If there is
16 something you have in mind, tell me.

17 Q So you don't recall any opportunity that you
18 had with regard to becoming involved or reviewing in
19 detail the Torrey Pines study?

20 MR. DYNNER: Could we get a time frame on that?

21 JUDGE BRENNER: I think it was during the
22 conduct of the study. That was the previous question.

23 MR. EARLEY: During the conduct of the study.

24 WITNESS HUBBARD: No involvement other than in
25 as a part of some settlement meetings.

1 BY MR. EARLEY: (Resuming)

2 Q Now, Mr. Hubbard, I am asking you about
3 opportunities, and you are responding in terms of no,
4 you were not actually involved. Is it also your
5 testimony you didn't have that, you weren't offered that
6 opportunity during the conduct of the study?

7 A (WITNESS HUBBARD) I don't again know what you
8 mean by opportunity. Again I can recall during
9 settlement discussions people said, if you will agree to
10 that, we will then allow you to participate. But it was
11 always a quid pro quo. So the opportunity never
12 presented itself.

13 Q It is your testimony the only opportunity was
14 in the context of the settlement discussions with LILCO?

15 A (WITNESS HUBBARD) That is really all that
16 comes to mind.

17 MR. EARLEY: Judge, I am distributing a letter
18 from Legislator Gregory Blass to MHB Associates, dated
19 September 21, 1982.

20 BY MR. EARLEY: (Resuming)

21 Q So, Mr. Hubbard, you did have an opportunity
22 to have some involvement in reviewing --

23 MR. DYNNER: Excuse me. Can he have a chance
24 to review this letter, please?

25 MR. EARLEY: Certainly.

1 (Pause.)

2 WITNESS HUBBARD: Again this is only partial
3 information, Mr. Earley. The County Legislature -- Mr.
4 Blass, as you know, is a member of the Legislature, and
5 he suggested --

6 MR. EARLEY: I don't think there is a question
7 pending.

8 JUDGE BRENNER: Wait a minute. It is getting
9 late. We will have to pay attention. I didn't hear
10 what you said, Mr. Earley.

11 MR. EARLEY: I don't think there is a question
12 pending.

13 JUDGE BRENNER: I thought you started to ask
14 one, and then Mr. Dynner stopped you. That is correct.
15 Have you had an opportunity to read this
16 letter?

17 WITNESS HUBBARD: Yes, sir.

18 JUDGE BRENNER: All right.

19 BY MR. EARLEY: (Resuming)

20 Q Mr. Hubbard, now that you have had an
21 opportunity to review this letter, you did have an
22 opportunity to participate in some fashion or review the
23 Torrey Pines inspection outside the context of
24 settlement discussions, didn't you?

25 A (WITNESS HUBBARD) No, Mr. Earley. This was

1 written by one of the members of the legislature, and
2 this matter was discussed by the whole legislature, and
3 the entire legislature voted that MHB was not to
4 participate. And Mr. Jones wrote me a letter saying
5 that I was not to participate this particular offer. So
6 I did not have the opportunity.

7 Q Do you know of any other opportunities that
8 were offered Suffolk County with respect to
9 participation in or reviewing the Torrey Pines study?

10 MR. DYNNER: Excuse me. Is that like are you
11 still beating your wife? He testified that this was not
12 an opportunity, so when you ask the question, do you
13 know of any other opportunities, it is like when have
14 you stopped beating your wife? I object.

15 JUDGE BRENNER: Your analogy isn't perfect,
16 but nevertheless you can rephrase the question.

17 BY MR. EARLEY: (Resuming)

18 Q Do you recall other instances in which there
19 was a possibility that Suffolk County could have
20 participated in a review of the Torrey Pines study
21 during the conduct of the study?

22 A (WITNESS HUBBARD) Yes. Again, as part of the
23 settlement discussions, I believe around the first day
24 of the QA hearings on September 14, I met with Mr. Ewell.

25 Q If I may save some time. Other than

1 settlement discussions.

2 JUDGE BRENNER: I am glad you added that, Mr.
3 Earley, because I am on the edge of my seat here in
4 terms of that subject.

5 Go ahead, Mr. Hubbard.

6 WITNESS HUBBARD: I can't recall any, Mr.
7 Earley.

8 MR. EARLEY: Judge, we are now distributing a
9 letter from the Honorable -- or I should say from James
10 L. LaRocca, New York State Energy Office. And it is a
11 letter regarding possible New York State Energy Office
12 participation in the Torrey Pines review.

13 JUDGE BRENNER: We can throw this other letter
14 out in terms of its further usefulness to this record?

15 MR. EARLEY: Judge, I would like to mark that
16 as an exhibit.

17 JUDGE BRENNER: The first one also?

18 MR. EARLEY: The first letter, the letter to
19 MHB Associates from Gregory J. Glass.

20 JUDGE BRENNER: All right, you can mark it as
21 an exhibit for identification.

22 JUDGE MORRIS: That will be LILCO Exhibit 61.

23 (The document referred to
24 was marked LILCO Exhibit
25 No. 61 for

1 identification.)

2 MR. EARLEY: To identify that, LILCO Exhibit
3 61 is a letter from Legislator Gregory J. Blass to MHB
4 Associates, dated September 21, 1982, and it is one page.

5 JUDGE BRENNER: All right. It is solely for
6 identification, but let's bind it in for convenience, so
7 if anybody wants to find it for any purpose, then they
8 can do that.

9 (The material referred to, the letter from Mr.
10 Blass to MHB Associates, dated September 21, 1982,
11 follows:)

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COUNTY OF SUFFOLK



COUNTY LEGISLATURE

VISARCO
LILCO #61
INSERT #4

GREGORY J. BLASS
LEGISLATOR FIRST DISTRICT

CHAIRMAN
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GENERAL CITIZENS COMMITTEE

P.O. BOX 811
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IVERHEAD, NEW YORK 11901
PHONE 727-7200

September 21, 1982

MIB Associates
State Office Building
Veterans Memorial Highway
Hauppauge, NY 11788

Gentlemen:

The panel which I have asked to inspect the Shoreham Nuclear Plant has requested that I convey to you their strongest hope that you will cooperate with them in their efforts. They are eager to begin a review which starts from the principal outstanding questions as to the safety of Shoreham construction. The panel has asked me to set up the earliest possible meeting with MIB personnel at which these questions can be identified and prioritized.

The panel also intends to review the Torrey-Pines inspection in as much comprehensive detail as time permits. The panel invites MIB to participate in the review to assist them in establishing a degree of validity of the Torrey-Pines inspection and its technical conclusions. Additional assignments to recommend to Torrey-Pines will be considered as well.

Limited time remains for this activity. The County may not succeed in the pursuit of the nature and extent of the inspection and design review they now seek. If that should be the case, this panel's work might play a key role. The panel has urged me to seek an early acceptance by MIB of this request to assist them in their task since time is of the essence.

Sincerely,

G. J. Blass
Gregory J. Blass
Legislator

GJB/mjk

1 BY MR. EARLEY: (Resuming)

2 Q Mr. Hubbard, have you had a chance to review
3 this letter, the July 9, 1982, letter?

4 A (WITNESS HUBBARD) Yes.

5 Q It is true, isn't it, that Suffolk County was
6 offered an opportunity to participate in reviewing the
7 Torrey Pines inspection through the New York State
8 Energy Office? Isn't that true?

9 A (WITNESS HUBBARD) I have never seen this
10 letter, so I don't know about the facts that are set
11 forth in this letter.

12 Q Mr. Hubbard, I am not asking you about the
13 letter in particular. Isn't it true that Suffolk County
14 had the opportunity to participate in reviewing the
15 Torrey Pines inspection during its conduct through the
16 auspices of the New York State Energy Office?

17 A (WITNESS HUBBARD) I am sorry, Mr. Earley, I
18 am not familiar with this letter and the negotiations
19 that went on with this letter or what that opportunity
20 was.

21 Q So it is your testimony you have no knowledge
22 whatsoever of the possible involvement of the New York
23 State Energy Office in the Torrey Pines study.

24 A (WITNESS HUBBARD) I had some knowledge of
25 that in discussions with Mr. Jones, but I have never

1 seen this particular letter to the member of the New
2 York State Assembly.

3 MR. EARLEY: Judge Brenner, I haven't been
4 addressing questions of the letter. The purpose of the
5 letter was to refresh Mr. Hubbard's recollection.

6 JUDGE BRENNER: That's right. He's asking you
7 some other questions now, so the letter was to see if
8 that refreshed your recollection. You said you weren't
9 familiar with the letter, which is not quite the same
10 thing as whether or not it refreshes some other
11 recollection. What he is trying to refresh is your
12 recollection of these other questions he is asking you
13 now and not solely of the letter.

14 BY MR. EARLEY: (Resuming)

15 Q And the question is, Mr. Hubbard, it is true,
16 isn't it, that Suffolk County had the opportunity to
17 participate in reviewing the Torrey Pines study while it
18 was going on through the auspices of the New York State
19 Energy Office?

20 A (WITNESS HUBBARD) Not with the protocol that
21 the County had in mind. I had a brief discussion of
22 this matter with Mr. Jones, and I understand where it
23 says here the County did not agree that the Legislature
24 and the County Executive reach the conclusion that it
25 was not acceptable to work through the State Energy

1 Office, for whatever the reasons -- and I wasn't privy
2 to those reasons.

3 Q But to your knowledge, Suffolk County did have
4 some opportunity to participate?

5 A (WITNESS HUBBARD) This is very much like
6 settlement. This is one of the offers, as I understood,
7 that was made, and the County did not believe that it
8 met the needs as perceived by the County.

9 (Counsel for LILCO conferred.)

10 MR. EARLEY: Judge, I don't have any further
11 questions on this document. I would like it marked as
12 LILCO Exhibit Number 62. For the record, it is a letter
13 from James L. LaRocca to Assemblyman Paul Harenberg,
14 dated July 9, 1982.

15 JUDGE BRENNER: Can you have better copies of
16 these letters for the record?

17 MR. EARLEY: We can get better copies to the
18 reporter, probably not today.

19 JUDGE BRENNER: All right. Let's have this
20 poorer copy bound in for convenience. It is again only
21 an exhibit for identification, and I don't know if you
22 can get some better copies for the record other than the
23 bound-in copy. But I think that would be helpful.

24 (The document referred to
25 was marked LILCO Exhibit

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No. 62 for identification.)

(The document referred to, the letter from Mr. LaRocca to Mr. Harenberg, follows:)



INSERT #5

**NEW YORK STATE ENERGY OFFICE
NEW YORK STATE ENERGY RESEARCH and DEVELOPMENT AUTHORITY**

JAMES L. LAROCCA
Commissioner
Chairman

July 9, 1987

9 Rockefeller Plaza
Albany, New York 12223

Honorable Paul Harenberg
New York State Assembly
Kauppauge State Office Building
2A-1 Veterans Memorial Highway
Kauppauge, NY 11787

Dear Assemblyman Harenberg:

The Energy Office will agree to your request not to participate with LILCO in an inspection of the Shoreham facility at this time. However, in now agreeing to this request, I must express to you the very grave concern I have about the unprecedented level of hostility and mistrust which has developed between the Company and the host government in Suffolk County.

If the Energy Office does not continue its efforts at mediation, some responsible party must. The ultimate interests of the Long Island community require that there be resolution of the Shoreham issue one way or the other, and reconciliation between the Company and the County.

I had hoped that the Energy Office could serve as a bridge between the two parties by participating in an observer status in a joint inspection. Failing that, I expressed a willingness to have SERO serve in an observer capacity in any separate inspections. LILCO agreed. The County did not.

As I defer my efforts at your request, I must urge that the Legislature use its good offices to continue the effort to reopen appropriate and effective communication between the Company and the County.

Sincerely,

James L. Larocca

JLL/nlg

cc: Hon. Patrick Malpin
Hon. George Hochbrueckner
Hon. J. William Bianchi, Jr.
Hon. Lewis Yevoli
Hon. Angelo Orasio

Hon. Kenneth LaValle
Hon. Dale Volker
✓ Hon. Charles Pierce
Hon. Peter Cohalan

1 MR. EARLEY: Judge, at this time I would like
2 to move LILCO Exhibits 61 and 62 into evidence.

3 MR. DYNNER: Objection.

4 JUDGE BRENNER: What is your evidentiary basis
5 that the facts asserted in the letters are true? And
6 what would be the materiality of the facts, even if true?

7 MR. EARLEY: Well, I think that as we
8 discussed, there are some statements in Mr. Hubbard's
9 testimony asserting that he and the County didn't have
10 an opportunity to participate in the review.

11 There has been lots of discussion whether that
12 is appropriate to have a review done without the
13 County's participation. I would assume that that would
14 be one of the bases the County will use for attacking
15 the validity of the Torrey Pines study. And I think
16 that these letters impeach some of the testimony
17 presented by Suffolk County witnesses in that they make
18 clear that there were opportunities and those
19 opportunities were declined.

20 JUDGE BRENNER: No, we are not going to admit
21 these.

22 MR. EARLEY: Well, as far as the evidentiary
23 basis for the first letter, it is a letter to MHB
24 Associates.

25 JUDGE BRENNER: So what? If that was -- I

1 don't mean to be that flippant, and maybe it is late in
2 the day. And I apologize. You know, I can write a
3 letter to anybody.

4 MR. EARLEY: It is a Suffolk County document,
5 Judge Brenner.

6 JUDGE BRENNER: No, it is Legislator Blass's
7 view of what is said in there. I don't know the full
8 accuracy of it. And when people -- and I am not
9 questioning his integrity, of course -- but I don't know
10 the full context of it. He is not available for
11 cross-examination.

12 And the materiality escapes me, very frankly,
13 in terms of meeting its evidentiary value for the point
14 you indicated. I can understand it on a limited basis,
15 and I can see the distinction although you haven't
16 expressed it between our saying I didn't want to hear
17 whether Torrey Pines was acceptable or not acceptable to
18 the County in settlement negotiations last time. I can
19 distinguish that from your cross-examining certain
20 statements in the testimony that the County was excluded
21 from access. And it is a very active strong verb, and I
22 think you have had enough questions and answers
23 involving what Mr. Hubbard meant by "excluded" and his
24 view of opportunity and so on.

25 And that is as far as we are going to go. And

1 I can tell you something else, just reading these
2 letters, that doesn't -- even if we thought it was more
3 material, the letters don't scope out what the
4 involvement would have been, whether there would have
5 been open permission for involvement even in the absence
6 of settlement.

7 And Mr. Hubbard has stated his belief that he
8 thinks it was very close, if not part of the settlement
9 process, and even his belief is in some cases not
10 direct. I am really not all that interested, to be very
11 blunt about it. I understand everybody in the
12 negotiation process thought they went the last mile in
13 compromise. For whatever reason, it didn't happen.

14 I also understand better what Mr. Hubbard
15 meant by "was excluded," and I think if that was your
16 purpose, you have achieved that.

17 MR. FARLEY: Well, that was one of the
18 purposes. I did not go back to some of the documents
19 relating to the settlement process. These are documents
20 from the County, a County official, and from the New
21 York State Energy Office. And I think it would have
22 been appropriate to admit them into evidence, but I
23 understand the Board's ruling.

24 JUDGE BRENNER: Well, we are not going to, for
25 the reason I expressed. The additional reason would be

1 that even when you have matters that are material and
2 when they are really part of the negotiation process,
3 there are evidentiary problems with that, given the
4 policy on not intruding into negotiations except for
5 certain very limited reasons.

6 But even putting that aside, and I have read
7 the letters quickly for the first time and I have
8 certainly never seen them before, but they don't tell us
9 enough to be reliable. And I am not going to admit them
10 and open them up to cross-examination because it is too
11 collateral to do that.

12 So while there may be some element of
13 materiality, it is just too collateral to be worth any
14 time and too close to intrusion into the negotiating
15 process.

16 I don't know, for example, nor am I going to
17 be interested in a finding based upon this record, that
18 Mr. Hubbard or anybody else working for the County was
19 free to be involved with all of the details of what
20 Torrey Pines did even in the absence of settlement. And
21 in fact, I had the contrary impression from Mr.
22 Hubbard's testimony based upon what you asked him.

23 Now, that may not be true, but it is just an
24 example of why we don't have a full picture. At least I
25 don't have confidence that I have a full picture, let me

1 state it that way.

2 MR. EARLEY: Well, Judge, I think, not to
3 belabor the point, but if the County is making a claim
4 that they didn't have any opportunity -- and that is the
5 way I read their testimony and some of the comments that
6 they have made -- I thought it was appropriate to
7 indicate that that may not have been the case. And I
8 think that is what these documents indicate. But I
9 understand the Board's ruling.

10 JUDGE BRENNER: Mr. Hubbard has testified that
11 his view of opportunity would have been at least more on
12 his terms. Now, if you are saying that they had open
13 opportunity regardless of the settlement, that is
14 certainly something that has never been put before us.

15 So for all of those reasons, we won't admit
16 this into evidence.

17 (The documents referred
18 to, previously marked
19 LILCO Exhibit No. 61 and
20 62 for identification,
21 were rejected.)

22 MR. BORDENICK: Judge Brenner, I don't know if
23 this is an appropriate point. I have two minor --

24 JUDGE BRENNER: I am not sure Mr. Earley has
25 concluded his cross-examination. He may have said that,

1 but I am not sure.

2 MR. EARLEY: Judge, as I said, that finishes
3 my cross plan. There were a number of Board questions,
4 and in reviewing my notes, there may be some areas that
5 I wondered about, two very briefly. It may be
6 appropriate to break here and then if I have some
7 questions, finish them up first thing in the morning. I
8 am not sure that I will even have any questions.

9 JUDGE BRENNER: All right. We will give you
10 that opportunity.

11 Mr. Dynner or Mr. Miller -- I am not sure who
12 is going to do it -- how much do you have on redirect?

13 MR. DYNNER: At this juncture I can say
14 probably not more than 15 minutes or so.

15 (The Board conferred.)

16 JUDGE BRENNER: We will hold our questions of
17 Mr. Hubbard until after the redirect, because you might
18 ask some of the same questions.

19 Mr. Bordenick.

20 MR. BORDENICK: Yes, Judge Brenner, two quick
21 things that are unrelated. First, Mr. Hubbard referred
22 several times to a Mr. Jones. I thought for
23 completeness of the record, the Board might want to have
24 him identify who Mr. Jones is. I know who he is and the
25 Board knows.

1 JUDGE BRENNER: That is Frank Jones, Deputy
2 County Executive.

3 MR. BORDENICK: The other thing was I have had
4 the so-called Novak memo. I am not sure whether the
5 Board wants to mark it as an exhibit or simply bind it
6 into the record at this point or any other appropriate
7 point.

8 JUDGE BRENNER: All right. I had thought we
9 would do it when we completed this panel, partly because
10 of the hour. But let's do it at the time right after we
11 dismiss the witnesses if you are still going to be here
12 tomorrow.

13 MR. BORDENICK: I will be here tomorrow.

14 JUDGE BRENNER: Then keep reminding me because
15 I know I will forget, left to my own devices. I think
16 we will mark it as an exhibit and bind it in, in answer
17 to your question.

18 MR. BORDENICK: That is fine.

19 MR. EARLEY: Judge, I will be handing out the
20 transcript corrections that we have compiled from last
21 week. We did add to it, and Mr. Johnson had the
22 opportunity to go through the last couple of days of
23 transcripts after he finished today. And I will hand
24 that up to the parties.

25 JUDGE BRENNER: All right. If the County

1 could take another look at the final list as soon as
2 possible overnight. We know it is a burden, but we all
3 know the problems we had last week. And I think that
4 would assist all of us. If you have a disagreement,
5 discuss it with LILCO first to see if you can resolve it.

6 If everything is okay with all parties, we
7 will simply accept those corrections. If there is a
8 problem that you cannot resolve, we might have to ask a
9 clarifying question or two of the witnesses. And that
10 is why I ask you to try to look overnight.

11 MR. DYNNER: Yes, we will review that tonight,
12 Judge Brenner.

13 MR. EARLEY: I might note there are still some
14 places that we just can't decipher what was said.

15 MR. DYNNER: I think if something is really
16 garbled and nobody can decipher it, maybe we ought to --
17 it might be appropriate to go back to the transcript
18 company which maybe can play the 18-minute gaps over in
19 slow motion.

20 (Laughter.)

21 MR. DYNNER: I am sorry, Ray.

22 JUDGE BRENNER: I have gone through that
23 exercise once, not last week and not with this reporting
24 company. It is very tedious.

25 Let's see what it is that is garbled, and

1 maybe the witness remembers, or if not word for word, at
2 least the gist of what the witness said. And if any
3 party thinks it is important, we would be willing to put
4 the witness up there just to essentially try to repeat
5 it but not -- I know that's dangerous.

6 (Laughter.)

7 JUDGE BRENNER: Not to ask follow-up
8 questions, but see if there is something important. In
9 fact, if the parties want to stipulate to new words,
10 even, we wouldn't hold that a transcript correction,
11 that if it really is an accurate recollection, then the
12 questions that followed up on the transcript should be
13 the same logical follow-up questions. I will let you
14 all be inventive on it. And we apologize for the
15 problem. And let's see if there are any specifics that
16 we really have to address.

17 All right, we will resume at 9:00 tomorrow
18 morning.

19 (Whereupon, at 5:15 p.m., the hearing in the
20 above-entitled matter was adjourned, to reconvene at
21 9:00 a.m. on Wednesday, January 26, 1983.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the
ATOMIC SAFETY AND LICENSING BOARD

In the matter of: LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Power Station)

Date of Proceeding: January 25, 1983

Docket Number: 50-322-OL

Place of Proceeding: Hauppauge, New York

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Ray Heer

Official Reporter (Typed)

Ray Heer

Official Reporter (Signature)