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NUCLEAR REGULATORY COMMISSION

ORIGINAL

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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In the Matter of: :

LONG ISLAND LIGHTING COMPANY : DOCKET NO. 50-322-OL

(Shoreham Nuclear Power Station) :

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DATE: October 28, 1982 PAGES: 12,195 - 12,383

AT: Bethesda, Maryland

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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 :  
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LONG ISLAND LIGHTING COMPANY : Docket No. 50-322-OL  
(Shoreham Nuclear Power Station) :  
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Bethesda, Maryland  
Thursday, October 28, 1982

The hearing in the above-entitled matter convened,  
pursuant to notice, at 8:58 a.m.

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

1 APPEARANCES:

2 On behalf of Applicant:

3 ANTHONY F. EARLEY, Esq.  
4 T.S. ELLIS III, Esq.  
5 Hunton & Williams  
6 707 East Main Street  
7 Richmond, VA. 23212

8 On behalf of the Regulatory Staff:

9 BERNARD BORDENICK, Esq.  
10 Washington, D.C.

11 On behalf of Suffolk County:

12 LAWRENCE COE LANPHER, Esq.  
13 Kirkpatrick, Lockhart, Hill,  
14 Christopher & Phillips  
15 1900 M Street, N.W.  
16 Washington, D.C.

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1	<u>C O N T E N T S</u>		
2	<u>WITNESSES:</u>	<u>DIRECT</u> <u>CROSS</u> <u>REDIRECT</u> <u>RECROSS</u> <u>BOARD</u>	
3	T. Tracy Arrington, Frederick B. Baldwin,		
4	William M. Eifert, T. Frank Gerecke,		
5	Joseph M. Kelly, Donald G. Long (Resumed)		
6	By Mr. Lanpher	12,200	
7	William J. Museler (Was recalled and joined the panel, page 12,236)		
8	By Mr. Lanpher	12,236	
9	<u>(Afternoon Session 12,300)</u>		
10	T. Tracy Arrington, Frederick B. Baldwin		
11	William M. Eifert, T. Frank Gerecke,		
12	Joseph M. Kelly, William J. Museler,		
13	Donald G. Long (Resumed)		
	By Mr. Lanpher	12,310	
14	By Judge Brenner		12,311
	By Mr. Lanpher	12,313	
15	<u>E X H I B I T S</u>		
16			<u>BOUND IN</u>
17	<u>NUMBER</u>	<u>IDENTIFIED</u>	<u>RECEIVED</u> <u>TRANSCRIPT</u>
18	EA Audit 00, page 7, under the portion "drawings"		12,217
19			
20	EA 1, page 7, under the portion "Drawings"		12,217
21			
22	EA 2, page 7, the portion relating to drawings		12,217
23	EA 29, Observation 093		12,217
	EA 34, Observation 121		12,217
24	EA 37, Observation 137, Item 2;		
25	EA 4, pages 2 & 3 relating to drawings		12,217

<u>E X H I B I T S (Cont'd)</u>		
<u>NUMBER</u>	<u>IDENTIFIED</u>	<u>RECEIVED</u>
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1                                   P R O C E E D I N G S

2                   JUDGE BRENNER: Good morning.

3                   We are a minute or two early, but while the  
4 witnesses are getting comfortable, what are we going to  
5 do about Friday, just so I know where I am going to be.

6                   MR. ELLIS: Until 5:00 on both Fridays.

7                   JUDGE BRENNER: Okay, very good.

8                   MR. ELLIS: For our planning purposes, can we  
9 have some indication of when the Board or Mr. Lanpher  
10 would like Mr. Alexander here and I think the way things  
11 are shaping up is that this panel, as I understand what  
12 Mr. Lanpher intends, this panel will be done this week  
13 and OQA starts next week, and we will have the OQA  
14 people here starting Tuesday morning.15                  JUDGE BRENNER: He said he would try. I guess  
16 he will give you another reading tomorrow.17                  MR. LANPHER: Judge Brenner, I will give a  
18 reading at the end of today for them. I think that is  
19 accurate. My only concern would be if -- I don't want  
20 them to bring people down unnecessarily. If I finish up  
21 the areas that I immediately want to pursue tomorrow at  
22 3:00 or something, I may need to proceed to some of the  
23 OQA areas, but I wouldn't want them to have to bring  
24 people down specially.

25                  JUDGE BRENNER: No, let's not do that. That

1 wouldn't make sense, to bring them down problemmatically  
2 for at most an hour or two.

3 MR. LANPHER: And I think that is all it would  
4 be. But I am mindful of my time and I just keep  
5 reminding you.

6 JUDGE BRENNER: I think you can see we are  
7 trying to be equitable on that, and we will adjust, if  
8 necessary.

9 MR. LANPHER: But generally I think Mr. Ellis  
10 is right.

11 JUDGE BRENNER: We haven't said anything about  
12 the sequence of things yet. It appears, by inertia if  
13 nothing else, to be the parties' views that the cross  
14 examination should continue until conclusion by the  
15 County as distinguished from the possibility -- and I  
16 leave it to the parties -- of going to examination by  
17 the other parties and the Staff and redirect on the  
18 audit matters, of everything that we have had to date.  
19 I take it we are not going to do that.

20 MR. ELLIS: We would prefer to get it all over  
21 with.

22 MR. LANPHER: I prefer that also, for the  
23 reason that if OQA does not take a full week, that, as I  
24 made clear in my letters, there are areas that I felt  
25 necessary to cut out of my examination and I want to

1 have the leeway to return to those.

2 MR. ELLIS: Well, there again we may have the  
3 problem of people.

4 JUDGE BRENNER: Yes, and we can discuss it for  
5 the next four hours and not know what we are talking  
6 about, so let's wait and see what happens as we get  
7 closer.

8 All right, why don't we proceed with your  
9 examination here?

10 Whereupon,

11 T. TRACY ARRINGTON  
12 FREDERICK B. BALDWIN  
13 WILLIAM M. EIFERT  
14 T. FRANK GERECKE  
15 JOSEPH M. KELLY  
16 DONALD G. LONG

17 resumed the stand and were further examined and  
18 testified as follows:

19 MR. LANPHER: For the Board's orientation, I  
20 am going to proceed to page 3 of my October 26 letter,  
21 document control group 7, which focuses on the review  
22 and checking process.

23 CROSS EXAMINATION - Continued

24 BY MR. LANPHER:

25 Q Mr. Eifert, could I please turn your attention



1 to Engineering Assurance Audit 34, Finding 121? Am I  
2 correct that in this observation the auditor determined  
3 that certain or various drawing discrepancies having to  
4 do with pipe support drawings had not been identified in  
5 the checking process?

6 JUDGE BRENNER: Mr. Lanpher, I am sorry.  
7 Where do I find Audit 00?

8 MR. LANPHER: Audit 00 was one of the three  
9 audits that we did not bind in our big packet.

10 JUDGE BRENNER: Okay, I've got it. Thank  
11 you. All right. That was Exhibit 49 for  
12 identification, County Exhibit 49.

13 MR. LANPHER: That's right.

14 BY MR. LANPHER: (Resuming)

15 Q Mr. Elfert, do you have that audit observation?

16 A (WITNESS EIFERT) Yes, Mr. Lanpher. Would you  
17 rephrase the question or ask the same question again?

18 Q Sure. Am I correct that the auditor in this  
19 instance found that with respect to pipe support  
20 drawings in certain instances drawing discrepancies had  
21 not been identified in the checking process?

22 A (WITNESS EIFERT) Yes, Mr. Lanpher, this audit  
23 observation does identify some drafting problems that  
24 the auditor has identified on the audit. These were  
25 drafting difficulties, as distinguished from problems

1 with the design itself.

2 Q Now could you please define what is mean by  
3 the "checking process" as used in this observation, give  
4 us a sense for what is involved when the term "checking"  
5 is used?

6 A (WITNESS EIFERT) I think as it was used in  
7 this observation it refers to the overall process that a  
8 drawing goes through in its preparation cycle, from  
9 preparation through until approval. The process is  
10 defined in our Engineering Assurance procedures and  
11 includes, for drawings, it includes sort of two  
12 different activities within our design organization.

13 It includes checking, which is the process  
14 that is aimed primarily at the drafting adequacy and  
15 ensuring that the Stone and Webster drawing standards  
16 are being satisfied and normally when I talk about  
17 drawing review and checking, the checking is that type  
18 of drafting check. It also includes the design review  
19 that is performed by a design engineer, as well as  
20 engineers in project engineering -- the responsible  
21 engineer, lead engineer.

22 So I think in our discussions we will talk in  
23 terms of checking as well as the design review problems  
24 in this audit observation. I believe they were  
25 referring to the checking process as a more global

1 process.

2 Q You sort of anticipated one of my questions.  
3 I wanted to know how checking related to reviews of  
4 drawings or design reviews. As I understand you,  
5 checking is a more global process and will include  
6 design review, or may include.

7 A (WITNESS EIFERT) The way it was used in this  
8 audit observation, yes. I think for our discussions  
9 this morning I think we should think of that as separate  
10 steps in the one process of drawing preparation. It  
11 would be easier for us to communicate, I believe.

12 Q Well, then, would you turn to Engineering  
13 Assurance Audit 29, observation 093, please,  
14 particularly the last two sentences of that observation,  
15 where it indicates that with respect to one flow diagram  
16 the auditors could find no evidence that the diagram had  
17 been forwarded to ODR for review?

18 First, what is ODR? Is that the Office of  
19 Design Review?

20 A (WITNESS EIFERT) ODR stands for Operational  
21 Design Review, and it is referring here to an additional  
22 review that is beyond the review process I just  
23 described that we apply to flow diagrams. The  
24 Operational Design Review Group is a group in our  
25 Operations Services Division which was established -- I

1 don't remember the date, but it was established to  
2 provide an additional review of system flow diagrams to  
3 add some experience with respect to operations and  
4 maintenance to the review process.

5           This was an additional review to the checking  
6 review process for drawings that I described a few  
7 moments ago. In this particular audit observation, what  
8 we have identified is that the flow diagrams being  
9 prepared on the Shoreham project were not being  
10 submitted to the Operations Services Division for that  
11 review.

12           The procedures that we have for the design  
13 review and flow diagrams, we really have two. We have  
14 one EAP that is for flow diagrams, EAP 5.9. And that  
15 procedure is designed and applicable primarily to our  
16 newer projects, and we prepare flow diagrams as sketches  
17 on Shoreham and some of our other projects that we have  
18 now completed the flow diagrams were prepared as  
19 drawings. So the flow diagrams on Shoreham were going  
20 through the full drawing review, checking and review  
21 process, and they had overlooked that they had the  
22 additional requirement for going to the Operational  
23 Design Review Group.

24           As a result of this audit we did a 100 percent  
25 backfit and submitted all of the drawings to the

1 Operational Design Review Group and ensured that that  
2 review was conducted.

3 MR. LANPHER: Could we go off the record for  
4 just one moment?

5 (A discussion was held off the record.)

6 BY MR. LANPHER: (Resuming)

7 Q Mr. Eifert, if you could turn your attention  
8 to Engineering Assurance Audits OOE1 and EA2, page  
9 seven of each of those, and are each of these instances  
10 where the auditor found that the review process had not  
11 been adequate for drawings?

12 A (WITNESS EIFERT) Which pages are those?

13 Q Page seven of each.

14 (Pause.)

15 A (WITNESS EIFERT) Mr. Lanpher, in Audit 00 and  
16 Audit number 2, I find words specifically referring to  
17 the review in Audit 1. The words aren't specifically  
18 there, or if you could point to them --

19 Q Then your answer is affirmative with respect  
20 to Audits 00 and 1, correct?

21 A (WITNESS EIFERT) The words in the audit  
22 report indicate, in the case of 00, lack of total and  
23 correct review, and, in the case of 2, an unacceptable  
24 level of review.

25 Q Okay. If you would look at the last sentence

1 under the drawing section in Engineering Assurance Audit  
2 1, which is Suffolk County Exhibit 50 for  
3 identification, the last sentence states: "These  
4 statistics" -- which are in the preceding sentences --  
5 "indicate that during the time interval since the last  
6 major audit the Design Division has been 10.5 percent  
7 efficient in the review of drawings."

8       A       (WITNESS EIFERT) Yes, it does indicate that,  
9 and we discussed these early audits, I forget if it was  
10 the 16th or 17th, with respect to these percentage  
11 figures that were contained in the early audits.

12               The audits were the early audits that the  
13 Division has prepared and the Division had come up with  
14 and an arbitrary mechanism for establishing standards  
15 and a way to come up with a number that was very  
16 subjective to try to depict the performance of the  
17 engineering activities. Mr. Burns responded to those  
18 questions.

19               We did stop using that as a measure because we  
20 found that it was not a meaningful way to measure the  
21 performance, but it was a mechanism that gave some feel,  
22 but it was not a tool that we determined was effective  
23 and continued to use in the later audits.

24       Q       I recall that testimony, Mr. Eifert. My  
25 immediate question with respect to Engineering Assurance

1 Audit number 1, page seven, that drawing paragraph, with  
2 that added direction to that particular sentence, would  
3 you agree that this is an instance where the auditor  
4 found that the review of drawings had not been adequate?

5       A       (WITNESS EIFERT) That is what the auditor was  
6 reporting. I think what I can do is maybe help you here  
7 with these specific audits, and I think we should also  
8 include the audit 4. Audit 4 also identified  
9 difficulties with the drawing and checking process and,  
10 again, were early audits in the process.

11               Now in looking at all of the items that you  
12 put into these groupings, I think that these four audits  
13 do relate to each other in what they were reporting,  
14 these findings that were reported in these audits, and  
15 if you go into the backup data in the four audits I  
16 think we had a total of approximately, I said  
17 approximately -- I think we had 132 individual  
18 deficiencies that were found.

19               Going back again, these were the early audits,  
20 as well as the drawings were the early drawings. I  
21 tried to understand what the process was and what  
22 concerns this was from a repetitive standpoint. The  
23 drawings that were audited, many cases were the first  
24 issue of the drawings and we audited them as being  
25 complete and they weren't complete -- flow diagrams, for

1 example.

2           Later, in the mid-'70s, we revised the  
3 procedures to clearly indicate that the first issued  
4 flow diagram is a conceptual issue that is not intended  
5 to be complete and should not have -- does not need to  
6 have all of the detail on it. It is a drawing that is  
7 issued for -- basically for a general arrangement and to  
8 identify the large piping sizes so we can lay out the  
9 plant.

10           The problems that we identified in these  
11 audits, many of them relate to problems with the drawing  
12 that relate to fabrication and direction of the systems  
13 and not to the purpose for which they were issued, as  
14 the conceptual issue. The problems were such that they  
15 would have created some difficulties in manufacturing if  
16 you tried to manufacture them at that time or fabricate  
17 the equipment.

18           There were only two problems that we  
19 identified that I would characterize as relating to  
20 design, and I would characterize 130 of them as being  
21 the checking process that we discussed, and two of them,  
22 with respect to two problems that would give me concern  
23 with respect to the design adequacy.

24           Q     Mr. Eifert, so I understand those statements,  
25 your reference in Engineering Assurance Audit 4 is to



1 pages two and three -- the discussion of building  
2 service drawings, structural drawings -- and that is  
3 primarily on page two, and on page three the electrical  
4 control diagrams. Is that correct?

5 A (WITNESS EIFERT) Yes, and I am grouping these  
6 together because these were the early audits.

7 Subsequent to this time frame, the company adopted a  
8 formal checking procedure to assist the design process,  
9 to ensure that on the checking side of the process we  
10 got a better product the first time through, if you  
11 will.

12 Q I understand that, Mr. Eifert, and I really  
13 don't want to cut you off on any of this, but your first  
14 answer was just fine. I just wanted you to identify the  
15 specific portions in the EA Audit 4 that you referred to  
16 in your earlier answer.

17 And, following up, in your review of EA Audit  
18 00, 1, 2 and 4, the portions that we have identified,  
19 you went to backup material and you found  
20 approximately -- I think this is an accurate count --  
21 130 instances, and I believe it was your words of  
22 checking problems. Is that right?

23 A (WITNESS EIFERT) Yes. What I did was I had  
24 one of our engineers go back the best he could and  
25 identify the specific detailed items that were

1 reported. Many of the 130 of them were the checking  
2 things and the range included things, for example, that  
3 the north arrow wasn't completely legible on the  
4 drawing -- a lot of drafting-type concerns.

5           And again these were drafting problems, not  
6 design problems and we corporately established checking  
7 procedures, formal checking lists, that were used.

8           Q     Mr. Eifert, then in Engineering Assurance  
9 Audit 4 the discussion of building service drawings,  
10 structural drawings and electrical control drawings are  
11 instances where the checking process had not picked up  
12 errors which were subsequently identified in the audit  
13 process; is that correct?

14          A     (WITNESS EIFERT) Well, not entirely, because  
15 many of these things I wouldn't categorize as errors. A  
16 lot of the discrepancies reported by the project were  
17 related to missing information. If you look at Audit  
18 4 --

19          Q     Why don't we take the first part, building  
20 service items, Item A?

21          A     (WITNESS EIFERT) These are incorrect or  
22 omitted. On incorrect I would classify as an error, but  
23 dimensions omitted, and the next category,  
24 identification insufficient, for these particular  
25 drawings in this time frame, where they were the

1 early-issued drawings, it hadn't been the intent that  
2 the issue be for fabrication or construction.

3           I am reluctant to call that an error because  
4 the drawings were probably complete to the extent that  
5 they were intended to be used at that point in time, and  
6 later in our flow diagram procedure we adopted a  
7 definition of that, as well as for drawings. We adopted  
8 a mechanism right in the drawing scheduling chart to  
9 track percent complete as a mechanism for recognizing  
10 this kind of activity.

11           So they are certainly not all errors.

12       Q       Well, the auditor found that each of the items  
13 listed in Engineering Assurance Audit 4 -- for instance,  
14 dimensions, incorrect or omitted material,  
15 identification insufficient, graphic of elevation is  
16 incorrect -- each of that kind of finding which the  
17 auditor listed he found to be aspects of the drawings  
18 which he judged to be not in accordance with what he  
19 would have expected, correct, for drawings?

20       A       (WITNESS EIFERT) That is correct. In this  
21 audit and in earlier audits, that is what the auditor  
22 was doing. We were auditing these drawings on the  
23 assumption that they should be 100 percent when they  
24 were issued, issue 1. In the process I believe the  
25 auditors were learning the engineering process at the

1 time and the process was later refined to describe it  
2 more fully and more accurately.

3           So in hindsight this wouldn't have been  
4 appropriate to identify all of these as problems with  
5 the drawings at that time. That is the way that we  
6 audited it in the very early '70s.

7           Q     To understand, the ones that you would differ  
8 in terms of calling them in error is where some  
9 information was omitted or missing. Is that correct?  
10 At least that was the example you gave. The dimensions  
11 are omitted. You wouldn't call that an error?

12          A     (WITNESS EIFERT) Not on an early drawings,  
13 yes.

14          Q     Is it the usual procedure on a drawing where  
15 something is omitted to highlight it in the sense that  
16 you would just note that the information will be  
17 provided at a later time?

18          A     (WITNESS EIFERT) Once we go into construction  
19 I believe that the practice is to indicate holds on  
20 drawings for both situation where there is information  
21 shown that possibly is preliminary, and we put a hold on  
22 it because we don't want manufacturing or fabrication to  
23 begin. I believe we also at that stage of the process  
24 identify holds on the areas where the information simply  
25 is missing.

1           But the drawings are issued for conceptual  
2 purposes only so to allow the general arrangement to  
3 start developing and details like this that are not on  
4 the drawings, that are not needed for the purpose of the  
5 drawing, we do not at that point clearly identify the  
6 missing information.

7           Q     Mr. Eifert, if you would turn your attention  
8 to Engineering Assurance Audit 37, Finding 137 now, and  
9 I will turn your attention to Item 2 in observation  
10 137. In 2A the auditor, am I correct, identified  
11 references and symbols and notations which were outdated  
12 or not explained, correct?

13          A     (WITNESS EIFERT) Yes, Mr. Lanpher. The  
14 second part of that paragraph does indicate that the  
15 symbology and notations used were unexplained. The  
16 situation, the way the process works, with the line-line  
17 diagrams is that the first sheet is intended to identify  
18 the symbols that are being used in the one-line diagram  
19 series and in this audit we did identify that there were  
20 symbols being used that were not identified on that  
21 first sheet.

22                 I have questioned why that wasn't the case  
23 with respect to this particular audit and why we would  
24 find this type of problem as late as 1981, and we  
25 haven't been able to establish a firm reason for that,

1 other than in talking with the auditors, the symbols in  
2 some cases were symbols that were no longer used by  
3 Stone and Webster and were not on the standard that  
4 becomes the first sheet.

5           Mr. Mooncai, who was the primary auditor in  
6 this case, has been with Stone and Webster for over  
7 twenty years in electrical engineering, and I am sure if  
8 he had alone audited these drawings before he probably  
9 would never have questioned the symbols because he  
10 readily knows what they mean.

11           Kim Smith, who was also with him on the audit,  
12 was a career development engineer who we have had, and  
13 what I suspect happened is that she asked Mr. Mooncai  
14 what the particular symbol was and he referred her to  
15 the table and it wasn't there, and that is why we would  
16 have a finding here.

17           This is just, again, a drafting type problem,  
18 as compared with the design problem.

19           Q     Mr. Eifert, those last comments on what you  
20 think must have happened, that is not based upon any  
21 actual information, is it? That is what you are  
22 surmising.

23           A     (WITNESS EIFERT) That is how I prefaced it.

24           Q     Turning your attention to the next page, at  
25 the top of the page, item B under number 2, indicates,

1 am I correct, that incomplete checking sheets were noted  
2 for three of the nine drawings which were audited?  
3 Correct?

4 A (WITNESS EIFERT) Could I have a moment? I  
5 didn't realize you were going to refer to this  
6 particular section.

7 Q Take whatever time you need. It's at the top  
8 of the page, 2B.

9 (Pause.)

10 Q Am I correct the auditor found in this  
11 instance that three of the nine drawings, the checking  
12 sheet for them, had not been completed?

13 A (WITNESS EIFERT) Yes, Mr. Lanpher, the  
14 observation does indicate that incomplete checking  
15 sheets were noted for three of the nine drawings  
16 audited. The system in this particular case is that  
17 the, I believe it is, two of the checking sheets were  
18 incomplete in that they had not been signed. They had  
19 been completed, but the checker had failed to sign them  
20 when he completed the checking process.

21 In the third case, the checking sheet could  
22 not be located at the time of the audit and subsequent  
23 to the audit the electrical group did locate the  
24 checking sheet and identified that to the auditors.  
25 This I wouldn't characterize as an inadequate -- an





1 "drawings"; EA1, page  
2 seven, under the portion  
3 "Drawings"; EA2, page  
4 seven, the portion  
5 relating to drawings;  
6 EA29, Observation 093;  
7 EA34, Observation 121;  
8 EA37, Observation 137,  
9 Item 2; and EA4, pages  
10 two and three relating to  
11 drawings were received  
12 into evidence.)

13 BY MR. LANPHER: (Resuming)

14 Q Mr. Eifert, turning your attention to  
15 Engineering Assurance Audit 40, both page two of the  
16 introductory portion and Observation 156, I think they  
17 basically say the same thing, so why don't we first look  
18 at the observation itself.

19 Am I correct that the auditor determined that  
20 there were no project procedures governing the  
21 preparation, review and control of cable block  
22 diagrams?

23 A (WITNESS EIFERT) That is correct. That is  
24 the wording of the audit observation.

25 Q Do you disagree with the observation?

1           A       (WITNESS EIFERT) No, I do not.

2           Q       The auditor also indicated that there was no  
3 evidence that cable block diagrams are reviewed. Were  
4 you able to determine whether this aspect of the  
5 observation was accurate?

6           A       (WITNESS EIFERT) With respect to evidence  
7 reviewed, that was accurate as we have indicated to you  
8 in our discussions, that we do not see this as an audit  
9 observation in the category of inadequate checking or  
10 review.

11                   Cable block diagrams are not a control design  
12 document in the Stone and Webster design process. Cable  
13 block diagrams are a tool that are used by electrical  
14 engineers that aid them in determining cable routing and  
15 provide a roadmap for that purpose. They are not used  
16 for any purpose but that and they are not used to build  
17 the plant.

18                   The reason that we had this audit observation  
19 is that my auditor, who was not familiar with cable  
20 block diagrams, was discussing these with project  
21 engineering and engineers in the electrical discipline,  
22 asking questions about cable block diagrams, and it  
23 identified that there was an unsigned draft procedure  
24 for cable block diagrams and how they were to be handled  
25 on this project. But it was that it was unsigned. It

1 was an unofficial procedure.

2           He then questioned them about the purpose and  
3 use of cable block diagrams and came away from that  
4 discussion with some concerns on whether or not they  
5 were indeed informational documents that were  
6 appropriately uncontrolled, and it was because of that  
7 confusion that the audit observation was written.

8           I did attend this post-audit conference and we  
9 discussed it at some length. The final agreement that  
10 we reached with the project engineering and engineering  
11 management at that conference was that we would keep it  
12 as an audit observation and let them respond to us after  
13 doing a check with respect to how these cable block  
14 diagrams were indeed being used, including a check  
15 through construction to verify that they were indeed  
16 being used on Shoreham on appropriately controlled  
17 document.

18           That subsequently was determined to be the  
19 case, after having discussions between engineering  
20 assurance, the project as well as the electrical  
21 division, and in this case I also asked one of our staff  
22 consultants, an electrical engineer with a lot of  
23 experience at Stone and Webster to give me the absolute  
24 confidence that the project was indeed correct when they  
25 indicated that these were appropriately not being

1 handled as controlled design document.

2 Q Mr. Eifert, maybe you could give me a little  
3 bit more information as to that last point. The auditor  
4 stated that they were used by the client or sent to the  
5 client to be used by construction. Now what is the use  
6 of these diagrams in the construction process?

7 A (WITNESS EIFERT) Mr. Lanpher, the reason that  
8 that was worded that way is that the auditor had been  
9 led to believe, at least, that there was some use for  
10 these at the construction site. They were being  
11 distributed at the construction site, and that was the  
12 reason we wrote the audit observation that way and we  
13 checked to have definite information that that was not  
14 the case.

15 The subsequent check showed they were  
16 distributed to the site. They were not being used by  
17 construction in any way, by the electrical contractor in  
18 any way, or any other contractors or construction  
19 people. They are an information document. They are not  
20 used to build the plant, and we were sufficiently  
21 concerned to pursue it this way because they are an  
22 uncontrolled document.

23 They aren't reviewed. They are a sketch that  
24 is prepared by the electrical engineer, and if they were  
25 being used it would have been a significant problem, and

1 that is why we put the emphasis on this and wanted the  
2 positive feedback from the project with the concurrence  
3 of the electrical division staff as well, to ensure that  
4 everyone -- engineering assurance at the project and the  
5 electrical engineering staff -- were confident that we  
6 did not have a problem here.

7           The fact is that they are not used for  
8 construction.

9           Q       Why were they sent to the site if they weren't  
10 to be used? We have heard a lot of testimony about how  
11 much paper the construction site gets, as is. Is there  
12 a reason that they are sent?

13          A       (WITNESS EIFERT) Because they are an  
14 informational tool. In discussing this with the  
15 electrical division staff in Boston -- and I'm not an  
16 electrical engineer, and that is one of the reasons I  
17 had a consultant brought in to make sure that we had  
18 everything correctly understood -- they are used as a  
19 roadmap once they are prepared. They are a tool for  
20 primarily cable routing. Electrical engineering people  
21 use it for cable routing.

22           The cable routing is not established in these  
23 diagrams or the plant built to these diagrams. Many  
24 engineers in the past just throw away their sketches  
25 after that point and just use the information in the

1 cable scheduling system. If you keep them, they serve  
2 as a roadmap, a ready reference to locate information in  
3 the cable scheduling system and in the wiring diagrams.

4           They can serve in that purpose and that is why  
5 electrical engineers now keep them and we put a sketch  
6 number on them and so forth, because it makes for a  
7 ready reference in identifying cable routing.

8           Q       Well, then, aren't they being used? Maybe  
9 we're having a terminology problem. It sounds to me as  
10 if the electrical engineers in fact, or some of them in  
11 fact do use these diagrams for cable routing and the  
12 other functions you have been discussing.

13          A       (WITNESS EIFERT) I think your understanding  
14 of why we wrote the audit observation and why we  
15 followed up so closely, because it isn't necessarily  
16 black and white and we wanted to look at this very  
17 carefully. They are being used in that sense, but it is  
18 an information-only sense. No design decision, no  
19 construction decision is made based upon their use.

20           After they are prepared, it is once, it is an  
21 informational roadmap to allow people who are not  
22 immediately familiar with the cable routing within the  
23 plant to find it readily, but it is not used to make  
24 design decisions or construction decisions in any way.  
25 So in that sense it is information only, which is beyond

1 what would be needed in a design control document.

2 Q Mr. Eifert, you indicated that you attended at  
3 least the exit conference, I believe, or one of the  
4 conferences on this.

5 A (WITNESS EIFERT) I attended the post-audit  
6 conference.

7 Q Have you seen some of these cable block  
8 diagrams that were the subject of this observation?

9 A (WITNESS EIFERT) Yes, I have.

10 Q Are they stamped or otherwise indicated in  
11 some way for information only, not to be used in  
12 construction?

13 A (WITNESS EIFERT) They are now. That was one  
14 of the resolutions of the audit.

15 Q They weren't previously?

16 A (WITNESS EIFERT) They were not.

17 MR. LANPHER: Judge Brenner, I would like to  
18 move the admission of Engineering Assurance Audit 40,  
19 page two, the portion discussing Observation 156, and  
20 also observation 156.

21 JUDGE BRENNER: All right. When you say the  
22 portion discussing 156, do you mean that paragraph on  
23 page two?

24 MR. LANPHER: Yes, sir. There is just one  
25 paragraph. It's the second full paragraph on page two.

1 JUDGE BRENNER: All right. I don't want to  
2 jump in too quick, Mr. Ellis. The reason, incidentally,  
3 I adopted the procedure of saying in the absence of  
4 objection is first to save you some trouble and, second,  
5 I know how it pains you to say no objection, given the  
6 overall one that we discussed, so I thought I would  
7 spare you that.

8 (Laughter.)

9 JUDGE BRENNER: But I don't mean to cut you  
10 off, either, so maybe we had better go back to your  
11 telling me you have no particular objection so I know  
12 I'm not cutting you off.

13 MR. ELLIS: No, that's fine. You read me like  
14 an open book.

15 (Laughter.)

16 JUDGE BRENNER: Are we okay on this one?

17 MR. ELLIS: Yes, sir.

18 JUDGE BRENNER: All right, these are admitted  
19 into evidence.

20 (Engineering Assurance  
21 Audit 40, page two, the  
22 portion discussing  
23 Observation 156, and  
24 Observation 156 were  
25 received into evidence.)



1           WITNESS EIFERT: Excuse me. We just entered  
2 40, number 156. Is that the only one?

3           JUDGE BRENNER: And the paragraph, the second  
4 bullet, if you will, on page two.

5           WITNESS EIFERT: Thank you.

6           JUDGE BRENNER: That is the same observation.

7           BY MR. LANPHER: (Resuming)

8           Q     Mr. Eifert, if I could turn your attention to  
9 Engineering Assurance Audit 8, page two, the first item,  
10 C2, related to structural steel drawings, I am correct,  
11 am I not, that the auditor in this instance found that  
12 incorrect drawings were referenced and that drawing  
13 coordinates were not included in the references?

14          A     (WITNESS EIFERT) Yes, Mr. Lanpher, that is  
15 what the audit observation indicates.

16          Q     Now, Mr. Eifert, would you have expected that  
17 this kind of a problem, incorrect drawings reference and  
18 the other one, would have been found in the process of a  
19 review or checking of these drawings prior to the time  
20 of an audit?

21          A     (WITNESS EIFERT) In the normal course, yes.  
22 This is an unusual audit that I will have to explain  
23 because, again, this was an early audit and I didn't  
24 include this in the category with the first four audits  
25 that we discussed -- 00, 1, 2 and 4.

1           The kind of difficulties that are being  
2 reported are similar to those, but the situation with  
3 the structural drawings as well as with the mechanical  
4 flow diagrams -- well, the structural flow diagrams --  
5 what we did in this audit was we audited drawings that  
6 had been released for bid purposes.

7           In the case of the flow diagrams, the flow  
8 diagrams audited were not through the review process.

9           Q     You are talking about the flow diagrams in  
10 paragraph 4 at the bottom of that page?

11          A     (WITNESS EIFERT) Yes, I am. In going back,  
12 we have been able to establish that the structural  
13 drawings were bid drawings, and the flow diagrams were  
14 drawings that had not completed the review process. I  
15 can't explain why the group audited these particular  
16 drawings and, the next step, reported the problems.

17           Typically what was happening with respect to  
18 bid drawings is they were developing a structural  
19 drawing on the drawing boards in the design organization  
20 and the engineers are developing the specification,  
21 which must be released for bid purposes to get pricing  
22 information and other technical and administrative  
23 information.

24           And typically what would be happening in this  
25 time frame is that the engineer would very simply go

1 over to the drawing boards or wherever that drawing was  
2 and take it out of the process in whatever condition it  
3 was in and that became the bid document. That process  
4 has subsequently been changed. That isn't acceptable.  
5 By 1976 we had a clear directive out from management  
6 that they didn't want to send specifications out for bid  
7 with drawings that hadn't been completed through the  
8 check process, but that was what was happening in these  
9 early days.

10           So I'm not sure why we would have audited  
11 those drawings or the flow diagrams. It's not clear to  
12 me why we would have audited flow diagrams that were not  
13 through the process. I remember Bob Burns, when we  
14 talked about those early calculations, indicated the  
15 same thing, that in those early days we even audited  
16 some calculations that had not been checked. It was the  
17 learning curve. It was timing and access to the records  
18 is the best explanation.

19           But because these were incomplete drawings, if  
20 you will, I'm not in a position to say very much about  
21 the discrepancies that were identified by the auditor.  
22 It is just not clear why we would have audited them.

23           (Counsel for Suffolk County conferring.)

24           Q     Mr. Eifert, if you would turn your attention  
25 to Engineering Assurance Audit 13, page two, item C.3,

1 now, Mr. Eifert, this was an instance relating to  
2 nuclear flow diagrams, was it not, where the auditor  
3 found certain deficiencies in those diagrams?

4 (Pause.)

5 A (WITNESS EIFERT) Yes, Mr. Lanpher.

6 Q Would you have expected these deficiencies to  
7 be identified prior to the auditor having performed his  
8 audit?

9 A (WITNESS EIFERT) The items reported in  
10 paragraph 3 of subpart A and subpart B are, as I  
11 responded to your question, drafting type difficulties  
12 that I would not have expected to have found in flow  
13 diagrams in this audit. The design checklist problem  
14 identified in C is not a deficiency, if you will, with  
15 respect to the checking or review process. It is not  
16 the deficiency in the document.

17 Q Items A and B, though, you would classify as  
18 something that should have been picked up in the  
19 checking or review process?

20 A (WITNESS EIFERT) Yes, I would, although not  
21 significant.

22 Q All right. Turning your attention to  
23 Engineering Assurance Audit 30, Mr. Eifert, Observation  
24 103, Mr. Eifert, am I correct that the auditor  
25 determined that five of eight electrical drawings which

1 he audited did not comply with the requirement that  
2 where drawings containing Category 1 information are  
3 changed the reason for the change and any justification  
4 or backup information is supposed to be given?

5       A       (WITNESS EIFERT) Yes, Mr. Lanpher. Our  
6 procedures do require that, and in looking at this audit  
7 observation as well as one in EA Audit 33, Observation  
8 115, I must apologize. We have been advising you of  
9 which problems we do not consider to be review problems,  
10 and I have noted last night that I do not consider these  
11 to be review problems and I failed to tell Mr. Early  
12 this morning so he could pass that on to you.

13               The situation that we have in Audit  
14 Observation 103, after going back and being able to talk  
15 to the auditors, was the situation that on what we call  
16 our record of drawing changes where we require that they  
17 not only describe the change but put down a reason for  
18 the change, they were not in all cases putting down the  
19 reason for change on these electrical drawings.

20               If we go to EA Audit 33, we identify in  
21 essence the same finding.

22       Q       This is Observation 115?

23       A       (WITNESS EIFERT) Yes. I believe it is in EA  
24 Audit 33, Observation 115. We are talking about flow  
25 diagrams and not the electrical drawings, as we were

1 discussing in Audit Observation 103, but in this  
2 observation we are indicating that the documentation and  
3 the reason for change is not adequate.

4           And in looking into these what my conclusion  
5 is is that in both cases the situation is that there was  
6 an indication and traceability to the changes and the  
7 basis for the changes, but the documentation was not  
8 adequate. In the case of 103, although they did not put  
9 the information directly onto the record of drawing  
10 changes, they were making references directly to the  
11 elementary diagrams, to the E&DCRs or to manufacturer's  
12 prints, which were the basis or the cause for the  
13 change in the electrical drawing.

14           In the case of the flow diagrams, the  
15 difficulty that we were having is that they were using a  
16 category titled "Design Development" for some of the  
17 changes. Now the requirement for documenting any  
18 reasons for change came into place in our program in  
19 1976, I believe, and the audit program up until these  
20 audits in late '79 and '80, the auditors had been  
21 accepting the documentation the way it has been reported  
22 here as acceptable documentation.

23           In the 1979 and '80 time frame we in the  
24 Engineering Assurance Division judged that that  
25 documentation could be better and that we would like to

1 see it better and were making an effort to expand on the  
2 extent to which the reason to change was being  
3 documented. I don't consider this an example of  
4 something that was an inadequacy in the review and  
5 checking because the reviewers and the checkers were  
6 checking it to the practice that was in fact considered  
7 unacceptable practice in those time frames.

8           And in fact what we did with the audit program  
9 in late '79 was we asked the project to be more  
10 specific, if you will. We took a harder interpretation  
11 of the requirement and have changed that practice in all  
12 areas of Stone and Webster.

13           So in that context it doesn't fit the category  
14 and I apologize for not having advised you earlier on  
15 those two.

16           Q     Well, Mr. Eifert, looking at Observation 103  
17 from Engineering Assurance Audit 30, it indicates, does  
18 it not, that the requirement in the engineering  
19 assurance procedures to provide this traceability backup  
20 information had been instituted in August of 1976,  
21 correct?

22           A     (WITNESS EIFERT) That is correct.

23           Q     Now is it your testimony that in September of  
24 1979 you were finding that the project had not been  
25 carrying out this procedure to the full extent that you

1 believed was necessary?

2       A       (WITNESS EIFERT) No. I think I had better  
3 characterize that in 1979 the engineering assurance  
4 people changed their thinking with respect to how that  
5 would be documented. Prior to that time -- well, let me  
6 begin with the AP 5.4 very simply says when you prepare  
7 the record of drawing change include a description of  
8 the reason for change, and that's what it says. No  
9 further explanation or detail or method on how to carry  
10 that out.

11               The way that was being carried out on these  
12 electrical drawings, in the judgment of the electrical  
13 engineering people in the project, was by referencing  
14 the source document for the change, the ESK and the  
15 E&DCRs, et cetera. From the time of that requirement to  
16 the time of this particular audit, that practice has  
17 been accepted by the auditors as providing an adequate  
18 traceability.

19               And the basis for the change in 1979, what we  
20 are seeing in this audit as well as the flow diagram  
21 audit in June of '80, we changed our acceptance  
22 standard, if you will, in the audit program and said you  
23 are not really giving what's best intended by that  
24 procedural requirement. It was an interpretation of the  
25 requirement that we expanded on, if you will, and you



1 could describe it as changing our acceptance standard  
2 for the audit, if you will.

3           But there were efforts under way since 1976  
4 for documenting the reason for change. It is that  
5 situation.

6           Q     Have you subsequently amended or changed EAP  
7 5.4 to specify this revised interpretation that you have  
8 described?

9           A     (WITNESS EIFERT) We have issued an  
10 engineering department technical standard, I believe.  
11 It may be a procedure that I believe describes in more  
12 detail what the company is looking for with respect to  
13 the reason for changes. I qualified that because I was  
14 not able to look at that last night and I don't have  
15 access to that, but that was the intent of issuing that  
16 new department standard.

17          Q     When was this done -- what time frame?

18          A     (WITNESS EIFERT) I knew last night. I  
19 believe that was in 1981.

20          Q     Why wasn't that done back in 1979 at the time  
21 of audit observation 103 of Engineering Assurance Audit  
22 30?

23          A     (WITNESS EIFERT) I don't know.

24           MR. LANPHER: Judge Brenner, I would like to  
25 moveo the admission of four audit findings --

1 Engineering Assurance Audit 8, page two, items 2 and 4,  
2 or items C.2 and C.4 on that page; Engineering Assurance  
3 Audit 13, 2, Item C.3; Engineering Assurance Audit 30,  
4 Observation 103; and Engineering Assurance Audit 33,  
5 Observation 115.

6 JUDGE BRENNER: Did you ever make any motion  
7 with respect to EA40?

8 MR. LANPHER: Yes, and you granted it, I  
9 believe.

10 JUDGE BRENNER: I wasn't sure if we had put  
11 that in the other group or not. Okay. That one we  
12 picked up separately in-between the two groups.

13 MR. LANPHER: Yes.

14 MR. ELLIS: Is that a total of four?

15 MR. LANPHER: Yes, it is -- four audits.

16 MR. ELLIS: Other than our standing objection,  
17 we have no objection.

18 JUDGE BRENNER: All right. They are  
19 admitted.

20 (Engineering Assurance  
21 Audit 8, page two, items  
22 C.2 and C.4; Engineering  
23 Assurance Audit 13, 2,  
24 Item C.3; Engineering  
25 Assurance Audit 30,

1 Observation 103; and  
2 Engineering Assurance  
3 Audit 33, Observation 115  
4 were received into  
5 evidence.)

6 MR. ELLIS: Are you leaving the document  
7 control area, this Group 7?

8 MR. LANPHER: Yes.

9 MR. ELLIS: Judge Brenner, I think it -- what  
10 are you going to now?

11 MR. LANPHER: I'm going back to the witnesses'  
12 testimony.

13 MR. ELLIS: I think, Judge Brenner, then we  
14 need to take a break to find Mr. Museler and get him  
15 down here if we can. It will just take us a minute.

16 JUDGE BRENNER: All right. Let's take about  
17 five minutes and we won't consider this the mid-morning  
18 break.

19 (A brief recess was taken.)

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1 JUDGE BRENNER: Let's go back on the record.  
2 Whereupon,

3 WILLIAM J. MUSELER  
4 was recalled as a witness and, having been previously  
5 duly sworn, resumed the stand and was further examined  
6 and testified as follows:

7 JUDGE BRENNER: Welcome back, Mr. Museler.  
8 Maybe it turned out that Tuesday was not a good day to  
9 have a hearing anyway, as far as he was concerned, but  
10 we are ready to go now.

11 BY MR. LANPHER: (Resuming)

12 Q Gentlemen, I would like to direct your  
13 attention to page 57 of your prefiled testimony relating  
14 to the Torrey Pines technology program and, Judge  
15 Brenner, I would like to have marked as Suffolk County  
16 Exhibit 69 for identification a document, the cover  
17 sheet, which we prepared -- the cover sheet is entitled  
18 "Torrey Pines Documents" and it contains five documents,  
19 and the way they are listed as Tab 1 is Program Plan for  
20 Independent Verification of Shoreham Nuclear Power  
21 Plant, with a date of June 1982.

22 Tab 2 is a June 18, 1982 status report. Tab 3  
23 is a July 16, 1982 status report. Tab 4 is an August  
24 20, 1982 status report. Tab 5, which we have just  
25 inserted in this compilation, is a September 17, 1982

1 status report. And all of these documents relate, I  
2 believe, to the Torrey Pines effort.

3 JUDGE BRENNER: All right. They are marked  
4 for identification as Suffolk County Exhibit 69.

5 (The document referred to  
6 was marked Suffolk County  
7 Exhibit Number 69 for  
8 identification.)

9 JUDGE BRENNER: For your planning, what we  
10 will do is go until about 11:00 and take a full  
11 mid-morning break, and then we will run until 12:15 and  
12 we will generally take an hour and a half for lunch.

13 MR. LANPHER: Whatever is convenient for the  
14 Board.

15 JUDGE BRENNER: Well, if you notice when we  
16 are getting close and you know when you are at a  
17 convenient break, that will be okay. Otherwise, I will  
18 mention it.

19 MR. LANPHER: Thank you, sir.

20 BY MR. LANPHER: (Resuming)

21 Q Gentlemen, when you in your testimony at page  
22 15 talk about the Torrey Pines program, is the Torrey  
23 Pines program that you are referring to Tab 1 to Suffolk  
24 County Exhibit 69 for identification?

25 A (WITNESS MUSELER) Mr. Lanpher, you just make

1 a reference to page 15. Do you mean 57?

2 Q Let me restate the question. Page 57 of your  
3 prefiled testimony. In the answer on that page you talk  
4 about the Torrey Pines program and you talk about its  
5 objectives. Am I correct that Tab 1 to Suffolk County  
6 Exhibit 69 for identification constitutes a description  
7 of the Torrey Pines program that you are referring to at  
8 page 57?

9 A (WITNESS MUSELER) Yes, sir.

10 Q To the best of your knowledge, is that the  
11 program which in fact has been or is being carried out  
12 by Torrey Pines?

13 A (WITNESS MUSELER) Yes, sir.

14 Q Do you know of any significant changes in that  
15 program as described in Tab 1, or do you think that is  
16 the program and in fact it is being implemented?

17 (Witnesses conferring.)

18 A (WITNESS MUSELER) Yes, sir. I'm sorry. The  
19 question was are there any substantive changes, and the  
20 answer is no.

21 Q Mr. Museler, am I correct that in the Torrey  
22 Pines program physical inspection is divided into a  
23 number of tasks?

24 A (WITNESS MUSELER) Yes, sir, that is correct.

25 Q Am I also correct that Task A is described as

1 the construction control program?

2 A (WITNESS MUSELER) Yes, sir.

3 Q And what is the objective of that task?

4 (Pause.)

5 Q Mr. Museler, let me withdraw that question for  
6 a moment to get context. There are additional tasks  
7 which constitute the entire program. Can you briefly  
8 describe what those additional tasks are in the Torrey  
9 Pines program? We talked about, just briefly, Task A.  
10 What are the remaining tasks?

11 A (WITNESS MUSELER) The Torrey Pines effort  
12 involved first an examination of how the project and  
13 construction and quality assurance collectively work or  
14 do business in order to properly implement the design  
15 that is produced by the engineers.

16 Once understanding that process, the  
17 additional tasks were detailed checks of the  
18 implementation of those programs, including physical  
19 walkdowns of the plants or the piping and electrical  
20 systems to verify that the plant was in fact constructed  
21 in accordance with the design documents. It also  
22 included a reinspection of a number of attributes or a  
23 number of discipline details of the plant itself.

24 For example, they reinspected welds. They  
25 retested concrete in the primary containment, and they

1 witnessed the major structural acceptance tests, proof  
2 tests of the containment. They also performed a  
3 documentation review of items such as material  
4 certifications for piping and welding materials, and  
5 they also performed a review of preoperational test  
6 procedures and results in order to verify that the  
7 intent and objective of the preoperational tests was in  
8 fact achieved during the preoperational testing  
9 program.

10           So the overall program consisted of an  
11 examination of the methods we used to construct the  
12 plant and to control the design change process on the  
13 site. The way that was done was to physically check the  
14 plant in a large number of cases. For example, they  
15 checked every safety-related large bore hanger in the  
16 plant and checked piping configurations in the field and  
17 electrical configurations in the field. They  
18 reperformed a number of physical tests to verify that  
19 our testing, both our procedures and the actual results,  
20 primarily the results, did in fact meet the design  
21 criteria.

22           And, third, they performed a documentation  
23 review to ensure that our procedures for controlling the  
24 material were proper and they reviewed the  
25 preoperational test program to ensure that final proof



1 tests of the systems did in fact meet the requirements  
2 that they were -- that needed to be met.

3 Q Thank you for that overview, Mr. Museler.

4 Going back to the initial part of your answer  
5 where I believe you were talking about the construction  
6 control program, you indicated that the first part of  
7 the Torrey Pines effort was to look at the process which  
8 had been utilized at Shoreham.

9 Now would it be fair to say that the objective  
10 of this initial task was to identify the construction  
11 quality assurance controls which were applied to  
12 Shoreham and to review those controls in terms of the  
13 program itself for adequacy, to look at the manuals, the  
14 procedures -- that sort of thing -- that were in effect  
15 during the construction period?

16 (Witnesses conferring.)

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1           A       (WITNESS MUSELER) That is generally correct,  
2 Mr. Lanpher. Task A required Torrey Pines to review the  
3 various programs for construction control, and that  
4 included the applicable quality assurance manuals, field  
5 quality control manuals, to evaluate whether the program  
6 was adequate. And also, obviously, to perform a  
7 physical inspection they had to be very familiar with  
8 the detailed process in order to develop their own plan  
9 for the detailed inspection phase of the plant.

10           JUDGE BRENNER: Off the record.

11           (Discussion off the record.)

12           JUDGE BRENNER: Let's go back on. Mr. Lanpher?

13           BY MR. LANPHER (Resuming):

14           Q       In Task A -- and I'm correct in calling this  
15 Task A, correct?

16           A       (WITNESS MUSELER) Task A is the construction  
17 control program. That is what we are speaking about.

18           Q       In this effort, am I correct that the programs  
19 there were looked at by Torrey Pines for the QA  
20 program's manuals, procedures, of LILCO and Stone &  
21 Webster?

22           A       (WITNESS MUSELER) Yes, sir, they looked at the  
23 quality assurance manuals, the quality assurance  
24 procedure manuals and also, the construction procedure  
25 manuals.

1 Q Did they look at, for instance, the manuals or  
2 procedures of Courter and Company in this effort?

3 A (WITNESS MUSELER) Mr. Lanpher, Mr. Kelly and I  
4 can't recall the exact manuals or procedures that they  
5 looked at, but they did look at Courter's program. I  
6 just can't tell you what exact manuals and procedures  
7 they looked at.

8 (Counsel for Suffolk County conferring.)

9 Q Mr. Museler, as I understand it, Task A was to  
10 look at the program really as written. Am I correct  
11 that Task B looked at selected aspects of that program  
12 to see whether the QA program as written was, in fact,  
13 implemented?

14 (Panel of witnesses conferring.)

15 A (WITNESS MUSELER) Mr. Lanpher, Task B really  
16 constituted the preparation by Torrey Pines of their  
17 detailed verification plan. In other words, the  
18 following tasks, C, D and E, evolved as a result of the  
19 development of what it was they should look at in Task  
20 B. In other words, Task B really constituted, -- for  
21 instance, in order to verify a material certification  
22 documentation part of the program, Task B would look at  
23 what kinds of documentation are developed; what does the  
24 program require in terms of documentation, documentation  
25 packages.

1           And it would develop a plan for that  
2 particular area which, for example, would have said for  
3 material certification for ASME piping, take so many  
4 hundred of these documentation packages and review them  
5 for this, this and this, with a checklist type of  
6 approach. So Task B was the development of the overall  
7 detailed audit plan, if you want to call it an audit.

8           Q     In your earlier answer, Mr. Museler, you  
9 indicated that part of the physical inspection effort  
10 involved walkdowns. Now, that's Task C; correct?

11          A     (WITNESS MUSELER) That is correct, sir.

12          Q     Now, am I correct also that the objective of  
13 this task was to see if the physical installation and  
14 the related construction portions of safety systems  
15 conformed to the design documents and design  
16 requirements?

17          A     (WITNESS MUSELER) Task C was the inspection  
18 and documentation phase of the program. In that  
19 respect, it was intended and did document the situation  
20 of the plant relative to the design documents. Tasks C,  
21 D and E, in fact, are data-gathering phases of the  
22 Torrey Pines effort. The evaluation of that data is  
23 done in the later tasks, mostly Task F.

24          Q     The purpose of Task C was to determine if  
25 there were discrepancies between design -- the

1 requirements of the design documents and the plant as  
2 physically installed and constructed?

3       A       (WITNESS MUSELER) Not really, Mr. Lanpher.  
4 The objective of the overall program was, as you stated,  
5 to determine whether the plant was constructed in  
6 accordance with the design documents. Task C utilized  
7 the design documents and required the inspectors to  
8 document what they noted in the plan as the actual  
9 condition in the plant vis a vis what the design  
10 documents called for.

11               It has to be realized that the inspection, in  
12 some cases, was taking place during the in-process  
13 construction of a number of components that were looked  
14 at. So the inspectors were asked to go out and document  
15 what they saw in the plant, if it was different than  
16 what the design documents called for independent of  
17 where that component stood in the construction phase.

18               So that they would note, for example, many  
19 items on a piping system or a pipe support that may not  
20 have been in accordance with the design documents  
21 because the pipe support was finished yet. If the bolts  
22 weren't there, they were not there because we hadn't  
23 finished it and inspected it and signed it off.

24               So that is what I mean by a data-gathering  
25 phase. They were instructed that anything you see that

1 is different than the drawing, to record that. And that  
2 forms the data base for Torrey Pines to do the  
3 evaluation of that data against the overall program  
4 requirements that they had set up for themselves.

5 Q In other words, Task C wasn't to draw  
6 judgments whether this was a deficiency or not; it was  
7 just to record whether there was a difference, if the  
8 as-built plant conformed to what the inspector or  
9 auditor thought the design documents required?

10 A (WITNESS MUSELER) That is generally correct,  
11 sir.

12 Q Now, when you use the term -- and I just used  
13 the term -- "design documents" did the Torrey Pines  
14 effort determine whether the design documents themselves  
15 were correct, or did they assume that the design  
16 documents were correct?

17 A (WITNESS MUSELER) If you mean did they  
18 re-engineer the designs shown on those drawings, the  
19 answer is no, they did not. They did not see whether a  
20 certain pipe support was designed properly. They took  
21 the design document as the base document. They did  
22 check to see that they had the proper design documents,  
23 the latest revisions in most cases, and items of that  
24 type so that they would not waste their time looking at  
25 an outdated revision.

1           In some cases, we did have to provide some  
2 additional revisions later, since it was a realtime  
3 process that was going on in the plant. But they  
4 verified that they had the correct documents, but they  
5 did not perform an engineering review on the adequacy of  
6 those documents.

7           Q     Now, Mr. Museler, am I correct that the  
8 walkdowns fell into three basic categories. Namely,  
9 walkdowns of entire systems, more detailed walkdowns of  
10 specific components, and walkdowns of the large bore  
11 pipe supports?

12           MR. ELLIS: Are you referring to any specific  
13 page, Mr. Lanpher, that might be helpful?

14           MR. LANPHER: I'm referring to my notes. I  
15 think it is in several places.

16           JUDGE BRENNER: Well, let's see if the witness  
17 can answer, since you didn't have a particular location  
18 in front of you.

19           WITNESS MUSELER: I will just need a moment,  
20 Judge Brenner.

21           (Pause.)

22           BY MR. LANPHER (Resuming):

23           Q     Mr. Museler, if you look at Tab 4 of the  
24 August 20 status report, pages 9 and 10, they may help  
25 you answer, also.

1 (Pause.)

2 A (WITNESS MUSELER) Mr. Lanpher, the first  
3 attribute you mentioned, the walkdown of the entire  
4 system, is correct. They walk down the systems  
5 utilizing the higher level design documents, flow  
6 diagrams, et cetera, to insure that all components that  
7 are required for the system were, number one, installed,  
8 and number two, installed in the proper logic sequence  
9 shown on those design documents.

10 Part B of that task involved picking  
11 components from each of those systems to insure that all  
12 the systems reviewed had one mechanical, at least one  
13 mechanical component, at least one electrical component,  
14 and these components were chosen by Torrey Pines  
15 utilizing their judgment as to the various types of  
16 components to insure that through the entire audit they  
17 got a coverage of a range of types of components.

18 They also used their judgment to insure the  
19 various degrees of construction complexity were covered  
20 by their selections. In other words, they wouldn't pick  
21 all of one type of valve; all of one manufacturer's  
22 motor-operated valves, for instance, in all systems,  
23 although they may well have looked at one of those  
24 valves in each system. They would insure that they  
25 looked at a range of those types of components. For



1 example, in addition to an MOV they would also look at a  
2 safety valve or pressure-regulating valve, just to name  
3 one type.

4           The same in the electrical area; they would  
5 not pick a relay in all systems. They might pick a  
6 relay or a skirt cabinet and they might also pick a  
7 display panel or an electrical item of that type. So  
8 that you didn't just pick one item which could have all  
9 been from the same manufacturer and all the exact same  
10 type throughout the systems.

11           But they did choose one of those components;  
12 one electrical, one mechanical, one structural, from  
13 each of the systems reviewed in order to provide that  
14 kind of coverage.

15           The large bore pipe supports, the decision was  
16 made to review all of the large bore pipe supports.  
17 That judgment was made, -- frankly, it was made  
18 partially on our recommendation because we thought it  
19 was something that was possible to do. And that would,  
20 in the time available and with the configuration of the  
21 plant at the time, we thought that that would add an  
22 added dimension of assurance in that in this particular  
23 case we would look at every one of that type of  
24 safety-related component in order to, at least in that  
25 case, avoid any sampling type of discussions. And to

1 show that as being representative of the entire plant,  
2 that when the entire population of an item is looked at  
3 that it indicates that the construction and design  
4 control process for that component is, in fact, adequate.

5 (Counsel for Suffolk County conferring.)

6 Q Mr. Museler, in your discussion of the systems  
7 walkdown, you used the term higher levels; I think in  
8 connection with the flow diagrams you used "higher level  
9 diagrams" to see if components were installed and to  
10 make sure that the sequence of the components and other  
11 items matched up with these documents. Would it be fair  
12 to say that the specific component review was

13 significantly more detailed than the system walkdowns?

14 A (WITNESS MUSELER) I wouldn't really say that,  
15 Mr. Lanpher, because the purposes of the two reviews  
16 were different. In order to satisfy the objectives of  
17 the overall walkdown, one would not use any other  
18 diagrams but the ones Torrey Pines used in order to draw  
19 the conclusions they wanted to draw in terms of overall  
20 system configuration.

21 To verify detailed piping configuration, for  
22 example, or detailed electrical configuration which was  
23 also done, one would use the design documents that the  
24 plant is built from for those items. For example, we  
25 have spoken before many times of isometric drawings

1 which are the piping drawings that are actually used in  
2 the field to install the piping systems. So when one  
3 wants to verify that the detailed piping configuration,  
4 in terms of dimensions of pipe, pipe diameters, hanger  
5 locations, the items that are required to insure that  
6 the design calculations, the stress analyses and the  
7 like were done to the actual as-built configuration of  
8 the plant, one would have to use those drawings; the  
9 detailed isometrics.

10           But to perform the overall system  
11 configuration review or walkdown, one does not need  
12 those diagrams.

13           Q     Mr. Museler, I understand that the purposes of  
14 these two walkdowns, the system level versus component  
15 level, were somewhat different as you have described.  
16 My question was whether you would agree that the  
17 component level walkdowns were more detailed.

18           A     (WITNESS MUSELER) I think that is generally a  
19 correct statement, Mr. Lanpher. The overall walkdown  
20 would insure that the equipment was installed in the  
21 proper logic sequence in the plant. If we were looking  
22 at a pump, for example, or a motor, the detailed look at  
23 that component would look at it and insure that it was  
24 not only located at the right place in the system, but  
25 that it was installed properly, that the physical

1 installation of that particular component met all of the  
2 either manufacturer or Stone & Webster or site  
3 installation requirements, whatever they might have been.

4 Q Mr. Museler, Task D, the walkdowns for Task C  
5 under the Torrey Pines program plan, Task D was the  
6 performance of retesting, or observation of tests;  
7 correct? Namely, the weld reinspection, the containment  
8 concrete tests and the observation of the containment  
9 acceptance tests. Isn't that correct?

10 (Pause.)

11 A (WITNESS MUSELER) Mr. Lanpher, the Task D  
12 involved three aspects of inspection of the plant. Task  
13 D-1 was intended to reperform or to perform again tests  
14 that had already been performed by construction and  
15 quality assurance organizations on the site. And the  
16 item that was chosen for that particular task was pipe  
17 welds, to choose a representative grouping of pipe  
18 welds. And due to them, performed the exact same test  
19 that was performed by us, the objective being first to  
20 make sure that the welds were adequate; secondly, it  
21 served as a check of our testing methods. In other  
22 words, were our testing methods implemented properly,  
23 because if Torrey Pines were to perform the same test we  
24 performed and got a different result, that would speak  
25 both to the adequacy of the component being inspected,

1 and also to the adequacy of the testing program.

2           In fact, it showed that that particular test  
3 verified that both of those were true. And the reason  
4 I'm trying to draw the distinction between the three  
5 Task D subtasks is that they looked, they all looked at  
6 different aspects of the program but they didn't all  
7 reperform, they didn't all just redo the same tests that  
8 were done.

9           For example, subtask D-2 which addressed the  
10 primary containment concrete strength, consisted of  
11 testing the containment concrete strength in a different  
12 manner than had been tested for the inspections of  
13 record during the construction phase of the project. By  
14 that I mean they used a technique which is known as a  
15 Windsor probe technique in order to determine the  
16 compressive strength of the concrete in every lift,  
17 meaning every specific poured section of the containment.

18           Now, we also checked -- excuse me, we also  
19 checked every one of those lists during the construction  
20 phase utilizing a sample from that pour of concrete.  
21 But that sample was done by taking the concrete and  
22 taking a test cylinder and then using the standardized  
23 techniques to test concrete compressive strength at  
24 various points in the curing process. Those tests had  
25 all shown that the concrete strength was well in excess

1 of specification requirements.

2           So this was a re-check of the primary  
3 containment concrete compressive strength, but it was  
4 done utilizing a different technique. And the results  
5 show that this technique, as well as the original  
6 technique, indicated that the compressive strength was  
7 more than one and a half times the design requirements;  
8 about 160 percent, roughly. So Task D-2 was a re-check  
9 of a particular attribute, but it was a check using a  
10 different technique.

11           Task D-3 was included because this particular  
12 test is a once-in-a-lifetime test of the primary  
13 containment, and it amounted to an examination of our  
14 test procedures and test requirements, and then a  
15 witnessing of the actual test that we performed. So  
16 that served both to validate that what we said the test  
17 results were were, in fact, accurate, and also, as a  
18 validation of the test procedure that was employed.

19           So there were three different focuses of those  
20 three physical inspection attributes.

21           Q     Mr. Museler, the final data-gathering task, I  
22 guess is the best way to describe it, is Task E, and I  
23 think you described that as the construction document  
24 review. The first part of that test, was it not that  
25 Torrey Pines would verify the piping and weld-filler

1 material certifications. Is that correct? Or sample  
2 them?

3       A       (WITNESS MUSELER) The program was to sample a  
4 rather large number of those material certifications and  
5 indicate whether or not the program had, in fact,  
6 provided the adequate documentation required. The  
7 population was expanded as a result of some of the  
8 details noted in that review. It was expanded by the  
9 Lighting Company to insure that where a few items were  
10 noticed and were later found to be just a matter of  
11 gathering the right documentation, the sample was  
12 expanded to the entire population of the type of items  
13 that were found during that review.

14               But it was basically a sampling operation on  
15 Torrey Pines' part. Where a finding was noted, we  
16 expanded the population to assure ourselves and Torrey  
17 Pines that it was an isolated incident. Torrey Pines  
18 didn't require that as a result of this review.

19       Q       Now, the other aspect of Task E was to review  
20 certain of the pre-operational tests that had been  
21 performed by LILCO personnel; correct?

22               (Pause.)

23       A       (WITNESS MUSELER) Yes, sir. The review  
24 incorporated both a look at -- well, the review was a  
25 comparison of the procedural requirements for the

1 pre-operational test with the actual documented results  
2 that the start-up group had amassed as a result of their  
3 testing. And it focused on both the administrative  
4 requirements of the procedures as well as the technical  
5 requirements; proper flow rates, proper currents, proper  
6 voltages. But it also looked at whether or not the  
7 administrative requirements of those procedures were  
8 being adhered to.

9 MR. LANPHER: Judge Brenner, this would be a  
10 convenient time for me to take a break.

11 JUDGE BRENNER: Okay, thank you. Let's break  
12 until 11:15, then, and we will come back for one more  
13 hour before the lunch break.

14 (A short recess was taken.)

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1 JUDGE BRENNER: We will start on the record  
2 with your first question, Mr. Lanpher.

3 BY MR. LANPHER (Resuming):

4 Q Mr. Museler, before the break you described  
5 Tasks A through E as the data-gathering tasks. Now am I  
6 correct that when differences between the constructed  
7 plant and design requirements are identified during  
8 Tasks A through E, the differences then are documented  
9 in what is called a discrepancy report?

10 A (WITNESS MUSELER) That is correct, sir. It's  
11 essentially a transfer of information from the design  
12 documents that the inspectors use in the field to a form  
13 that allows Torrey Pines to keep track of these  
14 thousands and thousands of inspections that are made.

15 Q So between each difference which is identified  
16 during one of the previous tasks, a discrepancy report  
17 form will be filled out by Torrey Pines to note that  
18 discrepancy or apparent discrepancy for further process;  
19 is that correct?

20 A (WITNESS MUSELER) That is my understanding,  
21 Mr. Lanpher. We haven't seen those reports ourselves,  
22 or at least I certainly haven't, and I believe that is  
23 the way Torrey Pines proceeded in this area.

24 Q Now, once discrepancy reports are prepared,  
25 Mr. Museler, am I correct that then engineering

1 personnel evaluate each report for possible impact on  
2 plant safety?

3       A       (WITNESS MUSELER) That is generally correct,  
4 Mr. Lanpher. The process of subtask F also involves,  
5 where needed, the gathering of additional information or  
6 additional probing into a specific problem by Torrey  
7 Pines, so they might well require additional information  
8 from us in order to be able to make a judgment. But  
9 basically, the engineering personnel do evaluate them  
10 for potential impact on the plant.

11       Q       Is this Torrey Pines engineering personnel or  
12 LILCO or Stone & Webster or whom?

13       A       (WITNESS MUSELER) Strictly Torrey Pines, sir.

14       Q       Am I correct that if that review or that  
15 evaluation determines that the difference documented in  
16 a discrepancy report has a potential impact on the  
17 safety of the plant, then a potential finding report is  
18 prepared and filed?

19       A       (WITNESS MUSELER) That is generally correct,  
20 sir. As you can tell by reference to the figure that's  
21 part of the figure we're discussing, it is a rather  
22 complex process where various levels within the Torrey  
23 Pines project and engineering organizations get involved  
24 in that. But your statement is generally correct that  
25 the result of that evaluation through the potential

1 finding phase involves an evaluation as to whether the  
2 observation could have or might have an effect on the  
3 plant.

4           As I said, the Torrey Pines, during this  
5 phase, typically not in all cases; only when they feel  
6 it's necessary, would require additional information  
7 from us. Sr clarification, so that their evaluation  
8 would be based upon all of the facts and they would  
9 request that of the people whom we assigned to service  
10 the Torrey Pines needs.

11           Our involvement essentially consisted of  
12 people to give the Torrey Pines the documents they  
13 needed and provide clarification of items if they  
14 reached a potential finding stage when requested by  
15 Torrey Pines.

16           Q    Am I correct that if this evaluation of the  
17 discrepancy report determines that the difference which  
18 is documented in that report does not have a potential  
19 impact upon safety, then there's no further processing  
20 through the Task F procedure into, for instance, a  
21 potential finding report?

22                   (Panel of witnesses conferring.)

23           A    (WITNESS MUSELER) Mr. Lanpher, as you know,  
24 there are three levels of documents described in this  
25 section of the Torrey Pines effort. We are speaking now

1 I think of the potential findings reports. And if a  
2 potential finding report is determined to be invalid at  
3 that review stage by the Torrey Pines personnel who are  
4 making the review at that stage, it then is not a  
5 potential finding. That decision is documented and is  
6 in Torrey Pines's records. If that level of review  
7 within Torrey Pines determines that it is a potential  
8 finding, it then proceeds to the next level of review  
9 for evaluation as to whether or not it is -- I will use  
10 the word -- a real finding.

11 Q I think you got a little ahead of me, Mr.  
12 Museler, and maybe my question wasn't clear. I was  
13 still back on the step between a discrepancy report and  
14 a potential finding. And if a discrepancy report is  
15 evaluated and it's determined that the discrepancy, even  
16 if it perhaps is a real discrepancy documented in the  
17 plant, -- if it is determined, however, that there is no  
18 safety impact potential, then that discrepancy report  
19 will not result in a potential finding report. Am I  
20 correct?

21 A (WITNESS MUSELER) No, sir, that is not  
22 necessarily so. The discrepancy reports, if they are of  
23 a nature where what the inspector looked at is a  
24 situation where the work just hadn't been completed yet  
25 but they have objective evidence that the work is on

1 schedule for completion, that would, I believe in all  
2 cases, not become a potential finding report.

3           Again, I'm not familiar with all of the  
4 potential finding reports; I'm only familiar with a few  
5 of them that I happen to know about. There is a wide  
6 range of items covered in potential finding reports, and  
7 a number of those would become -- just from the  
8 knowledge I believe I have or the understanding I have  
9 of how the process works, some of those would, in fact,  
10 become potential findings.

11           They would not become findings if they had no  
12 safety significance, but they could well become  
13 potential findings that even if it had no safety  
14 significance it would still be recorded. And that is a  
15 judgment that Torrey Pines makes in terms of their  
16 understanding of the situation at the time they do their  
17 review.

18           Q     Mr. Museler, if I could turn your attention to  
19 page 33 of Tab 1 of Suffolk County Exhibit 69 and the  
20 third sentence of the paragraph under Subtask reads, "If  
21 there is a potential for impact on the safety of a  
22 plant, a potential finding report will be prepared and  
23 filed for the discrepancy." I understood that sentence  
24 to mean that if it were determined that there were no  
25 potential for impact on the safety, a potential finding

1 report would not be prepared. Is that the way you  
2 understand that?

3       A       (WITNESS MUSELER) Mr. Lanpher, that is what  
4 this broad program plan says in other places in the  
5 program plan. And I can't recall where they are. They  
6 also talk about documenting items where they've noticed  
7 a number of occurrences of a situation. I can't recall  
8 whether it says specifically whether safety related or  
9 not, but I believe there are words that imply that.

10               This is a matter of the judgment that Torrey  
11 Pines applied when doing this review. Generally, these  
12 words are correct. Generally, that is the process. And  
13 again, I don't know the detail on all of the potential  
14 finding reports. I do know that in a few cases, Torrey  
15 Pines felt that things were, I believe the proper word  
16 would be important, even though they wouldn't have an  
17 adverse effect on the safety of the plant. And I can't  
18 give you an example of that because I am not that  
19 familiar with the potential finding reports. That is  
20 just from my knowledge and discussions with a few of the  
21 people that were involved in this process.

22               So generally, the characterization that is  
23 contained here is correct. I just don't want to give  
24 the impression that if they saw something that they  
25 believed was a discrepancy and they evaluated it, that

1 it didn't have any effect on the safety of the plant.

2 That is a difficult evaluation to make, obviously.

3 Q I understand that involves a great deal of  
4 judgment.

5 A (WITNESS MUSELER) Right. And that is why I'm  
6 just trying to make the point that Torrey Pines, I  
7 believe, interpreted those words rather literally in  
8 terms of generating potential finding reports.

9 Q Fine, I understand your point. Now assuming  
10 that Torrey Pines, in exercising that judgment, decides  
11 to issue a potential finding report, the next step, am I  
12 correct, is that the Torrey Pines leader then reviews  
13 that report to insure that it meets Torrey Pines' own  
14 criteria for issuing a potential finding report?

15 (Panel of witnesses conferring.)

16 A (WITNESS MUSELER) Yes, sir, that is correct.

17 Q Now assuming that the task later on meets the  
18 Torrey Pines criteria, then the potential finding report  
19 goes to the original design organization, perhaps LILCO,  
20 Stone & Webster, General Electric, whatever, for their  
21 review. Correct?

22 A (WITNESS MUSELER) Yes, sir, the original  
23 design organization receives the potential finding  
24 report in order to provide any additional information  
25 needed by Torrey Pines for their further evaluation of

1 the potential finding report as a finding or an  
2 observation.

3 Q At page 33, the next to the last paragraph,  
4 the last sentence, it says, also that a copy of the  
5 potential finding or report is also sent to the LILCO  
6 executive. Do you know what LILCO executive? Well, is  
7 that correct, that LILCO receives copies of all  
8 potential finding reports, whether or not it is the  
9 original design organization?

10 A (WITNESS MUSELER) Sir, we receive the initial  
11 copy of the potential finding. The potential finding  
12 report package consists of a number of items. It  
13 consists of the Torrey Pines initial potential finding;  
14 it consists, if we respond and I believe we probably  
15 responded on most of them, of LILCO's response; it  
16 consists of Torrey Pines' evaluation of the situation,  
17 right on through the entire process. And any backup  
18 material and internal -- not necessarily internal, but  
19 any backup material or additional information that  
20 Torrey Pines developed in coming to their final  
21 conclusion on the potential finding.

22 The LILCO executive that is mentioned here is  
23 Mr. Navarro, who was designated as the contact point  
24 with Torrey Pines for this effort.

25 Q Now, as I understand the process, after the



1 original design organization reviews the potential  
2 finding report, then they give feedback to Torrey Pines  
3 so that Torrey Pines can, in essence, re-review its  
4 initial decision to issue such a report. Is that  
5 correct?

6 (Panel of witnesses conferring.)

7 A (WITNESS MUSELER) Sir, that information is  
8 provided to Torrey Pines and returned to the originator  
9 to evaluate the additional information provided. And as  
10 it says, the initiator may modify it or just pass it on  
11 to the task leader with his comments, based on the  
12 additional information provided.

13 Q Now, the potential finding report, if it is  
14 still considered to be valid by Torrey Pines at this  
15 point in time, would be sent to the Findings Review  
16 Committee; correct?

17 A (WITNESS MUSELER) That is correct, sir.

18 Q And in addition to the potential finding  
19 report, the Findings Review Committee is also provided  
20 with an impact assessment defining the potential of the  
21 item for an impact on the safety of the plant; correct?

22 A (WITNESS MUSELER) Yes, sir, an impact  
23 assessment prepared by Torrey Pines in their internal  
24 process.

25 Q Am I correct that the Findings Review

1 Committee then determines whether the potential finding  
2 report constitutes a finding for an observation, or  
3 whether it's invalid?

4 (Pause.)

5 A (WITNESS MUSELER) Sir, the Findings Review  
6 Committee, in order to determine whether a potential  
7 finding report is invalid, the Findings Review Committee  
8 and the lower level committee, which we discussed  
9 earlier, the initiator, the task leader and the original  
10 design organization, both of those groups have to concur  
11 that a potential finding is inaccurate or is invalid  
12 before it be classified as invalid. But the  
13 classification by the Findings Review Committee is into  
14 one of the two categories that I mentioned.

15 Q Well, in fact, isn't it three categories;  
16 either finding an observation, or the Findings Review  
17 Committee itself could make a finding that the perceived  
18 discrepancy is invalid? Can it not?

19 A (WITNESS MUSELER) They can make that finding,  
20 sir. But as I mentioned, the initial review committee,  
21 the majority of the initial review committee would also  
22 have to agree with that before it would designate it  
23 invalid.

24 Q All right. Now am I correct that a finding  
25 under the Torrey Pines program is defined as a deviation

1 that could result in a substantial safety hazard, or if  
2 there's an indication of a repetitive or a generic  
3 deviation that could create a substantial safety  
4 hazard? And I'm reading from page 34 of Tab 1, next to  
5 the last paragraph. Is that your understanding of the  
6 definition?

7 (Pause.)

8 A (WITNESS MUSELER) My understanding of the  
9 definition of a finding, sir, is generally in  
10 concurrence with that paragraph. I believe that, just  
11 as we discussed earlier in the application of those  
12 words to the actual classifications, that Torrey Pines  
13 utilized considerable leeway on the conservative side in  
14 terms of designating items as findings.

15 The general definition given here is correct.  
16 The implementation of that process -- and again, I  
17 haven't seen all of the findings; we won't see all of  
18 the findings until the final report is out. As I said,  
19 I believe that Torrey Pines interpreted those words as  
20 they saw fit in order to perform what they consider to  
21 be an adequate review and documentation of their  
22 observations.

23 Q But your answer, as I understand it, Mr.  
24 Museler, is that a finding of a deviation could result  
25 in a substantial safety hazard, or if there is an

1 indication that it is repetitive that could create a  
2 substantial safety hazard, that would be a finding?

3       A       (WITNESS MUSELER) No, sir. My understanding  
4 of the designation process is not that, although as I  
5 said, I agree that those are the general guidelines  
6 Torrey Pines utilizes to evaluate the potential  
7 findings. As I said, my understanding is that they  
8 interpret them rather broadly, and that a finding -- in  
9 other words, the clear, clinical definition of a finding  
10 as something that definitely represents a safety hazard  
11 I don't believe can be applied. The general definition  
12 in terms of relating or affecting the operation of the  
13 plant or the safety system is correct. But as I said,  
14 that clinical definition I don't believe applies in this  
15 case.

16               I am afraid I am obviously not intimately  
17 involved in that review process because that is done in  
18 San Diego by the Torrey Pines Potential Finding  
19 Committee that does this. So I am really testifying  
20 just on some conversations with a limited number of  
21 people that have been involved in this process.

22       Q       That was going to be my next question, Mr.  
23 Museler. What was the basis for your belief that Torrey  
24 Pines interprets the words that you've quoted very  
25 broadly? Let me be more specific. Did you talk to the

1 Torrey Pines people on the Design Review Committee to  
2 get that impression?

3       A       (WITNESS MUSELER) No, sir, I have not spoken  
4 to any of those people. I will say that my impression  
5 of how that process works comes from a discussion with  
6 the Stone & Webster person who was assigned as liaison  
7 with the Torrey Pines personnel. He is a gentleman that  
8 provides the information and he provides the base  
9 information. And he also coordinates any additional  
10 information provided to Torrey Pines through the  
11 potential finding process.

12           I am familiar with a few of the potential  
13 findings through that process, and my understanding of  
14 what those potential findings are, and findings in a few  
15 cases indicates to me that the definition is being  
16 properly but broadly interpreted. Again, I have not  
17 seen all of the findings. To the extent that I know  
18 about our responses to the potential finding reports,  
19 and that is limited to a relatively small number that  
20 involve the Unico Construction organization, those  
21 potential findings indicate that Torrey Pines is  
22 interpreting those words conservatively, which I think  
23 is proper for the type of independent review they were  
24 commissioned to do.

25           (Counsel for Suffolk County conferring.)

1           Q       Now, Mr. Museler, if a potential finding is  
2 determined by the Finding Review Committee to be valid  
3 but does not meet the criteria for a finding; that is,  
4 is not, would not create, in the judgment of the review  
5 committee, or perhaps cause a substantial safety  
6 hazard. In those instances, the deviation or  
7 discrepancy would be classified as an observation;  
8 correct?

9           A       (WITNESS MUSELER) That is correct, sir.

10          Q       Now finally, for all findings which are  
11 issued, then LILCO prepares a corrective action plan to  
12 be returned to the Finding Review Committee for its  
13 review; correct?

14          A       (WITNESS MUSELER) Sir, I believe we do provide  
15 additional information at that phase. I know there are  
16 or were at least a small number of findings that we  
17 disagree with as findings, but we are required to  
18 provide Torrey Pines with a corrective action plan which  
19 will have to be accepted by them, and the final report  
20 would so state. Or we would have to somehow convince  
21 them that a corrective action plan was not required,  
22 even though the finding was valid.

23                   I am not sure whether or not that process ever  
24 resulted in a final determination to just provide  
25 additional information. If it were, it would have been

1 in only one or two instances. But we would then provide  
2 a corrective action plan to satisfy Torrey Pines that  
3 the finding was adequately addressed, and that the  
4 subsequent actions would insure that there was no  
5 potential for degraded plant operation as a result.

6 Q Mr. Museler, turning your attention to the  
7 August 20 status report, which is Tab 5 to Suffolk  
8 County Exhibit 69 for identification, and specifically,  
9 page 27, am I correct that as of the time this status  
10 report was prepared on or before August 20, I assume,  
11 Torrey Pines had identified 52 potential findings?

12 A (WITNESS MUSELER) I have no reason to doubt  
13 the accuracy of this report, sir.

14 Q This report also indicates that out of those  
15 52 potential findings, it had determined that 11 were  
16 invalid; two were valid and were classified as  
17 observations; three were valid and classified as  
18 findings, and the remainder were still in the review  
19 process such that a determination as to validity or  
20 classification had not been made. And I can review  
21 those numbers again for you, Mr. Museler. Eleven  
22 invalid, two observations, three findings, and 36 still  
23 in the review process.

24 A (WITNESS MUSELER) Again, Mr. Lanpher, I have  
25 no reason to disagree with these findings. The only one

1 I can comment on from specific knowledge is the one we  
2 discussed very briefly before, regarding the 6000-pound  
3 pipe bosses, and that one I do know is accurate as  
4 described in this report. That is the one that I had  
5 mentioned, and I believe I may have misspoke. That is  
6 the one that I had mentioned that Torrey Pines had  
7 identified initially one discrepancy. And in their  
8 additional review, had identified another two  
9 discrepancies of the same kind; proper paper not being  
10 in the file.

11 I also mentioned that we expanded that to look  
12 at the entire population of those 6000-pound pipe  
13 bosses, and I guess the ambiguity I would like to clear  
14 up is that the expansion to look at all of that type of  
15 6000-pound pipe boss was something that was not part of  
16 this Torrey Pines review. It was something that LILCO  
17 construction and quality assurance undertook to look at  
18 all potential 6000-pound pipe bosses.

19 The paper on the three that Torrey Pines found  
20 was found and properly filed, and there were no  
21 additional ones. That is the only one I have any  
22 personal knowledge of, sir.

23 Q Mr. Museler, for my sake at least, what is a  
24 pipe boss?

25 A (WITNESS MUSELER) It is an attachment fitting



1 which is welded onto a large bore pipe in order to  
2 provide a junction for a small bore pipe. It is a  
3 little coupling with a female socket so that the  
4 coupling is placed on the large bore pipe, welded onto  
5 the large bore pipe, a hole is drilled in the large bore  
6 pipe so you have communication between the two, and then  
7 the socket on that pipe boss or coupling is used to  
8 insert the small bore pipe, and then you weld that. So  
9 it is just a connection fitting between a large bore and  
10 a small bore pipe.

11 (Panel of witnesses conferring.)

12 A (WITNESS MUSELER) I'm sorry, Mr. Lanpher. Mr.  
13 Eifert points out that 6000 pounds refers to the  
14 pressure capacity of the fitting. The fittings are  
15 typically about this big around and that long  
16 (indicating). So a 6000-pound pipe boss --

17 Q You're going to have to give the dimensions.

18 A (WITNESS MUSELER) About anywhere from an inch  
19 and a half to three inches in outside diameter, and  
20 anywhere from approximately two to approximately four  
21 inches in length, weighing perhaps a pound and a half to  
22 five pounds. The 6000 pounds refers to the pressure,  
23 the internal pressure rating of the pipe boss and not to  
24 its weight.

25 Q So in this instance, the specifications had

1 called for the pipe boss to have a 6000-pound  
2 capability, pressure capability, but what had been  
3 installed was one with half that capability? Is that  
4 correct?

5       A       (WITNESS MUSELER) No, sir, it's just the  
6 opposite. We had installed, I believe, -- and I haven't  
7 seen this particular finding in a long time, but I  
8 believe that the situation was we had installed a  
9 6000-pound boss. The documentation was for a 3000-pound  
10 boss. The requirement was for a 6000-pound boss, so  
11 that the field installation was proper but the  
12 documentation did not match that 6000-pound rating.  
13 That is my understanding of it, but I don't have -- I  
14 haven't reviewed those pieces of paper in a long time.

15       A       (WITNESS ARRINGTON) That is correct, it was a  
16 6000-pound boss installed in the field. The  
17 documentation that came in with the vendor package  
18 indicated that it was 3000 pounds. We verified in the  
19 field that it was the 6000. So the proper boss was  
20 installed.

21               (Counsel for Suffolk County conferring.)

22       A       (WITNESS MUSELER) And, Mr. Lanpher, those were  
23 three that Torrey Pines identified out of 1600 material  
24 certification documents -- not all on pipe bosses --  
25 that they reviewed that there were three, and they were

1 all of this particular type, the 6000 versus 3000-pound  
2 type.

3           We then went and looked at all 6000-pound  
4 bosses in the plant, of which there were 80, or 70 to 80  
5 is the number that I recall, and checked all of those,  
6 and the documentation on the remaining population was  
7 satisfactory.

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1 Q Gentlemen, what you are telling me, or telling  
2 us, in fact the proper size boss was installed. The  
3 as-built plant was correct. Do you have any idea why  
4 the Findings Review Committee classified this as a  
5 finding, that is, as something that could create or  
6 result in a substantial safety hazard?

7 A (WITNESS MUSELER) Sir, I think there are two  
8 things operating here. Number one, this is an example  
9 and again this is one of the few that I happen to be  
10 familiar with -- this is an example of the reason I gave  
11 for why I believe the Findings Review Committee  
12 interprets those words of what a finding means very  
13 liberally, because of this example.

14 However, I don't think their finding was  
15 frivolous. I believe their concern -- and this isn't  
16 documented anywhere -- I am postulating why this would  
17 have been classified as a finding. When the fitting was  
18 in fact adequate, the fact remains that the paper didn't  
19 match the fitting and the situation, while it is  
20 doubtful the situation, if it were found to be the other  
21 way around -- a 3,000-pound coupling installed instead  
22 of a 6,000-pound require coupling -- the documentation  
23 check is just another layer of QA to make sure that the  
24 right equipment is installed in the plant.

25 So while I certainly can't speak for them, my

1 opinion would be that they classified it as a finding  
2 because they noticed that the paper in the case of these  
3 three packages out of the 1,600 did not match and,  
4 therefore, they interpreted the words very  
5 conservatively in terms of what they designated as  
6 findings.

7           JUDGE BRENNER: Excuse me, Mr. Lanpher. I  
8 want to see if I can understand the process a little  
9 better by this example. Mr. Museler, did the Torrey  
10 Pines finding state given this finding LILCO should go  
11 look at all of the other 6,000 pipe bosses in the plant,  
12 or is that a conclusion that LILCO reaches on its own  
13 but with its own consultants after seeing the Torrey  
14 Pines finding?

15           WITNESS MUSELER: No, sir. That was a  
16 decision not required or implied by Torrey Pines. It  
17 was a decision we made because we saw that out of the  
18 whole population they had looked at there were three of  
19 the same type of paper discrepancy, and we determined  
20 that it would certainly make us sleep a little better if  
21 we said well, since there are three that are the same,  
22 if they had all been different, I cannot say for sure,  
23 but we probably would have assumed out of that  
24 population that we were looking at isolated instances,  
25 especially since we were able to find the proper paper.

1           It wasn't that it didn't exist or that it  
2 wasn't traceable. We were able to get the proper paper,  
3 but the fact that there were three and they were all the  
4 same said to us that we will take a look at the entire  
5 population for our own information to see if there was  
6 anything else of this particular type. So it was the  
7 three identical items that made us go and look at the  
8 other 70 or 80 6,000-pound pipe bosses.

9           I suspect that -- I don't know what the  
10 corrective action for this finding is. We may say that  
11 in the corrective action, but it wasn't required by  
12 Torrey Pines.

13           JUDGE BRENNER: Well, the reason I asked was,  
14 or one reason I asked was to consider whether Torrey  
15 Pines felt they should classify it as a finding in order  
16 to give them the right to recommend that further  
17 action. That was just something that wandered through  
18 my mind. I also wanted to know for other reasons, and  
19 you answered the question.

20           Thank you.

21           BY MR. LANPHER: (Resuming)

22           Q   Mr. Museler and Mr. Arrington, you indicated  
23 that in fact the 6,000 rated boss was installed. If you  
24 look at Tab 3, page 28, Tab 3 being the July 16 status  
25 report, the last two sentences in the paragraph at the

1 top of the page, and I will read those into the record.

2 "In the case of the 1-1/2-inch 3,000 number  
3 boss installed on the main steam system, some additional  
4 consideration and analysis is warranted." And it goes  
5 on to say a potential finding has been written.

6 Now is it your testimony -- I mean, I  
7 understood this to mean that in fact a 3,000-pound boss  
8 had been installed. You are telling me that Torrey  
9 Pines made an error here in reporting it as such?

10 A (WITNESS MUSELER) Just give us a moment, Mr.  
11 Lanpher. I think we can clear that up.

12 (Witnesses conferring.)

13 Q That is page 28, Mr. Museler.

14 A (WITNESS MUSELER) I have that.

15 (Witnesses conferring.)

16 A (WITNESS MUSELER) Mr. Lanpher, what you are  
17 seeing here is, I believe, just a juxtaposition of the  
18 3,000-pound/6,000-pound situation. I was looking in  
19 that particular summary report for the equivalent of the  
20 potential finding report which is included in the  
21 next -- it is included in the August summary. And the  
22 reason I was looking for that is, and it doesn't exist  
23 in the third one. It evolved as the process went along,  
24 but you can see that.

25 Q I think it does exist if you look at Table

1 F-1, page 36 -- and I don't want you to misspeak -- is  
2 that what you were looking for?

3       A       (WITNESS MUSELER) Yes, sir. Thank you. And  
4 that Table F-1 in the July report and Table F-1 in the  
5 August report both reflect the same item, and the  
6 quotation is that -- and the words are transposed, but  
7 they both say the same thing.

8               In the July report, it says "Document  
9 indicated 3,000-pound boss installed of a 6,000-pound  
10 boss specified." Now that is correct. What that means  
11 is they looked at the documentation, the material  
12 certification documentation, for that piece of hardware  
13 and the material certification is the document referred  
14 to here, not the installation document. The  
15 installation document is an isometric, which did call  
16 for the proper 6,000-pound fitting.

17              And otherwise I certainly wouldn't have known  
18 why we installed the 6,000-pound boss instead of a  
19 3,000-pound boss. This document is the paper, the  
20 manufacturer's material certification that says for this  
21 piece of hardware here is the 3,000, here is for the  
22 6,000-pound fitting, here is the material  
23 certification. That is a different document than the  
24 installation document.

25              Now that document is the one that said this is



1 a 3,000-pound fitting instead of a 6,000-pound fitting.  
2 So the text in the July report is incorrect, if you want  
3 to say that. It is just a matter of the person who  
4 wrote the report just mixed up the 3,000 and 6,000  
5 pound, but the situation is as described by myself and  
6 Mr. Arrington.

7 Q You and Mr. Arrington obviously have knowledge  
8 about the specific finding, as you indicated earlier.  
9 What is the basis of this knowledge -- that you reviewed  
10 the potential finding package -- or is this based upon  
11 discussions or what?

12 A (WITNESS MUSELER) My knowledge is based upon  
13 discussions with Mr. Arrington and also with the  
14 gentleman who was liaison with Torrey Pines. I believe  
15 I may have seen this potential finding report also. I  
16 can't say for sure.

17 A (WITNESS ARRINGTON) My discussion was with  
18 the document reviewer for Stone and Webster who reviewed  
19 the documentation with the Torrey Pines inspector, also  
20 the same inspector that went out to verify that there  
21 was a 6,000-pound boss in the field. I did not review  
22 the PFR.

23 Q Now, Mr. Museler or Mr. Arrington, there were  
24 two other findings reported in the August status report  
25 and I'm looking at table F-1 of that August report, one

1 concerning HVAC configuration not per drawing and the  
2 other denominated as pump motor inspections.

3 Do you see those two other findings?

4 A (WITNESS MUSELER) I have the HVAC. Could you  
5 give us the number if that is easier?

6 Q It is on the last page of Table F-1, the pump  
7 motor inspection. It is PFR number 48 and deficiency  
8 report number 336.

9 A (WITNESS MUSELER) Yes, sir, we see them.

10 Q My question, Mr. Museler, was whether, given  
11 your earlier statements that there are only a number of  
12 these that you have knowledge about, whether these two  
13 findings happen to be ones that you do have information  
14 about or any member of the panel. I am concentrating on  
15 you and Mr. Arrington.

16 A (WITNESS MUSELER) I have some knowledge of  
17 the potential finding 048-336.

18 Q The pump motor inspections?

19 A (WITNESS MUSELER) Yes, sir, if they are the  
20 ones I am thinking of.

21 Q But you don't have information concerning the  
22 HVAC configuration finding?

23 A (WITNESS MUSELER) No, I don't.

24 Q Does any member of the panel?

25 (No response.)

1           Q     You think you have knowledge about the pump  
2 motor inspections. Is there something you need to  
3 review in order to be sure that you are thinking about  
4 the same item that is mentioned here in Table F-1,  
5 because I don't want you to speculate if you don't have  
6 knowledge.

7           A     (WITNESS MUSELER) In order to be certain,  
8 sir, I would have to check with the liaison individual  
9 who has the most knowledge about these items.

10           I should note, Mr. Lanpher, that what we  
11 are -- what we, LILCO, are waiting for is probably what  
12 a number of other people are waiting for, and that is  
13 the final report so we can review the findings and  
14 potential findings after they have gone completely  
15 through the Torrey Pines process.

16           And at that time certainly most of the people  
17 on this panel are going to review them in depth, but we  
18 have not done so along the way because of the way the  
19 process is structured. The process is structured for us  
20 to provide information and answers to Torrey Pines based  
21 upon their observations, but the final evaluation and  
22 classification of items as findings, potential findings,  
23 observations and the latter is a process that is  
24 conducted in San Diego by Torrey Pines.

25           So if we seem a little vague about this, I

1 believe that is -- what was a conscious decision when  
2 this effort was embarked upon, to allow Torrey Pines to  
3 be the party who made the classification and made the  
4 determinations.

5           JUDGE BRENNER: Excuse me, Mr. Lanpher. Mr.  
6 Museler, when you weren't here yesterday we did get an  
7 estimate from Mr. Early as to when the final report  
8 might be expected and we know that. I am wondering if,  
9 however, following the pattern of the previous four  
10 months whether there was an October 15 report on the  
11 third Friday of the month.

12           WITNESS MUSELER: No, sir. I checked that.  
13 There is not.

14           JUDGE BRENNER: And, in other words, the next  
15 report after the September report that we have will be  
16 the final report?

17           WITNESS MUSELER: That is correct.

18           JUDGE BRENNER: Okay, sir. Thank you.

19           BY MR. LANPHER: (Resuming)

20           Q     Mr. Museler, while you have, I understand from  
21 your previous answer, you -- and I think you were  
22 speaking for LILCO -- have not made an intensive review  
23 of potential finding reports but instead are waiting for  
24 the so-called Torrey Pines process to run its course.  
25 Correct?

1 A (WITNESS MUSELER) That is correct, sir.

2 Q But it is true, is it not, that the potential  
3 finding reports, even where LILCO is not the originating  
4 design organization, are all transmitted to LILCO?

5 A (WITNESS MUSELER) That is correct, sir. They  
6 are all transmitted. The first phase of the potential  
7 findings are transmitted to Mr. Navarro of LILCO.

8 MR. LANPHER: Judge Brenner, I would like to  
9 raise a procedural matter prior to lunch, so maybe the  
10 Board can consider it over lunch, and that is in the  
11 subpoena which was issued as authorized, Item 14 of that  
12 subpoena -- and I have copies of that and let me just  
13 read it -- requested documents describing the results,  
14 interim and/or final, of the audit by Torrey Pines  
15 Technology, referred to at pages 57 to 58 of the LILCO  
16 testimony, including descriptions of the scope of the  
17 audit, methodology, reporting and all internal and other  
18 reports, memoranda and correspondence.

19 As a result of -- at the argument on August 24  
20 on the subpoena we were led to believe that the only  
21 documents responsive to Item 14 of the subpoena in  
22 LILCO's possession were the document which is Tab 1 and  
23 the status reports that existed at that time. It  
24 appears to us that clearly as of the time of that  
25 subpoena the arguments thereon, at least some, and I

1 don't have an exact number, potential finding reports  
2 were in LILCO's possession.

3           Since under the procedure once they were  
4 approved by the task leader and sent to the original  
5 design organization they also in each instance were sent  
6 to LILCO, I guess to the attention of Mr. Navarro.

7           JUDGE BRENNER: Did we discuss Item 14 on the  
8 transcript. I think we did.

9           MR. LANPHER: Yes.

10          JUDGE BRENNER: Do you have the page? Well, I  
11 shouldn't speculate, but I don't think there was a tough  
12 argument on the legal grounds based upon some other  
13 rulings. It was just a matter of identification of what  
14 was involved.

15          All right, so you are giving me transcript  
16 pages 9,375 through 77.

17          MR. LANPHER: Yes, sir.

18          JUDGE BRENNER: Did you talk to the other  
19 counsel about this before just now?

20          MR. LANPHER: Yes, sir.

21          JUDGE BRENNER: I probably cut you off from  
22 your obvious bottom line.

23          MR. LANPHER: Well, I would like a ruling from  
24 the Board that the documents, all of the documents  
25 requested pursuant to the subpoena were not provided and

1 an order directing LILCO to provide those documents so  
2 that we may review them.

3 JUDGE BRENNER: Do you want to respond now or  
4 after lunch?

5 MR. EARLEY: I'm ready to respond now, Judge  
6 Brenner.

7 JUDGE BRENNER: All right.

8 MR. EARLEY: Mr. Lanpher did raise this  
9 question, I guess it was Tuesday afternoon, and I have  
10 had the opportunity to talk to Mr. Christman. It was  
11 his understanding at the time that the only documents  
12 that were in LILCO's possession were the monthly reports  
13 that were provided to the County. It turns out he was  
14 mistaken.

15 In the course of dealing with that subpoena  
16 there were a number of conversations he had with people  
17 at LILCO as well as a number of conversations with  
18 counsel for the County and I think, as you will recall,  
19 there was some negotiations as to what LILCO would  
20 provide in lieu of what was requested because of the  
21 broad scope of the request.

22 We are not really sure why there was the  
23 misunderstanding as to what was available, but Mr.  
24 Christman was mistaken when he made that representation  
25 on the record. In any event, we think it is

1 inappropriate to produce that sort of working document  
2 either then or right now.

3           First of all, the LILCO testimony itself  
4 doesn't state conclusions about the Torrey Pines  
5 inspection. It deals with the scope of the Torrey Pines  
6 inspection and what was involved, and we think that that  
7 is a fair subject for cross examination and the County  
8 was provided with the scoping document that deals with  
9 exactly how the inspection was going to be conducted and  
10 what it would be looking at.

11           LILCO is well aware that the Board and the  
12 County are interested in the results of the Torrey Pines  
13 study. We have committed to provide the results of that  
14 study to the Board and to the County as soon as it is  
15 available. I confirmed again this morning that it will  
16 be available by the middle of November. November 15 I  
17 think is the target date. It may even be in a couple of  
18 days before that.

19           But that is within 2-1/2 weeks or so that that  
20 will be available. As noted in the scoping document,  
21 these potential finding reports will be part of the  
22 final report and I think, as it became clear in the  
23 discussions here today of one particular finding, you  
24 have got to have all of the information to understand  
25 the significance of the particular finding and we just



1 don't think it would be appropriate or add to the  
2 proceeding and, in fact, we don't think any of the  
3 document, the working documents, would be material or  
4 relevant until all of the information was collected, and  
5 that is the process that is going on now to get out the  
6 final report.

7           So we don't think that it is appropriate to  
8 produce the documents and we don't think right now they  
9 are going to add anything to the cross examination,  
10 given the scope of LILCO's direct testimony and given  
11 the fact that these are in-process working documents.

12           As Mr. Museler indicated, the potential  
13 finding reports are not necessarily one report. It is  
14 an initial document and then there is backup material.  
15 I am not sure, and I have inquired into this, exactly  
16 how much of the backup material LILCO even has  
17 available. We do know we have got the actual, the  
18 original potential finding report form, but some of the  
19 material will be with that in some people's files, and  
20 some of it will be available possibly at Stone and  
21 Webster. But the whole file is held by Torrey Pines  
22 right now.

23           JUDGE BRENNER: Well, one handicap I have --  
24 and maybe everyone else has the same handicap -- is not  
25 knowing how thoroughly the final report will give the

1 details of what is involved.

2           MR. EARLEY: Judge, it is my understanding  
3 that these potential finding reports, together with the  
4 material that was generated as a result of the potential  
5 finding reports, or at least a summary of the material  
6 that was generated as a result of the finding report  
7 will all be part of the final report and given the  
8 timing right now of -- I think it would be appropriate  
9 to wait and see what the final report has to say.

10           If the final report raises new issues that the  
11 County feels are significant, it has its right under the  
12 NRC procedural regulations to ask to add a new issue or  
13 to reopen the QA issue, but I don't think it is  
14 appropriate to do that now before we have all had a  
15 chance to see the final report, review it, and determine  
16 whether there is something there that would justify  
17 reopening the record on these particular issues.

18           So at the time the County gets the report,  
19 they can review it. If they think it has something that  
20 merits dealing with, I am sure that they will let the  
21 Board and the parties know. LILCO will have a chance to  
22 respond, and the Board can then decide whether there is  
23 something in that report that warrants reopening. I am  
24 sure if the report is not detailed enough and the Board  
25 does want to reopen some aspect, the Board will also

1 rule on the scope of appropriate discovery at that  
2 time.

3           WITNESS MUSELER: Judge Brenner, if it is  
4 inappropriate for me to speak, you will tell me.

5           JUDGE BRENNER: You might want to talk to your  
6 counsel first. It's okay with me.

7           WITNESS MUSELER: I just wanted to add,  
8 because your concern was --

9           JUDGE BRENNER: Well, no. I think it is an  
10 appropriate suggestion because we are grappling somewhat  
11 with understanding what it will look like, and if you  
12 can shed some light on that.

13           WITNESS MUSELER: Yes, sir, Judge Brenner.  
14 With respect to the level of detail that will be  
15 presented in the final report, the final report will  
16 even include all of the discrepancy reports which are  
17 the first level of what the inspectors found and it will  
18 then include the potential finding reports, the initial  
19 safety significance that we talked about before, and the  
20 LILCO responses and then the final Torrey Pines  
21 determinations.

22           So I believe in terms of the level of detail  
23 in the final report it will be far more detailed than  
24 the initial potential finding reports that were sent to  
25 LILCO along the way.

1           JUDGE BRENNER: Are you talking about a level  
2 of detail analogous to these audit reports that we have  
3 been dealing with, including the replies?

4           WITNESS MUSELER: Generally, yes, sir.

5           MR. EARLEY: Judge, if I may add one more  
6 point, as Mr. Museler mentioned in his testimony, the  
7 review process by Torrey Pines was set up to be as  
8 independent as possible. It is impossible to have  
9 someone come in and take a look at a project the size  
10 and the scope of LILCO and not have interface with the  
11 company, the designers, the people actually building the  
12 project. It is set up to be an independent review of  
13 the quality assurance and quality control and  
14 construction of the plant.

15           It was -- part of the scope of this was set up  
16 when the company was having discussions with the County  
17 because the County had concerns about having this  
18 independent verification. I am not sure what impact  
19 producing the documents now would have and litigating  
20 them in advance of the final report would have on the  
21 independence, but I think that there is a potential for  
22 that effect, that for whatever reason the final report  
23 might react to what come out in advance of completing  
24 the whole project.

25           So I think it is appropriate just to let the

1 final report come out. I think that it will be detailed  
2 enough to allow the County and the Board to assess its  
3 validity, and if it is not I am sure the County will let  
4 us know.

5           JUDGE BRENNER: All right. Everything you  
6 say, Mr. Earley, is very reasonable, with the exception  
7 of one possible detail and I want to explore that.

8           Your theme is why upset the apple cart now.  
9 In two or three weeks, subject, of course, to the fact  
10 that this is an estimate, but in that time frame, we  
11 will have the whole report and we will have sufficient  
12 detail, as indicated by you and Mr. Museler, to  
13 understand what each of these items involved have been  
14 and, therefore, why not wait.

15           And that sounds good, except you also talked  
16 about reopening in the sense that you would be applying  
17 a different standard to the County two or three weeks  
18 from now than you would apply if they had the  
19 information this week or next week, and that is one  
20 possible distinction and I don't know if you intended it  
21 or not.

22           MR. EARLEY: I think that is a possible  
23 distinction and I haven't focused on whether, given the  
24 scope and the discussion in LILCO's prefiled direct  
25 testimony, whether we would object to questioning on the

1 Torrey Pines results or not. That is too speculative.

2           JUDGE BRENNER: Well, I don't want to cut you  
3 cold now, but you have to factor in the claim that the  
4 discovery request back before August, and the dialogue  
5 which we had took place in August, had there not been  
6 that error. And it is a very understandable error, let  
7 me add. We know what was involved and the massive  
8 documents and the time frame that the conversations that  
9 Mr. Christman had to have on the run, even as he was  
10 informing us during the hearing, so this is no  
11 reflection on him at all.

12           Nevertheless, the result of it is that they  
13 might have had documents then that they don't have and,  
14 therefore, wouldn't have to worry about reopening type  
15 standards.

16           My own opinion is we are better off getting it  
17 in an organized fashion in two or three weeks, to the  
18 extent you indicate, and then allowing a full plan from  
19 the County as to what they think is worthy of pursuit  
20 and then some look by the other parties similar to  
21 letting everybody know what would be involved and then a  
22 look by us to see whether they have convinced us that it  
23 is worthwhile and what time would be involved in the  
24 examination before us and so on, not because they are  
25 just bringing it to our attention then, but because it

1 is a screening process that should be employed when it  
2 can be employed, as we have attempted to employ here.

3           So maybe it has worked out for the best,  
4 provided we apply it that way, rather than the  
5 relatively high standard for reopening with some  
6 likelihood of changing the result of what we have heard  
7 so far, and I don't think we will be able to apply that,  
8 frankly, in fairness to the County.

9           But think about those considerations and we  
10 will be thinking about them also.

11           MR. EARLEY: We will do that, Judge.

12           JUDGE BRENNER: Does the Staff have a view?

13           MR. BORDENICK: Judge Brenner, I don't have a  
14 position one way or the other. I do share Mr. Earley's  
15 concern regarding the compromising the independence of  
16 this undertaking. On the other hand, I would, of  
17 course, point out that the Torrey Pines review, or  
18 whatever the terminology, it is not being undertaken as  
19 a result of any Staff-imposed requirement.

20           But I do share the independence aspect. I  
21 don't know that that has been fully explored enough for  
22 me to make a judgment one way or the other.

23           JUDGE BRENNER: I don't think we will factor  
24 that in and that is not to denigrate the possible  
25 reality of it. It is just we don't know enough about it

1 to intelligently weigh that.

2           My intuition is that it is unlikely to do that  
3 since they are going to get all of this stuff in two or  
4 three weeks anyway, whether it would weigh more heavily  
5 at this organization aspect that Mr. Earley statement.  
6 It would sidetrack us now and sidetrack the parties and  
7 their experts now, when we can get it and have the  
8 benefit of the organized report that Torrey Pines is  
9 being paid for in just a few weeks.

10           And I don't know what disruption it would have  
11 on the Torrey Pines personnel finishing their work in a  
12 timely estimated fashion. And I would rather just get  
13 to it that way, given the detail that we expect to  
14 have. But let us think about it and we will come back.

15           MR. LANPHER: Judge Brenner, I just wanted to  
16 be clear, from the County's point of view, that the  
17 suggestion that we would have to satisfy some kind of a  
18 reopening standard is, it seems to us, completely  
19 unfair.

20           JUDGE BRENNER: Well, Mr. Earley said he  
21 hadn't necessarily thought it through fully to that  
22 extent. He just didn't want to waive that  
23 consideration, depending upon his further thoughts, I  
24 guess, and what might come up -- at least that is the  
25 way I understood what he said anyway.



1 I take it the County doesn't care whether you  
2 get it three weeks as opposed to today, as long as it  
3 doesn't prejudice your ability to use anything important  
4 that you find there in the record before us.

5 MR. LANPHER: That is right, and while I would  
6 be happy to put in a cross plan for the Board's review,  
7 I mean on further documentation, I am concerned that  
8 some people view documents differently as to whether  
9 they are important or not and even if it weren't a  
10 reopening standard I am concerned that when this came in  
11 people might say -- if we, for instance, and I haven't  
12 seen it, obviously, believe that it is important and  
13 think that we have to explore it, I think we would need  
14 the assurance that we can do that.

15 JUDGE BRENNER: Even if you had it today, I  
16 don't think you would be in any better shape three weeks  
17 from now as you are today, just as we may conclude that  
18 you wouldn't be in any worse position. And I can tell  
19 you that we're not just going to give you unlimited time  
20 to cross examine it, and I don't think that is what you  
21 want.

22 MR. LANPHER: I didn't ask for that.

23 JUDGE BRENNER: We avoided the screening  
24 process by imposing a time limit, and when we see what  
25 you would want to do with it we would weigh the time

1 period involved and our initial view of what you wanted  
2 to do. If it is a short time limit, we won't spend a  
3 lot of time talking about the significance, because you  
4 can be done with it very quickly, even if we disagreed  
5 with you that it was worth the time.

6           Perhaps another way to do it would be to set a  
7 time limit on a deposition session using that report and  
8 then letting you put all of part of the deposition into  
9 evidence before us, so long as we have time to read it  
10 and ask our own questions on it of those same witnesses.

11           There are a lot of possibilities, but let us  
12 talk about it. We would have to employ some screening,  
13 just as we are doing in this examination. The screening  
14 would not be designed for the County to have to meet a  
15 standard, anything like a reopening standard, and I  
16 don't think we have applied that so far.

17           Nevertheless, we would have to balance the  
18 time involved with our view of how much more it will  
19 eliminate what is going on on quality assurance, quality  
20 control. We are very interested in that report, there  
21 is no doubt about that, as Mr. Earley said, so you have  
22 got that going for you.

23           But, on the other hand, you would never get  
24 carte blanche in terms of time limit on it, even if you  
25 had all of the information now, so what I said should

1 not be taken to mean that the Board would impose  
2 something different because it is three weeks later than  
3 we would have imposed now, and I didn't mean that at  
4 all.

5 MR. LANPHER: I didn't imply that. I just  
6 wanted an opportunity to explore what is relevant and I  
7 just wanted to be clear that there can be some  
8 differences and I think we can all be reasonable on it  
9 from that point of view.

10 Your statements about no reopening I  
11 appreciate, so my chief concern is obviated.

12 JUDGE BRENNER: Well, I want to talk to the  
13 rest of the Board. Those were preliminary comments by  
14 me and we will come back and let you know as soon as we  
15 can. It might be tomorrow morning. It might be later  
16 today. I guess potentially -- well, it might be  
17 Tuesday. We will get back to you when we can on that.

18 Let's break until 2:00.

19 (Whereupon, at 12:30 o'clock p.m., the hearing  
20 recessed, to reconvene at 2:00 o'clock p.m., the same  
21 day.)

22

23

24

25

## 1 AFTERNOON SESSION

2 (2:00 p.m.)

3 JUDGE BRENNER: Let's start about Torrey Pines  
4 first.

5 MR. EARLEY: Judge, I have thought about what  
6 sort of standard we might apply, and let me just give  
7 you a proposal that I think might be helpful. Once the  
8 Torrey Pines final report comes out and the county has  
9 had a chance to look at it, they should then submit a  
10 pleading, some sort of document setting out the portions  
11 of the Torrey Pines report that they would like to go  
12 into on further cross examination, making clear why that  
13 portion isn't an area that could have been delved into  
14 here, given the documents that they have available now.

15 And it also should set out the purposes of the  
16 intended cross. In other words, show how the cross will  
17 add in a meaningful way to the record that is already  
18 existing; how it ties into the QA contentions and what  
19 has been asked about in the five weeks of cross that  
20 have gone on before.

21 And I'm not looking for a standard for  
22 reopening. Obviously, it does have to be a much lower  
23 standard, but I think it is appropriate to have some  
24 sort of screening process to make sure that we are just  
25 not covering ground that we really have covered

1 extensively during the cross examination of these  
2 witnesses.

3           Then LILCO ought to have an opportunity to  
4 respond to Suffolk County's pleadings, stating the  
5 reasons as to what portions they agree with or disagree  
6 with. And then the Board will decide what portions of  
7 the report should be explored on cross examination,  
8 perhaps indicating precise areas or issues that you  
9 think the Torrey Pines report fairly raises so that we  
10 can focus any additional cross examination on Torrey  
11 Pines.

12           JUDGE BRENNER: Well, that is not  
13 unreasonable, but what we had in mind was a little  
14 different and, we think, a little more efficient to cut  
15 down on some of the paper exchange. There is no doubt  
16 in our minds that when there are particular findings in  
17 the Torrey Pines report that, of course, come within the  
18 scope of the contentions that we would allow the county  
19 to explore them.

20           And we also are of the view that if we ask the  
21 county to give it their best shot now and then go back  
22 and do what they couldn't go into now for lack of  
23 information, that there are likely to be a fair number  
24 of things and enough that they could not fully explore  
25 now with these witnesses, given the current status of

1 the Torrey Pines report. And that affects our judgment  
2 that it would be not productive to have to go into it  
3 very fully now in terms of particular findings, at least.

4           Maybe I should check with the county as to  
5 whether our inference is correct. It is our  
6 understanding that what you have in mind is taking a  
7 look at the particular findings in the report, then.  
8 That is, we are not first going to start then with a  
9 whole discussion of what the Torrey Pines study was and  
10 what the scope is and so on. All of that is  
11 ascertainable now.

12           MR. LANPHER: Well, that is right, Judge  
13 Brenner, the focus would be on the findings and  
14 conclusions. But I certainly couldn't preclude the  
15 necessity, once a particular finding is focused and  
16 understood, or proposed finding, that you might have to  
17 go back to the scope document to fully understand how  
18 that relates.

19           JUDGE BRENNER: How it is related to the  
20 particular finding.

21           MR. LANPHER: Right. I think that is right.

22           JUDGE BRENNER: Okay. Give me one minute.

23           (Board conferring.)

24           JUDGE BRENNER: Well, what we had in mind was  
25 the following. You would finish up now with the

1 questions along the lines you are pursuing, whatever you  
2 plan to pursue now, short of delving into particular  
3 findings unless you've got one that you think is fully  
4 developed and these witnesses know something about.

5           I'm not going to preclude your doing that, but  
6 we're not going to require you to do it either. But you  
7 should finish up your questions along the lines you were  
8 asking, whatever you planned to ask this week on it.  
9 Then when the report comes out, we are going to give the  
10 county an opportunity -- in fact, we're going to require,  
11 if they plan to do something with it in evidence, to  
12 hold the deposition first. And we would set a time  
13 limit on the deposition. And we are willing to hear  
14 from the parties after the report comes out as to what  
15 time is involved. But we are thinking a day or two and  
16 not weeks.

17           The quid pro quo is before the deposition, the  
18 county, after going through the report, should have full  
19 access informally through counsel or whatever other  
20 informal means, to get any clarifying questions that it  
21 has so it doesn't have to take up its time on the  
22 deposition then if it doesn't understand what something  
23 means. Simple things like that. And as a minimum, you  
24 can ask, related to whatever depth you want to  
25 informally, but we're not talking about requiring

1 witnesses to be brought to locations or anything like  
2 that.

3           Then, the deposition will be held and we will  
4 hear from the parties as to what the time period should  
5 be, but it's going to have to be a day or two. And I  
6 expect the likely time it would be held would be  
7 Thanksgiving week, since that is -- unless you can  
8 somehow do it with other people -- while we are still in  
9 hearing. Because I am not going to recess the hearings  
10 artificially to do that, and I think Thanksgiving week  
11 is the next likely break. But if you can work it in on  
12 a Monday or something else, that's up to the parties.

13           We will then take that deposition and hear  
14 from the parties as to what portions of it should go  
15 into evidence; perhaps all of it. And we want an  
16 opportunity to read it so we know what questions we  
17 might have of the witnesses, and then we'll bring the  
18 witnesses here, unless all parties agree that there is  
19 no longer any need to have the witnesses here. In which  
20 case we will explore how important our questions, if  
21 any, are. And the session that we would have before us  
22 would be very short; probably a day. At least, that is  
23 our contemplation.

24           But we will hear, once we know better what we  
25 are dealing with, how many findings are involved, what



1 the scope is and so on. But prior to the deposition, we  
2 would require the county to produce documents similar to  
3 what we have been doing on the audits; that is, the  
4 particular findings you want to explore, and what  
5 categories or points you think these findings go to in  
6 light of everything that has transpired at the hearing.

7           Now, you don't have to do that before the  
8 informal conversations, but you would have to do it  
9 before the deposition.

10           Now, that is the essence of what we would  
11 rule. We are willing to hear as to what adjustments  
12 should be made if the parties come to some understanding  
13 that they think is superior to that, which is entirely  
14 possible. And you don't have to do that until after you  
15 see the report. But bear in mind the timeframes now on  
16 the expectation that the report will be out sufficiently  
17 in advance so that depositions can be prepared for on  
18 Thanksgiving week or such other time as the parties  
19 agree upon.

20           MR. LANPHER: Judge Brenner, my understanding  
21 is that the report is currently scheduled to be  
22 available around the 15th.

23           JUDGE BRENNER: Yes, but that is an estimate.

24           MR. LANPHER: That is an estimate, but if it  
25 came out the 15th, Thanksgiving is what, the 23rd, this

1 year? I mean, it is that week. It is an early  
2 Thanksgiving this year.

3 JUDGE BRENNER: It is the week that starts  
4 Monday, the 22nd. The 15th is the previous Monday, so  
5 you would have a week before that Monday.

6 MR. LANPHER: Well, we will have to see the  
7 scope. I would just like it clear ahead of time that  
8 I'm not sure that's going to be adequate time to do a  
9 review and provide the kind of data that you are  
10 indicating you want us to provide LILCO in advance of  
11 the deposition; precise findings, what points they go to.

12 But I'm speculating to an extent because I  
13 haven't seen the report. From the descriptions that  
14 were made of what is going to be in the report, I  
15 understand that it's going to have all of the  
16 discrepancy reports, all of the proposed findings, a lot  
17 of the backup data. It's going to be pretty massive.

18 JUDGE BRENNER: Well, we will think about it,  
19 but it's pretty much going to have to be that  
20 timeframe. I think the timeframe is workable if you  
21 have some help on it. It is to your benefit also, if  
22 we're going to set a time limit on the deposition. The  
23 witnesses are going to spend a lot of time trying to  
24 recall -- it's going to be just like the audits.  
25 They're going to spend a lot of time trying to recall

1 what was involved in the finding. Whereas, if you give  
2 it to them in advance, they'll be prepared, and that is  
3 why we're going to require that.

4 MR. LANPHER: Judge Brenner, my objection did  
5 not go to that aspect.

6 JUDGE BRENNER: It went to the timing.

7 MR. LANPHER: It went to the timing of getting  
8 ready for the deposition, that's right. I don't believe  
9 that is adequate, judging from the scope that this  
10 document is going to be. I don't think it lends to  
11 efficiency to rush it that much.

12 Further, since I'm likely to have to be  
13 involved in that deposition, my expectation is that the  
14 examination of the staff will be in progress during that  
15 time period, also. It's going to be hard to be in two  
16 places at once and preparing.

17 JUDGE BRENNER: Mr. Farly, why don't you see  
18 if you can find out, recognizing it's just an estimate,  
19 whether or not Torrey Pines is going to beat that date  
20 by a little bit, as you indicated they might. If you  
21 can find out, and I recognize you might not be able to,  
22 and let us know next week.

23 MR. EARLEY: I will try to find that out as  
24 soon as I can, Judge.

25 JUDGE BRENNER: One possibility is for us to

1 stay in hearing that week and take a day or two off the  
2 following week to give you the time interval.

3 MR. LANPHER: Judge Brenner, one way that  
4 might be helpful in the September status report in Table  
5 1, it indicates that a draft report was prepared on  
6 September 16. That is the second page of Table 1.  
7 Maybe if the draft report could be provided in advance,  
8 we could start looking at that.

9 JUDGE BRENNER: All right. You get into the  
10 problem we discussed before lunch, though, about  
11 incomplete drafts and so on.

12 JUDGE MORRIS: I think that is a reasonable  
13 inquiry, Mr. Lanpher, and I was going to ask Mr. Museler  
14 whether it is contemplated that a draft report would be  
15 sent to LILCO prior to the final report.  
16 Whereupon,

17 T. TRACY ARRINGTON,  
18 FREDERICK B. BALDWIN,  
19 WILLIAM M. EIFERT,  
20 T. FRANK GERECKE,  
21 JOSEPH M. KELLY,  
22 DONALD G. LONG and  
23 WILLIAM J. MUSELER,

24 the witnesses on the stand at the time of recess,  
25 resumed the stand and, having been previously duly

1 sworn, were examined and testified further as follows:

2           WITNESS MUSELER: No, sir. We will receive  
3 only the final report. The draft report I think was  
4 just referenced in the Torrey Pines progress report to  
5 indicate that they were starting work on it, and they  
6 had completed whatever parts of it had been completed to  
7 constitute that draft. But it is not a process where a  
8 draft is produced and sent to anyone for comments; not  
9 to us. And so, it is just indicative of the internal  
10 workings of Torrey Pines. We expect to get the final  
11 report only.

12           JUDGE MORRIS: I think it is normal to have a  
13 draft that receives final concurrences and goes through  
14 the printing process and the dressing up and what not.  
15 I think, Mr. Early, you might inquire into that when you  
16 inquire into the schedule.

17           MR. EARLEY: Certainly, Judge Morris.

18           JUDGE BRENNER: All right. When we have more  
19 facts we will see if we can focus on making that time  
20 interval a little longer somehow between the  
21 availability of essentially all of the factual  
22 information that would be in the report, if not the  
23 final report, and the time by which the deposition would  
24 take place. It may be that the parties, among  
25 themselves, can work out a timeframe such that we don't

1 have to worry about the hearing going on at the same  
2 time, if other witnesses and other counsel are going to  
3 be involved on any given week in that general  
4 timeframe. That might you give some leeway, also, Mr.  
5 Lanpher. So let's see what happens.

6 Don't forget the aspect that we want to see  
7 the depositions so that we can read them. And who knows  
8 when while we are at hearing, but as soon as we can, and  
9 decide whether we have questions. So you have to have  
10 some time beyond that. And also, that we can be assured  
11 of completing QA in December.

12 All right.

13 CROSS EXAMINATION -- Resumed

14 BY MR. LANPHER:

15 Q Mr. Museler, the September 17, 1982 status  
16 report, Tab 5 to Suffolk County Exhibit 69 for  
17 identification, that is the last status report you  
18 received, correct?

19 A (WITNESS MUSELER) Yes, sir.

20 Q I would like to direct your attention to page  
21 11 of that status report under the heading Task F,  
22 potential finding processing. Am I correct that as of  
23 the time that the status report was prepared, Torrey  
24 Pines had prepared the following documents: 368  
25 discrepancy reports, 120 potential finding reports, and

1 of those potential finding reports, 25 they determined  
2 were invalid; two observations, three findings and 90  
3 potential finding reports were still under review.

4 A (WITNESS MUSELER) That is the status as  
5 reported, Mr. Lanpher.

6 (Counsel for Suffolk County conferring.)

7 MR. LANPHER: Judge Brenner, in view of your  
8 earlier rulings, I am going to move on to a different  
9 subject. I think it will be a lot more efficient to do  
10 that.

11 JUDGE BRENNER: We have got one or two  
12 questions.

13 MR. LANPHER: Well, I wanted to let you know  
14 that I was turning to another area.

15 BOARD EXAMINATION

16 BY JUDGE BRENNER:

17 Q I have a couple of questions, Mr. Museler. I  
18 think you said in the final report for all of the PFRs  
19 you will also receive the discrepancy reports.

20 A (WITNESS MUSELER) That is my understanding,  
21 yes, sir.

22 Q Do you know whether or not you will receive  
23 copies of those discrepancy reports that don't make it  
24 to the PFR stage?

25 A (WITNESS MUSELER) Yes, sir. There were 300

1 and some-oid discrepancy reports, and the program plan  
2 contemplates the final report including all of the  
3 discrepancy reports, even those that did not classified  
4 as potential finding reports.

5 Q Is the same thing true for what are decided as  
6 invalid PFRs?

7 A (WITNESS MUSELER) An invalid PFR would still  
8 have a discrepancy report associated with it, and those  
9 discrepancy reports, whether they turned out to be valid  
10 or significant or whatever, will be included. That is  
11 my understanding. So if the discrepancy report were  
12 evaluated and not to constitute a potential finding  
13 report, if it diin't get to that phase, the discrepancy  
14 report itself would still be -- I guess it will be an  
15 appendix, but it will still be a part of the main report.

16 Q Right, but some PFRs, based upon the  
17 discrepancy reports, are also evaluated as to whether  
18 they are valid or invalid.

19 A (WITNESS MUSELER) That is correct, sir.

20 Q And would the invalid ones also be part of the  
21 package? Or do you know?

22 A (WITNESS MUSELER) I don't know the answer to  
23 that specific question, sir. I do know that that  
24 history, the history of an item having been designated a  
25 potential finding and then designated as not a potential



1 finding, is part of the process. In other words, the  
2 paper trail to demonstrate that it went from a  
3 discrepancy report to a potential finding report and  
4 then the evaluations of the first level review  
5 indicating that it was only an acceptable discrepancy  
6 report but not a potential finding report, that trail  
7 does exist in the system. I don't know the answer to  
8 the specific question as to whether that trail will  
9 exist in the final report.

10 JUDGE MORRIS: Thank you.

11 JUDGE BRENNER: You may continue.

12 CROSS EXAMINATION -- Resumed

13 BY MR. LANPHER:

14 Q Mr. Museler, let me ask one last question, and  
15 I apologize if you've answered this before. I don't  
16 think you have, though. Looking at the file status  
17 report that we have, Tab 5, Table 1 of that, which is  
18 about the fourth page into it, I believe, and it is  
19 numbered page 3.

20 MR. ELLIS: Is this Table F-1?

21 MR. LANPHER: No, Table 1. It is toward the  
22 front.

23 BY MR. LANPHER (Resuming):

24 Q Do you have that available, Mr. Museler?

25 A (WITNESS MUSELER) Yes, sir.

1 Q There are a number of issue summaries which  
2 are indicated in this table. For instance, A-7, an  
3 issue summary which I presume goes to Task A. And  
4 milestone B-4. It is indicated that a document has been  
5 prepared, an issue summary, again. Does LILCO have any  
6 of the issue summaries which are indicated to have been  
7 prepared on this table?

8 A (WITNESS MUSELER) Not to my knowledge, sir.

9 Q To your knowledge, does LILCO have any of the  
10 documents indicated on this table?

11 A (WITNESS MUSELER) Sir, before I answer that  
12 question, you will note that a number of these items, or  
13 at least some -- I refer you to A-3 -- state, "Identify  
14 manuals and procedures." I mean, this is a phase of  
15 investigation, and obviously, we do have all of those  
16 manuals and procedures that they wanted to look at.

17 Q That's right. But I should point your  
18 attention to the document column on the far right, and  
19 please confirm -- those document numbers are Torrey Pine  
20 document numbers, correct?

21 A (WITNESS MUSELER) Yes, sir, I believe they are.

22 Q Do you have any of the documents listed in  
23 that righthand column on Table 1? Either page 1 or page  
24 2 of the table. And while you are considering that, Mr.  
25 Arrington, I'm going to ask the same question of Stone &

1 Webster.

2 (Panel of witnesses conferring.)

3 MR. ELLIS: I think I should note just for the  
4 record that it assumes that the document -- that there  
5 are documents that exist under that column, Document.  
6 That could mean something else, and in some instances  
7 the reference could be different. I take it that Mr.  
8 Lanpher hadn't established that these documents exist,  
9 and they're just doing it to the best of their knowledge.

10 JUDGE BRENNER: Yes, that is the inference I  
11 have from the question and if he doesn't know what any  
12 of these designations mean, he can say so, also.

13 WITNESS MUSELER: Mr. Lanpher, on page 4,  
14 Items G-1, G-2, G-3 and G-4 we do have. They are the  
15 monthly reports. Item G-4, GAC 16822 is the document we  
16 are reading from, so we do have those four documents.  
17 As to the rest, to the best of my knowledge, we do not  
18 have them, with the exception that I believe we may  
19 have, or at least have the contents of, Item D-3, too.  
20 Which is to identify witness points, I believe, for the  
21 structural acceptance test.

22 In other words, they would have had to give us  
23 that to tell us what hold points they wanted to put on  
24 that test. We may either have the document or we may  
25 just have the information, I don't know which. But we

1 would certainly have the contents of that document.

2           As to the rest, some personnel may have seen  
3 some of these documents, but to the best of my  
4 knowledge, we do not have them. And by that I mean only  
5 to the extent that an item such as a walkdown procedure,  
6 we might have seen or know about in terms of providing  
7 the kinds of documents that the walkdown procedure calls  
8 for, and the access required. And I'm not familiar with  
9 these documents and I don't believe that we physically  
10 have them, but we may well have seen a couple of them.

11           JUDGE BRENNER: Mr. Lanpher, I just want to  
12 note my personal opinion at least, and you can agree or  
13 disagree. That's a very hard question for Mr. Museler  
14 to answer, from this listing. And I think it was worth  
15 a shot, and let's assume he gave it the best shot. But  
16 I'm not going to be shocked if one of these documents,  
17 which may have been more familiar to him under another  
18 label or something, pops up. I don't know if you agree  
19 or disagree, and you don't have to state either way.

20           BY MR. LANPHER (Resuming):

21           Q     Mr. Arrington, would your answer be the same  
22 as Mr. Museler's?

23           A     (WITNESS ARRINGTON) Basically, the same. To  
24 the best of my knowledge, I don't recall ever reviewing  
25 any of these documents. These look like they would be

1 documents that Torrey Pines would be using for their  
2 checklist for their various reviews. I don't recall  
3 seeing any of them.

4 Q Is it fair to state, then, Mr. Museler, that  
5 to the best of your knowledge, the documents that LILCO  
6 has concerning the Torrey Pines program are the five  
7 documents that constitute a part of Suffolk County  
8 Exhibit 69, program plan and four status reports and the  
9 potential finding reports, which are transmitted to the  
10 LILCO executive, Mr. Navarro?

11 A (WITNESS MUSELER) I believe that does  
12 constitute what we have, sir. I believe we may also  
13 have the first issue of the findings reports which come  
14 from the potential finding reports. They would be sent  
15 to us in the same fashion as the potential finding  
16 reports. That would constitute the Torrey Pines  
17 documents that we have, to the best of my knowledge.

18 Q It's your understanding that those findings  
19 reports as distinguished from potential finding reports,  
20 will be an actual part of the final Torrey Pines report?

21 A (WITNESS MUSELER) Yes, sir, they certainly  
22 will.

23

24

25

1           MR. LANPHER: Judge Brenner, I'm going to turn  
2 to -- and gentlemen -- I'm going to turn to what we call  
3 for shorthand FSAR configuration matters.

4           JUDGE BRENNER: As long as we have that table  
5 in front of us. I'm sure Mr. Earley would have  
6 considered this the last three documents -- well, the  
7 next to the last and the one before that would be  
8 complete assessment and complete report draft. Those  
9 you might explore, whether we can get those without a  
10 lot of -- without Torrey Pines thinking that would give  
11 them problems. And also give us an understanding, if  
12 you can of the difference between those two documents,  
13 and in turn between those documents and the final report  
14 and that draft compilation that they said they already  
15 had in preparation.

16           But maybe we can save an important week or two  
17 in the critical time frame.

18           BY MR. LANPHER: (Resuming)

19           Q     Gentlemen, would you agree that the LILCO  
20 final safety analysis report constitutes LILCO's basic  
21 commitment to the NRC regarding the design of the  
22 Shoreham facility?

23           (Panel of witnesses conferring.)

24           A     (WITNESS MUSELER) Mr. Lanpher, the FSAR does  
25 contain LILCO's commitments regarding regulatory

1 requirements. It also contains a significant amount of  
2 descriptive material in addition to those commitments  
3 and the actual regulatory requirements for the FSAR  
4 content.

5 Q Mr. Museler, it is inevitable that as you  
6 proceed with the construction of the plant and after the  
7 FSAR is filed there are design changes which need to be  
8 effected, correct?

9 A (WITNESS MUSELER) The plant design does  
10 continue to change to some extent after the initial  
11 filing of the FSAR, yes, sir.

12 Q Now, as design changes are made which affect  
13 statements or commitments made in the FSAR does LILCO  
14 attempt to update the FSAR so that it remains current to  
15 reflect the actual design of the plant?

16 (Panel of witnesses conferring.)

17 A (WITNESS MUSELER) Yes, sir. It is a  
18 requirement to keep the FSAR current as to the  
19 regulatory commitments and the other regulatory  
20 requirements of the FSAR. We do have a program that  
21 does that, and it spans not only the physical updating  
22 of the overall FSAR document, but there are various  
23 other mechanisms, some utilized by the staff and some  
24 utilized by us, to ensure that for those items that are  
25 related to the regulatory commitments and to the

1 regulatory requirements that that information is  
2 available to the staff in a timely manner.

3           And by that I mean sometimes through the  
4 question and answer process of the NRC review we provide  
5 information on items that do relate to those  
6 commitments, and also we provide voluntary submittals  
7 when a design change is a change that would impact the  
8 staff's review or would impact the description of  
9 something in the FSAR that would relate to the staff's  
10 review.

11           We don't and have not as a matter of course  
12 updated on as rapid a basis as those regulatory  
13 commitment requirements some of the detail that is in  
14 the FSAR that is not required for the staff to do their  
15 review. But we believe that we have in all cases that I  
16 know about provided the information on the docket to  
17 keep the FSAR a viable document for the review and the  
18 conclusions that the staff utilizes it for.

19       Q     Now, you said that you have a program. Are  
20 there LILCO or Stone and Webster or both procedures  
21 which require that the FSAR be kept current with the  
22 design?

23           (Panel of witnesses conferring.)

24       A     (WITNESS MUSELER) Mr. Lanpher, both LILCO and  
25 Stone and Webster have programs which result in the FSAR



1 being updated to keep it current with the existing or  
2 with the ongoing design.

3           As I mentioned previously, in cases where an  
4 item is being changed in the design as a result of  
5 either a regulatory requirement or just an evolving  
6 design situation, for those items that are significant  
7 to the staff's review and to the staff's evaluation of  
8 the application we provide that information on almost a  
9 real time basis because that is the information that is  
10 of most importance in order to have the staff be able to  
11 perform a valid review on the plant.

12           And we do that many times by notifying the  
13 staff by telephone and then following up with a letter,  
14 so that that we do on a very rapid basis. The ongoing  
15 updating of the document itself is done on a more let's  
16 say prescribed basis. In other words, we don't update  
17 it once a month; we update it when it appears reasonable  
18 and logical to provide the overall update and  
19 incorporate all of this information in the body of the  
20 FSAR. And then again we do that primarily for those  
21 items that are significant from the standpoint of the  
22 staff's review.

23           Q     Mr. Museler, my question was whether you,  
24 LILCO, or Stone and Webster as part of the program  
25 you've referenced have specific procedures which require

1 or lay out the process by which you update the FSAR so  
2 that it matches the current design of the plant.

3 MR. ELLIS: Objection. Asked and answered.

4 MR. LANPHER: Judge Brenner, I don't believe I  
5 got an answer to the question.

6 JUDGE BRENNER: What is the answer, Mr. Ellis?

7 MR. ELLIS: The answer was that he explained  
8 that yes, they had procedures that they used to update  
9 the FSAR and that they used documents on a real time  
10 basis to tell the NRC about those items that were  
11 necessary, that impacted on the review process, and that  
12 the other items that did not they did on an as needed  
13 basis, and I think he said a protracted basis. He said  
14 essentially they had procedures, but he explained  
15 carefully and drew the distinction that -- Mr. Museler  
16 explained -- between the material that impacts on the  
17 review and the material that does not impact on the  
18 review.

19 JUDGE BRENNER: What do you want to say?

20 MR. LANPHER: Do I need to say anything?

21 JUDGE BRENNER: You looked like you wanted  
22 to. I wasn't going to ask you to.

23 MR. LANPHER: Not if you're going to rule in  
24 my favor.

25 JUDGE BRENNER: Well, I wasn't going to rule

1 so much as turn to Mr. Museler and tell him yes, I  
2 recall your answer as Mr. Ellis just summarized it, and  
3 do you consider that to be your answer to Mr. Lanpher's  
4 question?

5 WITNESS MUSELER: Yes, sir.

6 JUDGE BRENNER: Okay.

7 BY MR. LANPHER: (Resuming)

8 Q Can you identify the specific procedures,  
9 please?

10 A (WITNESS EIFERT) If you give me a moment, I  
11 think I can be quite specific.

12 (Pause.)

13 A (WITNESS EIFERT) Mr. Lanpher, within the  
14 Stone and Webster project engineering area there are  
15 many procedures which address the preparation of the  
16 FSAR in preparation of changes to the FSAR. The FSAR  
17 and the mechanism by which changes that are evolving  
18 from the design process -- that is, continuing on after  
19 submittal of the FSAR -- are identified and tracked for  
20 inclusion in the FSAR.

21 With respect specifically to -- I will give  
22 you three specific project procedure numbers which we  
23 use. Project procedure 32, project procedure 25, and  
24 project procedure 36 are specific procedures on the  
25 Shoreham project. Thirty-two is titled "Handling of

1 Licensing Document Changes." Project procedure 25 is  
2 "System Engineering Change Control and Package Program,"  
3 and I think we described that program in the prefiled  
4 testimony as a mechanism that we use in the change  
5 process on the Shoreham project. And that includes a  
6 mechanism for also identifying and initiating FSAR  
7 changes as necessary. Project procedure 36 is entitled  
8 "Incorporating Engineering Changes into the FSAR," which  
9 is also used on the Shoreham project.

10           From the standard program standpoint of Stone  
11 and Webster I can't give you a complete list or a  
12 specific list at this time of all of the procedures that  
13 specifically identify that the engineers involved in the  
14 design process as they identify the need, because of the  
15 evolving design process to cause an update of the FSAR,  
16 are required to initiate such an update. But I am sure  
17 that the engineering assurance procedure for diagrams as  
18 well as for the field change procedures or E&DCRs as  
19 examples include that responsibility on the engineers;  
20 that is, specific responsibility to initiate an action  
21 to ensure that the FSAR is appropriately assessed and  
22 modified if necessary.

23           Q     Mr. Eifert, turning your attention to  
24 Engineering Assurance Audit 21, item 2 of observation  
25 008 --

1           A       (WITNESS EIFERT) Mr. Lanpher, I'm sorry. I  
2 forgot you were going to look at those two audit  
3 observations and did not bring my books down. It will  
4 only take a couple of minutes to send someone up. I  
5 probably can talk from that without my notes because I  
6 think I'm familiar with the audit observations.

7                   JUDGE BRENNER: If you want your notes, we  
8 will give you an opportunity. Let's see how it goes.  
9 If you want your notes as you proceed through it, don't  
10 hesitate to say so.

11                  WITNESS MUSELER: Mr. Lanpher, the LILCO  
12 procedure, this one procedure that addresses that, it's  
13 a LILCO project procedure; but I don't have the number  
14 because I don't have the manual here.

15                  BY MR. LANPHER: (Resuming)

16           Q       Mr. Eifert, that is audit 21 and observation  
17 008, which I will note for the record my book is at the  
18 very end of the audit, if anyone's having a hard time  
19 finding it. And item 2, item 2 of that observation, Mr.  
20 Eifert.

21                   My question is am I correct that as of April  
22 1977 the auditor was concerned that engineering  
23 assurance procedure 6.3 dealing with E&DCRs -- and I  
24 think we've talked about that earlier in the QA  
25 examination -- at this point in time did not contain a

1 method to ensure that FSAR change forms were initiated  
2 when they were required.

3 (Panel of witnesses conferring.)

4 A (WITNESS EIFERT) Mr. Lanpher, my notes, I  
5 remember making notes on this very specifically. I  
6 think they'll be here in one moment. I would prefer to  
7 wait for those notes.

8 Q Fine. I will give you a chance to come back  
9 to that. Let me follow it up with another question, and  
10 if you can't answer this, please indicate.

11 To your knowledge, was EAP 6.3 subsequently  
12 amended or changed to institute a procedure to ensure  
13 that FSAR changes were initiated when they were required?

14 A (WITNESS EIFERT) EAP 6.3 was not changed  
15 because it was determined that such a system was not  
16 necessary or warranted, and I can fully explain that  
17 from the notes that are here in the book. And I was  
18 supervisor of the design control procedures group when  
19 this audit observation was written, and I was involved  
20 in the response to the audit group, and I wanted to be  
21 sure to review those notes again to be sure that I give  
22 you the accurate answer.

23 MR. ELLIS: Judge Brenner, I have a short  
24 matter. May I just ask one question? I think there  
25 will be no objection.

1 JUDGE BRENNER: Of the witnesses you mean?

2 MR. ELLIS: From anybody.

3 JUDGE BRENNER: Go ahead.

4 MR. ELLIS: Mr. Museler, I detect a material  
5 inaccuracy in Mr. Arrington's resume. Am I correct in  
6 that?

7 MR. MUSELER: Yes, sir. Mr. Tracy apparently  
8 provided some false information in his resume. He  
9 actually indicated that he was 36 years old, and that is  
10 really a violation of the ready traceability that we  
11 require in all of our site employees.

12 Due to extensive research last night on the  
13 part of Mr. Tracy's cohorts, they have established  
14 without a doubt that he was born in 1945 and that today  
15 he is in fact 37 years old and not 36 years old.

16 (Laughter.)

17 MR. ELLIS: Thank you for that clarification,  
18 Mr. Museler.

19 Happy birthday, Mr. Arrington.

20 (Laughter.)

21 JUDGE BRENNER: I take it you did that. I  
22 don't know if Mr. Lanpher had another question or not  
23 while waiting for the report. If we are just waiting, I  
24 don't mind, but I'm not sure we were just waiting.

25 MR. ELLIS: I thought he was just waiting. If

1 he wasn't, I apologize.

2 (Pause.)

3 WITNESS EIFERT: Did you want number 22?

4 MR. LANPHER: Twenty-one.

5 WITNESS EIFERT: Mr. Lanpher, what the auditor  
6 was reporting in this audit is that he had looked at  
7 E&DCRs that had been indicated that an SAR change was  
8 appropriate. So the block on the E&DCR form was  
9 appropriately marked.

10 He had also during this audit gone to the  
11 licensing group on the project to determine if the  
12 particular SAR change notices had been initiated, and he  
13 did identify a concern or register a concern that there  
14 wasn't a quick way of identifying for him that the  
15 appropriate SAR changes had been initiated per the  
16 E&DCR. So he was questioning whether or not a mechanism  
17 was needed to provide that ready identification that an  
18 SAR change had been initiated as the result of an E&DCR.

19 In reviewing this we judged that the procedure  
20 mechanism that we had established did contain sufficient  
21 detail to provide for control of the situation, and that  
22 not only do we indicate the E&DCR itself when an SAR  
23 change is required, but at the SAR change notices and  
24 the mechanism by which they are prepared in providing a  
25 reference to the source document for the change, whether



1 it be a drawing revision or an E&DCR, was sufficient  
2 documentation in this case. And that an additional  
3 procedure to provide that mechanism, if you will, was  
4 not appropriate.

5           That was our response to this audit finding,  
6 and that was accepted by the auditing organization.

7           BY MR. LANPHER: (Resuming)

8           Q     Mr. Eifert, you referenced the FSAR change  
9 notice forms at Attachment 21 to the LILCO prefiled  
10 testimony.

11          A     (WITNESS EIFERT) I believe we did keep a  
12 photocopy in our testimony. I would have to check that.

13          Q     Excuse me. Attachment 20.

14          A     (WITNESS EIFERT) Yes, it is, Mr. Lanpher.

15                   (Counsel for Suffolk County conferring.)

16          Q     Now, Mr. Eifert, in Engineering Assurance  
17 Audit 33 am I correct that -- and this is at page 1 of  
18 that audit and also observation 114 -- am I correct that  
19 the auditor stated that he had a significant concern  
20 that design document changes that differ from the FSAR  
21 are not documented for later inclusion in the FSAR?

22          A     (WITNESS MUSELER) Mr. Lanpher, you referenced  
23 14 also. Is that page 14?

24          Q     No. 114, observation 114.

25                   (Panel of witnesses conferring.)

1 Q The portion that I was paraphrasing I believe  
2 is from page 1 of that audit, audit 33.

3 (Panel of witnesses conferring.)

4 A (WITNESS EIFERT) Did you ask a question on  
5 that?

6 Q Yes.

7 A (WITNESS EIFERT) Would you repeat it, please?

8 Q Mr. Eifert, looking at the first page of  
9 Engineering Assurance Audit 33, am I correct that the  
10 auditor identified as a significant concern that design  
11 document changes that differ from the FSAR were not  
12 being documented for later inclusion in the FSAR?

13 (Panel of witnesses conferring.)

14 A (WITNESS EIFERT) I think the answer to your  
15 question is no. The auditor didn't say it was a  
16 significant concern. He said it was the most  
17 significant concern in this audit. And there is a  
18 significant difference between those two statements as  
19 we have discussed before with respect to this kind of a  
20 statement in an audit observation.

21 With respect to this audit, the most  
22 significant concern that the auditor identified was the  
23 specific concern with respect to the FSAR.

24 Q Now, the auditor went out of his way, did he  
25 not, to highlight this concern on page 1 of the audit?

1 In fact, he underlined it.

2 MR. ELLIS: I object to that question. I  
3 don't know what "went out of his way" means.

4 JUDGE BRENNER: I thought you were going to  
5 say we don't know who underlined it.

6 WITNESS EIFERT: I was going to respond to  
7 that, because I don't believe the auditor underlined  
8 it. I believe Mr. Lanpher and his people underlined  
9 these in the reports after they had them.

10 JUDGE BRENNER: We don't know who underlined  
11 it. You don't know either, Mr. Eifert? I just want the  
12 short answer. You don't know who underlined it?

13 WITNESS EIFERT: I'm not positive.

14 JUDGE BRENNER: Let's get back to the guts of  
15 the question, that the auditor chose to include this in  
16 the cover page as a summary of the audit finding 114  
17 within and does that not indicate a level of concern on  
18 his part above the ordinary, run-of-the-mill findings  
19 which he did not choose to include in the first page.

20 WITNESS EIFERT: When we developed these audit  
21 reports we tried to present to management a picture of  
22 the problems that we've identified. Yes, I think that  
23 the fact that we did highlight this in the first page of  
24 the report indicates that it was more significant than  
25 other things in this report.

1           We tried to do that, and I think in later  
2 reports we were trying to even do more of that so that  
3 we provided a fairly complete picture in one or two  
4 pages for upper management to read these reports.

5           I think if we go back to the audit observation  
6 114 and we discuss the specifics of the finding, what we  
7 were talking about is a situation where during this  
8 particular audit we identified that in the E&DCR had not  
9 been checked off to indicate that a change to the FSAR  
10 was required, and the E&DCR did indeed have an effect on  
11 the FSAR figure.

12           The situation evolving around this particular  
13 audit observation and what was happening on the project  
14 at that time that was identified as a result of this  
15 audit observation is that the engineers were  
16 individually tracking what they considered the minor,  
17 insignificant changes, especially changes to the FSAR  
18 figures, and not checking the E&DCR block because they  
19 were aware of the FSAR figure update program; they were  
20 maintaining the separate lists and tracking the changes  
21 that way. This was not in compliance with the  
22 requirement of our procedures, and as a result of this  
23 we took action to ensure that that was not in any way a  
24 problem that we should be significantly concerned about,  
25 that the items were being tracked. And we did take

1 preventive action to ensure that the engineers  
2 appropriately marked the E&DCRs after this audit.

3 BY MR. LANPHER: (Resuming)

4 Q Mr. Eifert, in that answer I believe you  
5 referred to an FSAR figure update program. Did I hear  
6 correctly?

7 A (WITNESS EIFERT) Yes. I did use those  
8 words. And maybe I'm overemphasizing the word  
9 "program," but at this time frame and since this time  
10 frame the SAR has gone through an update to put in the  
11 new figures that are in the FSAR. The figures that we  
12 are referring to here are the figures which are actually  
13 copies of the Stone and Webster design documents -- for  
14 example, the flow diagrams -- and periodically to keep  
15 the FSAR current for the minor changes that occur during  
16 the evolving design process after the FSAR has been  
17 submitted, the FSAR figures have been updated through an  
18 FSAR change. And the engineers knew that all of the  
19 changes to the flow diagrams that were figures would be  
20 picked up in that way, and they were not initiating  
21 individual change notices for minor changes to those  
22 figures.

23 As Mr. Museler indicated earlier, any changes  
24 which were in any way substantive were not held in any  
25 manner as this, and there were discussions with the

1 Commission early on as to anything of relevance to the  
2 staff review was identified, and that was identified and  
3 discussed with the staff early on.

4           But these minor changes in detail that go  
5 beyond the detail necessary for the staff review were  
6 accumulated and included in these figure updates, if you  
7 will.

8           Q     The fact that these changes were minor -- and  
9 I think that's the word you used -- is that indicated in  
10 audit observation 114, or is that information you have  
11 gleaned in your investigation of this matter?

12          A     (WITNESS EIFERT) That is information that I  
13 was -- that was information that I personally recall  
14 from the discussions that took place following this  
15 audit.

16          Q     The auditor himself didn't indicate in the  
17 observation then that these were minor changes?

18          A     (WITNESS EIFERT) He did not use those words  
19 to describe that, no.

20          Q     Gentlemen, are you familiar with the so-called  
21 CAT inspection, I&E Inspection 82-04, from earlier this  
22 year?

23          A     (WITNESS MUSELER) That's CAT inspection 04?

24          Q     That's I&E Inspection 82-04.

25          A     (WITNESS MUSELER) Yes, we are generally

1 familiar with that report.

2 MR. LANPHER: Judge Brenner, for the record,  
3 that's attached to Mr. Hubbard's prefiled testimony. I  
4 do have a couple of extra copies of the CAT inspection  
5 if people ion't have that. I wasn't going to mark it as  
6 an exhibit, but if anyone needs copies, I will make it  
7 available.

8 JUDGE BRENNER: Do you remember the attachment  
9 number offhand?

10 MR. LANPHER: Attachment 4.

11 BY MR. LANPHER: (Resuming)

12 Q Do you have a copy, Mr. Museler?

13 A (WITNESS MUSELER) Yes, sir, I do.

14 Q Mr. Museler, in Appendix B, as in boy, to the  
15 CAT inspection the NRC staff identified what it  
16 considered to be a number of deviations by LILCO from  
17 FSAR commitments, am I correct?

18 (Panel of witnesses conferring.)

19 JUDGE BRENNER: Are you talking about the  
20 notice of deviation? Is that right, Mr. Lanpher?

21 MR. LANPHER: Yes. Appendix B entitled  
22 "Notice of Deviation." And my question is whether I'm  
23 correct that the NRC staff at that time concluded that  
24 certain of the activities were not conducted in  
25 accordance with FSAR commitments. And I believe there

1 are a total of eight items listed, some with multiple  
2 parts.

3 (Panel of witnesses conferring.)

4 WITNESS MUSELER: Mr. Lanpher, the Appendix B,  
5 which is the notice of deviation, is part of the I&E  
6 inspection report. That is what the NRC wrote as a  
7 result of their inspection of the plant at this time.  
8 It states that, "It appears that several of your  
9 activities were not conducted in accordance with final  
10 safety analysis report commitments."

11 First, the NRC indicated that it appeared to  
12 their inspector that that was true. And secondly, the  
13 NRC's words are the NRC's words. These deviations were  
14 deviations in the informational detail in the FSAR and  
15 not deviations from any FSAR commitments.

16 BY MR. LANPHER: (Resuming)

17 Q So you disagree with the words used by the NRC  
18 staff where they state, "It appears that several of your  
19 activities" -- referring to LILCO activities -- "were  
20 not conducted in accordance with FSAR commitments?" You  
21 disagree with the use of the words "commitments?"

22 A (WITNESS MUSELER) Mr. Lanpher, we disagree  
23 that what the NRC noted was a deviation from any FSAR  
24 commitment.

25 MR. LANPHER: Judge Brenner, I would like to



1 have marked as Suffolk County Exhibit 70 for  
2 identification a July 28th, 1982 letter, LILCO letter  
3 SNRC-743.

4 JUDGE BRENNER: Let's just note it is a thick  
5 letter of 21 pages, and that will be marked as Suffolk  
6 County 70.

7 (The document referred to  
8 was marked Suffolk County  
9 Exhibit No. 70 for  
10 identification.)

11 BY MR. LANPHER: (Resuming)

12 Q Do you have a copy of that now, Mr. Museler?

13 A (WITNESS MUSELER) The July 28th letter to Mr.  
14 Martin?

15 Q Yes, sir.

16 A (WITNESS MUSELER) That is what I have, yes,  
17 sir.

18 Q And this constitutes LILCO's written response  
19 to the CAT inspection, correct?

20 (Pause.)

21 (Panel of witnesses conferring.)

22 Q Mr. Museler, my question simply was whether  
23 this document constitutes LILCO's response to the CAT  
24 inspection, written response.

25 A (WITNESS MUSELER) Yes, sir, Mr. Lanpher. I'm

1 sorry for the delay. The difficulty we were having is  
2 that Appendix B that you've asked us to look at is  
3 covered in this response. However, we had to go through  
4 the Appendix A, if you will, because your question was  
5 does this constitute our response I believe to the  
6 entire CAT team inspection, not just to Appendix B, and  
7 if that is correct. It just took us a few moments to go  
8 through all of those categories, including the ones you  
9 haven't asked about, to ensure that we covered all of  
10 them.

11 Q And is the answer yes?

12 A (WITNESS MUSELER) Right till now we've looked  
13 at Appendix A and B, and the answer is yes. There is an  
14 Appendix C, if you want us to verify that also.

15 Q Why don't you verify that also?

16 (Panel of witnesses conferring.)

17 A (WITNESS MUSELER) Our answer to that is yes  
18 also, sir.

19 JUDGE BRENNER: I was going to suggest page 18.

20 BY MR. LANPHER: (Resuming)

21 Q Mr. Museler, turning your attention to page 12  
22 of SNRC-743, that is where the LILCO response to  
23 Appendix B, the notice of deviation, by the staff is set  
24 forth, or the response starts at page 12, correct?

25 A (WITNESS MUSELER) Yes, sir.

1 Q In LILCO's response to item 1 of Appendix B to  
2 the CAT inspection does LILCO disagree with the NRC  
3 staff finding?

4 (Panel of witnesses conferring.)

5 A (WITNESS MUSELER) Mr. Lanpher, we do not  
6 agree that the NRC finding constituted a deviation from  
7 any FSAR commitment.

8 Q Is that set forth in the LILCO response, sir?

9 (Panel of witnesses conferring.)

10 A (WITNESS MUSELER) Mr. Lanpher, the NRC audit  
11 finding shows a difference between the information which  
12 was placed, the informational material which was placed  
13 in the FSAR early on in the process and the actual  
14 installed condition of the plant in terms of the numbers  
15 and sizes of bolts that were used to mount certain  
16 cabinets in the plant. And this was perhaps a good  
17 example to draw the difference between what I've said is  
18 not a violation of any commitment and the informational  
19 detail which is in the FSAR for the staff's  
20 informational purposes.

21 The commitment in the FSAR that is, I believe,  
22 what is relevant to the staff's review and to the  
23 finding of adequacy of the FSAR is that certain cabinets  
24 all phases of the plants are defined, but in this  
25 particular case that these cabinets are seismically

1 installed in an adequate manner to perform their  
2 intended function in the case of an earthquake or an  
3 accident. That is the commitment.

4           The detailed information we put in there in  
5 the early stages indicated what generally was the  
6 expected mounting details before the design details were  
7 available from the manufacturers. In fact, the way the  
8 process works is that the manufacturer and/or Stone and  
9 Webster, depending upon who has the responsibility, but  
10 one of those two organizations who was responsible for  
11 certifying the adequacy, the seismic adequacy of those  
12 panels, determines the mounting details that are  
13 required.

14           Those design details are utilized in the field  
15 for the actual installation, and that is what this  
16 indicates, that we had installed it. And I guess if  
17 these were General Electric panels, we had installed it  
18 to the General Electric drawings. The General Electric  
19 panel drawings called for the kind of mounting that we  
20 put in the field.

21           Now, it is true that at the time of the audit  
22 the auditor noted that the FSAR table which described  
23 the number of bolts that held these cabinets down was  
24 not the same, didn't contain the same information as  
25 what we actually did. We actually utilized the

1 manufacturer's -- we actually utilized the  
2 manufacturer's drawings to install these.

3           So the difference is that the commitment in  
4 the FSAR is that these panels be seismically adequate.  
5 If the NRC -- and they have done this on several  
6 occasions -- if the NRC staff review wanted or needed  
7 that detail in order to perform, if they had intended to  
8 perform a more detailed evaluation of those particular  
9 cabinets, they would have done that by requesting more  
10 detailed information because you couldn't do it from  
11 that information. You would have to do it from the same  
12 documents we built the plant with, namely the GE design  
13 drawings. And they would have done that if they had  
14 picked this as an item that they needed that detail on.  
15 For their overall evaluation of the application of the  
16 seismic portion they wouldn't need that.

17       Q     Mr. Museler, you would agree then that the  
18 as-built plant systems we're talking about here, this  
19 cabinet differed from the description or the details  
20 which were set forth in FSAR, correct?

21       A     (WITNESS MUSELER) The as-built plant was  
22 different in terms of this detailed description  
23 information from the FSAR information.

24       Q     And you differ with the NRC staff because you  
25 do not believe that those details constitute a part of

1 an FSAR commitment, correct?

2           A       (WITNESS MUSELER) Yes, sir. Those kinds of  
3 details do not constitute an FSAR commitment.

4           Q       Mr. Museler, and maybe this will be an  
5 appropriate place for a break, and maybe we should take  
6 an extra five minutes to give Mr. Museler an  
7 opportunity; but let me pose the question.

8                   I would like you to look at LILCO's responses  
9 to items 4 through 8, skipping over 2 and 3 for the time  
10 being, but items 4 through 8, which start at the bottom  
11 of page 14 and continue through page 17, Mr. Museler.  
12 And my question is whether you agree that in each  
13 instance the as-built plant differed, at least insofar  
14 as details in the way you used the term "details," from  
15 the FSAR description.

16           MR. LANPHER: Judge Brenner, in asking that  
17 sort of a global question I think the witness is  
18 probably going to have to take a look obviously.

19           JUDGE BRENNER: All right. Let's break until  
20 3:40.

21                   (Recess.)

22

23

24

25

1 JUDGE BRENNER: Okay. Let's continue.

2 BY MR. LANPHER: (Resuming)

3 Q Mr. Museler, the question is pending. Do you  
4 recall it?

5 JUDGE BRENNER: Do you want to take him  
6 through them one by one or sit back while he goes  
7 through all of them? It's up to you, Mr. Lanpher. It  
8 occurred to me that if you have followup -- well,  
9 whatever you want to do.

10 MR. LANPHER: Well, I don't know how long the  
11 answer is going to be. Let's give it a try going  
12 through.

13 BY MR. LANPHER: (Resuming)

14 Q If you could go through all of them as briefly  
15 as possible and make your answer complete, and then if  
16 we need to come back on individual ones, we can.

17 A (WITNESS MUSELER) Yes, sir. With respect to  
18 number 4, the answer to that question is no, and the  
19 reason the answer is no is specifically related to the  
20 discussion we had earlier in terms of how we ensure that  
21 the staff has the appropriate information early. The  
22 LPCI loop selection logic change was documented in the  
23 FSAR in Q and A's 212.2, 223.30, and 223.71, which are  
24 part of the FSAR. The earliest one of those was 1976.  
25 So that the FSAR information was amended by these Q and

1 A's, and therefore, the information was in fact there  
2 even though the particular figure had not been updated.  
3 In addition, in 1977 and 1978 the staff reviewed the  
4 detailed Stone and Webster design documents which  
5 implemented this change.

6           Should I go on to number 5, Mr. Lanpher?

7       Q     Yes. Why don't you go on?

8       A     (WITNESS MUSELER) On item 5 the NRC noted  
9 that the drywell pressure and LPCI low pressure  
10 injection pressure were 2 PSI and 500 PSI,  
11 respectively. In fact, the actual set points that are  
12 implemented in the field are 1.69 PSIG for the primary  
13 containment high pressure signal, and 409 PSIG for the  
14 LPCI reactor low pressure injection.

15           That situation occurs because the actual final  
16 safety analysis revolves around the development of the  
17 final system design and the detailed set points of the  
18 various parameters. The 2 PSI and 500 PSI are generic  
19 numbers that are used in the initial stages of the FSAR.

20           The significant point is that those detailed  
21 set point numbers are the numbers that support -- that  
22 are used to support the safety analysis. In other  
23 words, that is what the safety analysis dictates what  
24 those numbers have to be.

25       Q     Mr. Museler, I will let you continue. My



1 question is whether you agree that the FSAR differed in  
2 detail from the as-built or as-implemented  
3 construction. So if it's possible to answer yes or no,  
4 I would appreciate it.

5       A       (WITNESS MUSELER) I'm sorry, sir. The answer  
6 to that question in item 5 is yes, with the explanation  
7 I've given.

8               Item 6 covers six specific items, some of  
9 which are -- some of which fall into each category.  
10 They are unnumbered, so I will just refer to them as the  
11 first, second, et cetera.

12              The first one in item 6, the answer to your  
13 specific question is yes, the physical arrangement in  
14 the field is different from the as-installed situation;  
15 and this is a matter of the Christmas tree arrangement  
16 of pipes coming off other pipes having no effect on the  
17 logic of the system.

18              The second item, the answer is yes and no,  
19 because the relief valves to discharge to floor drains,  
20 which is the as-installed condition. However, the floor  
21 drains in the reactor building go to the rad waste  
22 system. So semantically there was a difference there,  
23 but in fact, in point of fact in terms of the process  
24 there is no difference. But that is the difference the  
25 NRC -- I can't say if that is yes or no, that is,

1 depending upon how you interpret it.

2           The third item is another example of a  
3 semantic difference between the NRC's interpretation of  
4 the nomenclature and our own. The valve is where it is  
5 shown. The NRC inspector's concern is that it is not  
6 really a thermal relief valve, and the function of the  
7 valve is to provide thermal relief in our understanding,  
8 but the inspector's idea or his belief as to what  
9 constituted a thermal relief valve we never were able to  
10 really get clear in our own minds. He did not have a  
11 question as to whether the valve would function. He had  
12 a question as to what kind of valve this really is. He  
13 believed it was a pressure control valve, which it is.  
14 That is what a thermal relief valve does. And we never  
15 did satisfactorily resolve his concern.

16           I don't believe he had a safety concern on  
17 this matter. I think he was concerned that we may have  
18 not labeled it properly.

19           The fourth item, the answer is yes. The  
20 physical installation does look differently in terms of  
21 arrangement of where the particular pipes come off of  
22 other pipes having no effect on how that system  
23 operates, but the physical arrangement was different  
24 than what the auditor noted.

25           We are now up to the fifth one.

1 Q Just so we can track, that is the cooling  
2 water.

3 A (WITNESS MUSELER) The fifth one is the  
4 cooling water for RHR pumps, and the answer to that is  
5 no. The two terms, "emergency equipment cooling water,"  
6 which is a GE generic term, and the "reactor building  
7 closed loop cooling water" are synonymous for Shoreham.  
8 They are the same system. This was a matter of  
9 clarification to ensure that the NRC -- NRC's concern  
10 was that the system that supplied the cooling water  
11 might not be powered from the emergency buses which the  
12 reactor building closed loop cooling water system is.  
13 And it was just a matter of resolving that particular  
14 discrepancy.

15 The system is -- the emergency equipment  
16 cooling water and the reactor building closed loop  
17 cooling water are one and the same.

18 The last one, the drains from the RHR suction,  
19 the answer to that, to your question on that item is  
20 yes. The drains do not tie together before they  
21 discharge. They discharge into a funnel into the  
22 reactor building sumps. So the difference was that  
23 instead of two lines discharging into the same sump, the  
24 arrangement was that we tied the two lines together for  
25 efficiency's sake and ran the single resulting line into

1 the same sump. That is another example of what I will  
2 characterize as the detail we need to build the plant as  
3 opposed to the detail needed to evaluate the plant. So  
4 that takes care of item number 6.

5 Q Mr. Museler, let me go back to what I had said  
6 before and ask a followup question here, and it really  
7 goes back to number 4 as well.

8 In a number of your answers you have indicated  
9 that the answer is no for the reasons given; for  
10 instance, the one on the thermal relief valve, it wasn't  
11 quite resolved, but I think the --

12 A (WITNESS MUSELER) That was a yes and no,  
13 sir.

14 Q That was a yes and no. And on the cooling  
15 water that was a no because the terms were synonymous.

16 When I look at the answer by LILCO which is  
17 set forth on page 16 to this item 6, your corrective  
18 action is that the figures are going to be revised to  
19 agree with the as-constructed plant, and you referenced  
20 the plant configuration review. And I got the  
21 impression from these answers that there was no  
22 disagreement between you -- that means LILCO -- and the  
23 staff.

24 Do you know why the explanations you just  
25 provided on the record were not spelled out in your

1 response to the staff?

2       A       (WITNESS MUSELER) Yes, sir, I do. The  
3 responses I just went through were discussed with the  
4 staff. I believe most of them were probably discussed  
5 at the time during the inspection or during or  
6 immediately after the exit interview.

7               The simple fact is that the NRC believed that  
8 these items should be changed to make it agree in the  
9 detail we've been discussing, so that at least in terms  
10 of the way they interpret the drawings and the text that  
11 there was no ambiguity from their standpoint. And quite  
12 simply, we decided to switch rather than fight on these.

13       Q       Are you saying then that you did discuss each  
14 of these with the NRC staff and the staff, to your  
15 recollection, disagreed with the explanations?

16       A       (WITNESS MUSELER) The staff did not, to my  
17 recollection, disagree with the explanations. The  
18 staff's position was, though, that we should change the  
19 FSAR to make it compatible with their observations.

20       Q       Did you also discuss with the staff what  
21 you've indicated the record today, your, LILCO's, view  
22 that these are details rather than commitments?

23               (Panel of witnesses conferring.)

24       A       (WITNESS MUSELER) Mr. Lanpher, the subject of  
25 this particular subject and what constitutes something

1 we should change and something we shouldn't change has  
2 been ongoing with the NRC for a number of years.

3 Q My question went to the commitment versus  
4 details.

5 A (WITNESS MUSELER) Yes, sir. And what I was  
6 about to say was in this Attachment B or Appendix B we  
7 did have that discussion. I can't say that we had it on  
8 each and every one of these items. I know we discussed  
9 it when we went through these items. However, you will  
10 note that Appendix B is deviations.

11 The NRC also has indicated what they consider  
12 to be violation in the same area, and we tend to have  
13 that discussion as a matter of course when we go through  
14 what the NRC notices as a violation. We did have it in  
15 this case. We probably did not have it in the case of  
16 each and every one of these items because the NRC -- the  
17 NRC's point, I believe, in this case was that they  
18 thought that we should make sure that there was no  
19 ambiguity between the as-built plant and the FSAR.

20 Q Insofar as you are aware does the NRC agree  
21 that these are details, or does the NRC continue to  
22 believe as they first represented back on the first part  
23 of Appendix B in the CAT inspections when they used the  
24 word "commitments," does the NRC still believe these are  
25 commitments?

1 (Panel of witnesses conferring.)

2 A (WITNESS MUSELER) Mr. Lanpher, I really can't  
3 answer that question. And I would note that we have not  
4 received -- as you know, we responded to the CAT  
5 inspection. We expect to get a further response or a  
6 further indication of the NRC's position on these items.

7 Q Fine. Mr. Museler, I interrupted you before.  
8 We were going to go to page 17 of SNRC-743 on items 7  
9 and 8, and you hadn't had a chance to address those.

10 A (WITNESS EIFERT) Well, while he is looking at  
11 that, if I may, the NRC's reporting criteria, the  
12 definition of "deviation" I believe --

13 MR. LANPHER: Judge Brenner, I'm going to ask  
14 that you ask the witness not to supplement. I don't  
15 think this goes to my question.

16 JUDGE BRENNER: Give me one minute.

17 (Board conferring.)

18 JUDGE BRENNER: Mr. Eifert, let's pick up Mr.  
19 Lanpher's point first. I, of course, don't know what  
20 you were about to say, and neither does anybody else.  
21 It sounded like it was a complete answer from Mr.  
22 Museler before.

23 Did you want to respond to the question as to  
24 what the NRC thought? That was the last question.

25 MR. LANPHER: Judge Brenner, my last question

1 had to do with whether they knew whether the NRC  
2 continued to believe that there were violations of  
3 commitments. I didn't use the word "violations," but it  
4 went to the commitment versus detail.

5 JUDGE BRENNER: Is that what you were  
6 responding to, Mr. Eifert?

7 WITNESS EIFERT: Yes, Judge Brenner, I believe  
8 I was. The point I was going to make is that the NRC's  
9 own criteria for determining severity level, they do  
10 give guidance on what they define as deviations, and  
11 they use the term "informal commitment" in that document  
12 and not the term "commitment" as used in this report.  
13 And I wanted to point that out to Mr. Lanpher.

14 And the context of the term "commitment" as we  
15 are using it is in terms of design commitments in the  
16 FSAR.

17 JUDGE BRENNER: Well, I think that was  
18 responsive. Mr. Eifert has been two for two in the last  
19 four days, so maybe we are all on a learning curve.

20 I'm not criticizing you, Mr. Lanpher. You  
21 couldn't tell from his first few words. But I think the  
22 witnesses have gotten a lot better in the last few days  
23 as to that.

24 MR. LANPHER: I'm not going to argue with you,  
25 Judge. I disagree on that one. I think he is one for



1 one or one and one, I should say.

2 JUDGE BRENNER: I wanted to ask something.

3 Mr. Museler, how do you know the staff is  
4 planning a further response to your response? Is there  
5 something in a letter or something you know other than a  
6 letter?

7 WITNESS MUSELER: Yes, sir. We had a meeting  
8 in Region I which was a notice meeting that Suffolk  
9 County was represented at where we discussed a number of  
10 issues, one of which was items that the I&E division,  
11 the Inspection division, had identified in audit  
12 findings, and we had responded that they were incorrect  
13 in the way they were looking at the situation, and that  
14 those items were being referred to NRR to the licensing  
15 division where they properly belong in terms of  
16 resolving that kind of a difference.

17 So that is how I know that on this one they do  
18 intend to get back to us.

19 JUDGE BRENNER: You were speaking generally as  
20 to all of the July 28, 1982 submittal by LILCO. Some of  
21 these items you don't say they are wrong; you just say  
22 you're going to make the change. So they may not  
23 respond to those.

24 WITNESS MUSELER: Yes, sir. I don't think  
25 they will. They will respond to the ones that we have

1 said clearly are not violations.

2 JUDGE BRENNER: When was that meeting, roughly?

3 MR. LANPHER: I think it was August 25,  
4 roughly.

5 WITNESS MUSELER: It was that time frame,  
6 Judge.

7 JUDGE BRENNER: Mr. Bordenick, here we are, a  
8 July 28th letter and an August meeting, and here we are  
9 at the end of October.

10 MR. BORDENICK: Judge Brenner, I'm not  
11 positive of this, but I believe that -- I guess the  
12 response to response or whatever you want to term it is  
13 in preparation, and it may be available this very week.  
14 I have not been able to specifically contact anyone on  
15 that in the last few days.

16 JUDGE BRENNER: I hope that they have been and  
17 will be in the very near future sensitive to our  
18 schedule here.

19 MR. BORDENICK: They are to the best of my  
20 knowledge, Judge Brenner. They are very sensitive to  
21 the schedule in this proceeding, and they are proceeding  
22 as best they can.

23 MR. LANPHER: Judge Brenner, this was the  
24 subject of a call between myself and Mr. Bordenick last  
25 week along with his regional people, and they did

1 represent that it was a draft; it was in the final  
2 review process, I believe; and they didn't want to let a  
3 draft out. And I can understand that. But I was led to  
4 believe that if we don't have it this week or very early  
5 next week -- if we don't have it this week that very  
6 early next week it would be available.

7 MR. ELLIS: Was that a conference call that  
8 involved anyone from our firm?

9 JUDGE BRENNER: Mr. Ellis, I'm not  
10 interested. Ask him later. If the Board -- they don't  
11 have to involve you on a call. And maybe you were  
12 involved and maybe you weren't through your colleagues,  
13 but I don't care as of this moment.

14 Okay. I just wanted to inquire of Mr.  
15 Bordenick, and I got the response. Did you want to add  
16 something?

17 MR. BORDENICK: No, Judge Brenner.

18 BY MR. LANPHER: (Resuming)

19 Q We were going to go to number 7 on page 17, I  
20 think, Mr. Museler.

21 A (WITNESS MUSELER) Yes, sir. The answer on  
22 number 7 is no. The part of the FSAR that the NRC  
23 inspector reviewed was the text, and the text was not  
24 worded perhaps in the most efficient manner. However,  
25 the text was not incorrect. The central point was that

1 the heat exchanger, the RHR heat exchanger was protected  
2 from both pump discharge overpressure and RCIC steam  
3 supply overpressure in the steam condensing mode of that  
4 system.

5           The FSAR, the main, I guess, point of  
6 confusion was that there were two relief valves involved  
7 -- one on the steam supply and the steam supply --  
8 excuse me, Mr. Lanpher. One difference was that it  
9 indicated the RCIC steam supply -- rather, the RCIC  
10 steam supply rather than HPCI steam supply; and that was  
11 incorrect. It was supposed to be HPCI, and that was a  
12 typo. So that part of the answer is yes.

13           The other part of it, where the relief valves  
14 were located, was simply a matter of how one would  
15 interpret those words. The one on that discharge, the  
16 HPCI or the RCIC discharge line, was where the words  
17 would lead one to believe it was. The one noted in the  
18 text as being on the discharge line to the heat  
19 exchanger instead of being close -- excuse me -- on the  
20 discharge line of the pump into the heat exchanger was  
21 in fact on right on the heat exchanger as opposed to on  
22 the line immediately attaching to the heat exchanger  
23 with no intervening valves.

24           The point being that the NRC reviewer thought  
25 that the text should be changed to say that the valve

1 was right on the heat exchanger. The function of the  
2 valve, the performance of the valve were never in  
3 question. It was just a matter of that semantic  
4 difference.

5           Item 8 is I guess again a yes and a no. The  
6 text in the FSAR stated that only the air-operated check  
7 valve and the check bypass valve of this particular  
8 portion of the system that the text was describing are  
9 located in the containment. The reviewer noted that  
10 there were other valves in the containment in addition  
11 to these. The text was meant to indicate that these  
12 were the functional parts or the functional valves in  
13 the system and that only air-operated checks and check  
14 bypass valves from the functional standpoint were  
15 located in containment.

16           In fact, one of the valves that the inspector  
17 noted, the isolation valves, one of the block valves is  
18 in fact shown on the figure. And the valves the NRC  
19 inspector noted that are in containment in addition to  
20 these valves are vent and drain valves which are not in  
21 all cases shown on FSAR drawings, nor is there any need  
22 for them to be. And the block valves of the type I just  
23 mentioned.

24           So there is some technical accuracy to the way  
25 the inspector interpreted the words, and our change --

1 and we are going to change the FSAR in this case -- is  
2 just to clarify that the text will say only that only  
3 the air-operated check valves and check bypass valves  
4 for functional relationship, for system functioning, or  
5 words to that effect, are located in the containment.  
6 So we're going to try to clarify the text some.

7           As I said, that is a yes and a no.

8           Q     Now, Mr. Museler, in almost every instance in  
9 its response to the staff findings in Appendix B to the  
10 CAT inspection, and maybe in fact in every instance,  
11 there is reference to the Shoreham plant configuration  
12 review. When was the Shoreham plant configuration  
13 review undertaken or first initiated?

14                   (Panel of witnesses conferring.)

15           A     (WITNESS MUSELER) Mr. Lanpher, do you want to  
16 know when we actually started to do them or when the  
17 concept was first adopted?

18           Q     When did you decide to commence the program?  
19 Obviously it has been an ongoing program this year, but  
20 was it last year or several years ago?

21                   (Panel of witnesses conferring.)

22           A     (WITNESS MUSELER) We decided definitely to do  
23 it in the latter half of 1981, if that's close enough.  
24 I don't know exactly.

25           Q     So it is a recent program?

1           A       (WITNESS MUSELER)   Yes, sir.   About a year and  
2 a half.

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1 Q Let me go back to one last question on the CAT  
2 inspection to get a little better context. The first  
3 page of that inspection, it is really the cover letter  
4 to LILCO, says, "This refers to the special inspection  
5 of completed construction of an emergency core cooling  
6 system." And I want to focus your attention on the word  
7 "completed construction."

8 The CAT inspection basically focused on the  
9 residual heat removal system, correct?

10 A (WITNESS MUSELER) That is correct, sir. They  
11 also looked at some ancillary support systems.

12 Q The focus was on RHR. What was the status of  
13 construction of the RHR system as of February 1982?

14 (Panel of witnesses conferring.)

15 A (WITNESS MUSELER) Mr. Lanpher, the system was  
16 what we termed construction complete. It had been  
17 turned over to the LILCO start-up organization. It had  
18 a punch list of items yet to be completed. I asked the  
19 other gentlemen, and we don't recall the size of the  
20 punch list, so I can't give you that information. It  
21 was in the checkout and initial operating stage. It had  
22 not completed its pre-operational tests at that time.

23 Q Those descriptions, having been turned over to  
24 start-up, and the other descriptions that you gave, that  
25 is what you mean by construction complete?



1           A       (WITNESS MUSELER) No, sir. I added that  
2 because construction complete is a schedule term on the  
3 jobsite. A system could well be construction complete  
4 and not be turned over and not be checked out, and not  
5 be undergoing its initial phases of operation. That may  
6 not have any relevance to your question, but it is a  
7 specific term to us, and that is why I added that it had  
8 reached that milestone, construction complete, it had  
9 been turned over to the start-up organization and the  
10 other items I mentioned.

11          Q       What is a B release, Mr. Museler?

12          A       (WITNESS MUSELER) A B release, Mr. Lanpher, is  
13 a start-up term indicating an intermediate system  
14 release to the start-up organization. It is the first  
15 level of system release from construction to startup.  
16 There are three levels of releases, the last level being  
17 a C release which is the release of a single component;  
18 a cable, a pump or a wire or the like.

19                 The B release is the release of a system or  
20 the major portion of a system, perhaps a subsystem, so  
21 it is to turn over an operational entity. And the A  
22 release is the program we described in our pre-filed  
23 testimony, which is the final quality assurance check  
24 prior to the release to the operating department.

25          Q       Which, -- as of February 1982, which if any

1 releases, in terms of C, B, and A, had the RHR had, or  
2 any part of it?

3       A       (WITNESS MUSELER) There had been a large  
4 number of C releases preparatory to the system turnover,  
5 so that the start-up organization was already checking  
6 out pumps, valves, items such as that. The system had  
7 been B released at that time, but the A release has not  
8 occurred as of this time.

9               (Counsel for Suffolk County conferring.)

10       Q       Mr. Museler, in one of your earlier answers,  
11 you indicated that while the RHR had been turned over to  
12 start-up, there was a punch list. How do you define a  
13 punch list? What kinds of items are on there?

14       A       (WITNESS MUSELER) The punch list contains a  
15 number of different types of items. The principal items  
16 from a construction standpoint are those components  
17 which have not been construction complete and inspected,  
18 and, therefore, not turned over to start-up jurisdiction.

19               For example, perhaps the most common example  
20 is a hanger where most of the hangers may be installed  
21 but a number of them, as we discussed, are subject to  
22 modification, and therefore, are not finally inspected  
23 nor are they released to startup. A number of cables  
24 might not be completed. A specific instrument might not  
25 be installed or connected yet, and typically, the RHR

1 system being the largest system. The number I recollect  
2 is that it by itself had over 600 cables, and there  
3 probably were some number in the couple of dozen range  
4 that were not yet terminated, or perhaps not yet  
5 inspected.

6           In addition, those are physical items not yet  
7 complete by construction. It also contains -- if an  
8 item is complete but not inspected it would contain  
9 that, but that is really the same type of category. It  
10 would contain any associated vendor documentation that  
11 had not completed the entire review cycle yet and been  
12 placed in the permanent plant file.

13           It is also utilized by the start-up  
14 organization -- I'm sorry, it would also contain what  
15 are called repair reworks, which are items that are  
16 being worked on by the start-up organization, not by the  
17 construction organization, so that items that they have  
18 physical work to perform, either modification or  
19 completion, are noted and tracked in that manner.

20           Startup also utilizes the punch list for  
21 certain specific follow-up items indigenous to their own  
22 procedures, but those are the major categories of the  
23 punch list.

24           Q     Thank you. In your answer you, a couple of  
25 times, talked about items not yet inspected or

1 inspections. Is this the final inspection of an item  
2 that you're talking about, or what inspection process  
3 are you referring to?

4       A       (WITNESS MUSELER) In most cases, I am  
5 referring to the final inspection of the item. In the  
6 case of some specific items it is somewhat of a  
7 misnomer. It is the final inspection, for example, of  
8 hangers; the final inspection of record of Mr.  
9 Arrington's organization. However, those hangers are  
10 again looked at as part of the as-built stress  
11 reconciliation program. But generally, the inspections  
12 we are speaking of are the final inspections of record.

13       Q       So if an item is not on the punch list --  
14 we're talking about in the RHR context here -- in most  
15 instances it will have undergone its final inspection?

16               (Panel of witnesss conferring.)

17       A       (WITNESS MUSELER) That is generally correct,  
18 Mr. Lanpher. Mr. Arrington just reminded me, too, for  
19 the purposes of clarity to indicate that a system  
20 release as constituted on the Shoreham site, is defined  
21 by a specific list of the components that are in that  
22 system.

23               For example, the RHR system has a list called  
24 the frozen component list, which says these are all of  
25 the components in that system as defined by the start-up

1 organization. The only reason I point that out is that  
2 there are some components that may bear an RMB E-11  
3 designator that may not be in that system; for  
4 operational reasons they may be in some other system,  
5 and they would appear on that system's frozen component  
6 list. But I think generally, the way you understand it  
7 is correct.

8 Q Thank you. Now getting back to the plant  
9 configuration program, you indicated that it was started  
10 sometime in the latter half of 1981. Was this  
11 undertaken at the request of the NRC staff?

12 (Panel of witnesses conferring.)

13 A (WITNESS MUSELER) Mr. Lanpher, the NRC staff  
14 did not request us to embark upon this program. As a  
15 result of a number of meetings over the past two years,  
16 perhaps a little longer than that, and discussions with  
17 the staff in I believe it was mid-1981, the staff  
18 indicated to us that their opinion was they thought we  
19 ought to do more than we were doing to incorporate the  
20 type of detail that we have just been discussing in the  
21 CAT system, in the CAT inspection findings; that we  
22 ought to do more to insure that that level of detail was  
23 kept more up to date than we had been keeping it.

24 The staff didn't indicate what we should do;  
25 they expressed that concern to our management. The

1 result of that was that we, in order to address that  
2 staff concern, and frankly, also looking ahead to the  
3 regulations, the regulatory changes that had -- I'm not  
4 sure if they were proposed or had been issued at that  
5 time, but certainly the licensing people were aware of  
6 the forthcoming changes in regulatory policy regarding  
7 the FSAR's update and the FSAR's level of detail -- our  
8 management made the decision to embark on a program that  
9 would satisfy, we believed, both the concerns that the  
10 NRC expressed to us, and also, to prepare and to insure  
11 that when the regulations were really issued, if they  
12 were and we think they have been, that we would be in a  
13 good position to have the FSAR reflect the kind of  
14 detail at the time of operating license issuance that  
15 the staff, I believe, wants.

16           So it was a two -- there were two reasons for  
17 the decision, and I think it just reflects the ongoing  
18 changes in the staff's requirements, the NRC's  
19 requirements. In the nuclear industry over the past 10  
20 years, FSARs have gone from three or four volumes to 20  
21 volumes and of an increasing level of detail, and we  
22 think this is just a natural evolution of that process.

23           Q     Mr. Museler, Attachment 28 to the pre-filed  
24 testimony is Project Procedure P-309, which is entitled,  
25 Plant Configuration Review. Is this the procedure which

1 guides the implementation of this program?

2 (Panel of witnesses conferring.)

3 A (WITNESS MUSELER) Yes, sir.

4 Q I would like to turn your attention to that  
5 procedure, and particularly, to page 2 of it, and first,  
6 am I correct that the persons undertaking the plant  
7 configuration review of a particular system will  
8 undertake that review, and if they believe they have  
9 found potential discrepancies between the FSAR and the  
10 as-built plant, then they document that on a discrepancy  
11 report?

12 A (WITNESS MUSELER) That is generally correct,  
13 sir.

14 Q And the kind of discrepancy report which is  
15 used is Appendix 5.3, or at least the cover sheet for  
16 it. Appendix 5.3 to this procedure, P-309.

17 A (WITNESS MUSELER) That is the report, sir. It  
18 may have supplemental pages, but that is the report.

19 Q Looking at that Appendix 5.3, the middle of  
20 the page, the statements, "Reviewed by LILCO project  
21 licensing, LILCO project engineer." When those  
22 statements are signed, am I correct that that  
23 constitutes the position of project licensing and  
24 project engineering when a discrepancy does, in fact,  
25 exist? And the basis for my question really is

1 paragraph 3.5.3 back on page 2 of the procedure.

2 (Panel of witnesses conferring.)

3 A (WITNESS MUSELER) Mr. Lanpher, what that does  
4 indicate is that when it is signed off by those three  
5 personnel -- and I believe you did mention the manager  
6 of special projects who is the person charged with the  
7 overall management of this program -- when those three  
8 individual sign off the initial discrepancy report prior  
9 to the disposition by whoever has to disposition it,  
10 that means that they concur that the observations are  
11 accurate.

12 Q That a discrepancy exists between the FSAR and  
13 the as-built facility?

14 A (WITNESS MUSELER) I'm hesitant to say it that  
15 way because there are some instances, I believe, where  
16 there is a semantic difference, just as there was with  
17 the NRC inspectors. But generally, an observation such  
18 as the valve joints, a pipe on one side of two other  
19 attachments to it instead of in the middle of it, to  
20 that extent, yes. The word "discrepancy" is -- if you  
21 define it that way, that is accurate.

22 Q Looking at page 122 of your pre-filed  
23 testimony for just a minute, and the first sentence  
24 under Shoreham Plant Configuration Review states in part  
25 that the program is to determine if the as-built



1 configuration of safety-related systems conforms to the  
2 FSAR and supporting licensing documents. That sentence  
3 is correct, is it not?

4       A       (WITNESS MUSELER) Yes, sir, that is the  
5 purpose of the program; to assure ourselves and the NRC  
6 that we meet the commitments in the FSAR. The detailed  
7 implementation of that process identifies in much the  
8 same manner as the Torrey Pines auditor is required to  
9 do, to document everything that they observed that was  
10 different between those two documents.

11       Q       Between the FSAR commitments and the as-built?

12       A       (WITNESS MUSELER) No, sir. The charge to the  
13 people conducting this review is to document any  
14 differences between the FSAR as literally read or  
15 literally looked at in the case of a drawing and the  
16 as-built plant. We pointed out earlier that all of the  
17 details and information provided in the FSAR is not a  
18 commitment, so that is why I'm drawing that distinction,  
19 sir.

20       Q       Fine, thanks for drawing that clarification.

21               Now looking at Appendix 5.4 to Procedure 309,  
22 when is Appendix 5.4 utilized?

23       A       (WITNESS MUSELER) Appendix 5.4, sir, is  
24 utilized when the entire system review by the SCPR group  
25 is complete, and all the CDRs, the configuration

1 discrepancy reports, have been compared. All of those  
2 CDRs are complete, not dispositioned but completed,  
3 signed by the three gentlemen we referred to previously,  
4 the project licensing, project engineer and manager of  
5 special projects as to the accuracy of the observation.

6           The plant configuration report is then  
7 compiled; it is simply a compilation of those reports  
8 which are sent to me for final signature, and to the  
9 manager of special projects, also. So that the entire  
10 system review is complete. It is then forwarded to the  
11 appropriate department for resolution of the CDRs.

12           So this form is utilized. When the review of  
13 the system is complete, I sign it off to indicate that I  
14 have looked at all the discrepancy reports and  
15 acknowledge that the system review is complete. It then  
16 goes into the process of a detailed evaluation of those  
17 specific CDRs.

18       Q     You are the Manager of Special Projects? That  
19 is your line?

20       A     (WITNESS MUSELER) No. If you will look under  
21 the comments, there are now four people that have to  
22 sign it, and I am the fourth one.

23       Q     Manager of Construction and Engineering?

24       A     (WITNESS MUSELER) Yes, sir.

25       Q     Now, for you to put your signature on this,

1 Mr. Museler, do you review the underlying reports?

2 A (WITNESS MUSELER) Yes, I do, sir.

3 Q And before you sign, do you concur? Do you  
4 need to concur, in your own mind, that a discrepancy, in  
5 fact, exists?

6 A (WITNESS MUSELER) I need to concur, and I  
7 don't go out and recheck the plant in all of these  
8 cases. Typically, on an entire system review I may have  
9 one or two questions of the preparer, and I generally  
10 accept their observations after their detailed  
11 observations have been verified by the project engineer  
12 and the manager of special projects.

13 I review them principally so that I understand  
14 what observations they have come up with. Because the  
15 primary concern of this program -- while I mentioned  
16 there are several rationales to it, the primary concern  
17 of this program is to determine whether, in fact, we do  
18 meet our FSAR commitments. So my own focus in this is  
19 to get an early reading of whether any of these  
20 observations would constitute a deviation from the FSAR  
21 commitments, as opposed to differences in the  
22 informational detail. Does that answer your question,  
23 sir?

24 Q I think we will bring it out more in further  
25 questions. I think the question was broad, and you did

1 just fine.

2 MR. LANPHER: Judge Brenner, I would like to  
3 have marked as Suffolk County Exhibit 71 for  
4 identification a document, the cover sheet of which my  
5 office prepared. It is entitled "Shoreham Plant  
6 Configuration Reports" and there are seven documents  
7 enclosed tabbed 1 through 7, which constitute -- we will  
8 establish it on the record -- seven Shoreham plant  
9 configuration reports.

10 JUDGE BRENNER: That is so marked.

11 (The document referred to  
12 was marked Suffolk County  
13 Exhibit No. 71 for  
14 identification.)

15 BY MR. LANPHER (Resuming):

16 Q Mr. Museler, let's just start by looking at  
17 Tab 1, and I would like you to go -- well first, Tab 1  
18 constitutes the plant configuration report on the  
19 reactor water recirculation system, correct?

20 A (WITNESS MUSELER) Yes, sir.

21 Q And the first sheet entitled Plant  
22 Configuraton Report, is the same sheet, though completed  
23 this time, as Appendix 5.4 of P-309; correct?

24 A (WITNESS MUSELER) Yes, sir.

25 Q And if you'll turn about five pages into Tab

1 1, there is a document entitled Configuration  
2 Discrepancy Report, and it is for the reactor water  
3 recirculation system. This is one of the detailed  
4 reports conforming to Appendix 5.3 of P-309; correct?

5 A (WITNESS MUSELER) Mr. Lanpher, just to be  
6 absolutely sure, on the upper righthand corner there is  
7 a CDR number, B31/01. Is that the page you're referring  
8 to?

9 Q Yes. And sheet 1 of 4.

10 A (WITNESS MUSELER) Yes, sir, that constitutes  
11 the first page of the CDR.

12 Q And the CDR indicates that the appropriate  
13 persons have signed off on it, so that they have  
14 determined that they believe that a discrepancy does  
15 exist between the FSAR and the as-built plant? Correct?

16 (Panel of witnesses conferring.)

17 A (WITNESS MUSELER) There are two observations  
18 here, Mr. Lanpher. One stating that the certain test  
19 connections are, in fact, included in the system in the  
20 field and not as shown on a specific FSAR figure; and in  
21 the other case it is just the opposite; that there are  
22 particular connections shown on an FSAR figure and these  
23 are connections to a large bore pipe which are not  
24 implemented in the field. And the sign-off of the CDR  
25 indicates that the three individuals on the individual

1 CDR concur that that observation is correct.

2 Q And turning back to the first page of Tab 1,  
3 the page entitled Plant Configuration Report for the  
4 Reactor Water Recirculation System, am I correct that  
5 this report indicates that the reviewers had identified  
6 nine potential discrepancies between the as-built plant  
7 and the FSAR? And I don't want to get hung up in  
8 numbers. Sometimes there may be more than one part.

9 (Panel of witnesses conferring.)

10 A (WITNESS MUSELER) Yes, sir, it indicates there  
11 were nine observations that have to be evaluated in  
12 terms of differences between the observed condition in  
13 the plant and information in the FSAR.

14 Q Now, the purpose of -- reading about a third  
15 of the way down on this page, the Plant Configuration  
16 Report, it indicates, am I correct, that the purpose of  
17 the plant configuration review was to determine if  
18 conformance between the as-built plant and the FSAR has  
19 been maintained? Correct?

20 (Panel of witnesses conferring.)

21 A (WITNESS MUSELER) The overall purpose of the  
22 plant configuration review is to determine whether or  
23 not the FSAR commitments for any system descriptions  
24 which might bear on the conclusions or the safety  
25 analysis are accurate. The purpose of the plant

1 configuration review is also to identify any differences  
2 between the as-built plant and the informational detail  
3 in the FSAR for the reasons we discussed earlier.

4 Q Now, the conclusion of this report was that  
5 the results of the review indicate that conformance  
6 between the as-built plant and the FSAR does not exist  
7 until engineering resolution is provided. Correct?

8 A (WITNESS MUSELER) Yes, sir.

9 Q Looking at Tab 2 of Suffolk County Exhibit 71,  
10 Tab 2 constitutes the plant configuration report for the  
11 control rod drive, hydraulic control system. Correct?

12 (Panel of witnesses conferring.)

13 A (WITNESS MUSELER) Yes, sir.

14 Q And this report has attached to it, or it  
15 indicates in the front that it has attached to it, 13  
16 potential discrepancies between the as-built plant and  
17 the FSAR.

18 A (WITNESS MUSELER) Yes, sir, that is correct.

19 Q And the conclusion of this report is that the  
20 results of the review indicate that conformance between  
21 the as-built plant and the FSAR does not exist until  
22 engineering resolution has been provided?

23 (Panel of witnesses conferring.)

24 A (WITNESS MUSELER) Mr. Lanpher, this report  
25 does indicate in the parlance of this form that FSAR

1 conformance does not exist until engineering resolution  
2 or evaluation is provided. I would note that our  
3 experience with these reports to date has shown that  
4 there are a number of findings that are just not proper  
5 observations. The other observations that have been  
6 made are of the same nature that we have discussed in  
7 the CAT inspection in that they are differences in the  
8 level of detail not affecting the staff review or the  
9 conclusions of the safety analysis of the FSAR.

10           So that while we do have to provide formal  
11 engineering responses to these, we have been working on  
12 them and to the extent that we have looked at them to  
13 date, they don't constitute anything that we haven't  
14 seen before, and they don't constitute any discrepancies  
15 between our FSAR commitments.

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1 Q But it does indicate the conclusion in control  
2 rod drive -- hydraulic control system configuration  
3 report, indicate that the review of the as-built plant  
4 versus the FSARL indicates a conformance between the two  
5 does not exist until engineering resolution is provided,  
6 correct?

7 A (WITNESS MUSELER) The report correctly says  
8 that, sir, and that indicates that the overall review of  
9 that system is not complete until all of those  
10 observations are dispositioned by the engineering  
11 organization.

12 Q Mr. Museler, Tabs 3 through 7 of Suffolk  
13 County Exhibit 71 are the plant configuration report for  
14 the standby liquid control system and core spray system,  
15 the MSIV leakage control system, the high pressure  
16 coolant injection system, the reactor core isolation  
17 cooling system, correct?

18 A (WITNESS MUSELER) Why don't I just concur on  
19 a one-by-one basis? Tab 3 is the C-41 system. Tab 4 is  
20 the --

21 Q That is standby liquid control?

22 A (WITNESS MUSELER) Right. Tab 4 is the E-21  
23 core spray system. Tab 5 is the E-32 main steam  
24 isolation valve leakage control system. Tab 6 is the  
25 E-41 high pressure coolant injection system. And Tab 7

1 is the E-51 reactor core isolation cooling system.

2 Q And with respect to each of these plant  
3 configuration reports, am I correct that the reviewer  
4 reached the conclusion that conformance between the  
5 as-built plant and the FSAR does not exist until  
6 engineering resolution is provided?

7 (Witnesses conferring.)

8 A (WITNESS MUSELER) Mr. Lanpher, it is correct  
9 that at this stage in the review and in the SCPR program  
10 all of the plant configuration reports noted do indicate  
11 that the state of the review is that conformance does  
12 not exist until engineering resolution is provided to  
13 the observations contained herein, and we have looked at  
14 all of these and none of the CDRs included in any of  
15 these findings result in a deviation from an FSAR  
16 commitment.

17 They do contain a number of accurate  
18 observations where the as-built plant differs from some  
19 of the detailed information contained in the FSAR not  
20 relevant to the Staff's review or the conclusions drawn  
21 therefrom.

22 (Counsel for Suffolk County conferring.)

23 Q Looking at Tab 3, Mr. Museler, am I correct  
24 that the reviewers identified nine potential  
25 discrepancies? Tab 3 concerns the standby liquid

1 control system.

2 A (WITNESS MUSELER) Tab 3, the system  
3 configuration report identifies nine CDRs, yes, sir.

4 Q And with respect to the core spray system, Tab  
5 4, similarly nine discrepancy reports were filed?

6 A (WITNESS MUSELER) Yes, sir.

7 Q And with respect to the MSIV leakage control  
8 system, Tab 5, there were eight discrepancy reports.  
9 Isn't that correct?

10 A (WITNESS MUSELER) Yes, sir.

11 Q With respect to the HPCI, Tab 6, am I correct  
12 there were nine discrepancy reports?

13 A (WITNESS MUSELER) Yes, sir.

14 Q And with respect to Tab 7, the reactor core  
15 isolation cooling system, am I correct there were twelve  
16 discrepancy reports?

17 A (WITNESS MUSELER) Yes, sir, and we have  
18 looked at all of those, and that is the basis for the  
19 statement I made earlier.

20 MR. LANPHER: Judge Brenner, I want to go back  
21 before I lose sight of something and move several audit  
22 findings into evidence that we discussed this afternoon,  
23 and I apologize for not doing it when we were actually  
24 addressing them. I can either do it now or wait until  
25 we go back at a later time.

1 JUDGE BRENNER: Let's do it now.

2 MR. LANPHER: Okay. First, Engineering  
3 Assurance Audit 21, Observation 008, Item 2; and  
4 Engineering Assurance Audit 33, page one, item (a) and  
5 also Observation 114, to which the page one reference  
6 refers.

7 MR. ELLIS: No objection to those except that  
8 I assume when the ultimate one is placed in evidence it  
9 won't have the underscoring.

10 JUDGE BRENNER: Well, I don't know if he has a  
11 clean copy or not. We will ignore it.

12 MR. ELLIS: That's fine.

13 JUDGE BRENNER: It is the same copy. We are  
14 not producing additional copies and I assume that the  
15 three he provided for the record already had it. We are  
16 ignoring the underscoring. That is why I guess I forced  
17 Mr. Eifert to say he didn't know, regardless of his  
18 suspicions. I really don't care. It means nothing to  
19 us to have the underscoring there.

20 MR. ELLIS: No objection apart from the usual  
21 to those two.

22 JUDGE BRENNER: I hate to say this, but I  
23 don't even remember what the usual one is any more.

24 (Laughter.)

25 JUDGE BRENNER: But I'm sure you will

1 resurrect it at the appropriate time for the appropriate  
2 body. I won't ask you to repeat it.

3 (Engineering Assurance  
4 Audit 21, Observation  
5 008, Item 2; Engineering  
6 Assurance Audit 33, page  
7 one, item (a) and  
8 Observation 114 were  
9 received into evidence.)

10 MR. LANPHER: Judge Brenner, this is a  
11 convenient time for the County to stop for the day if we  
12 were going to stop at 5:00.

13 JUDGE BRENNER: Well, do you want to remind me  
14 what the usual one is, since we have a minute? You  
15 don't have to if you don't want to, and I'm not sure it  
16 kept applying really to all of these throughout. I  
17 remember the argument two weeks ago.

18 MR. ELLIS: I think it does continue to apply,  
19 Judge Brenner, and if you like I will rehearse it and  
20 state it in the morning, if you wish. It was a  
21 relevance and materiality objection based upon --

22 JUDGE BRENNER: The lack of significance being  
23 established as a foundation.

24 MR. ELLIS: In addition to which that it does  
25 not, based upon what they are attempting to show, it

1 does not show what they are offering to show and in  
2 general that was it.

3 JUDGE BRENNER: Okay, I remember now. You  
4 don't have to do it in the morning. That was my fault,  
5 not your fault.

6 Let's take a minute on one more thing. On Mr.  
7 Alexander, we have thought about it a little bit and if  
8 it doesn't upset any scheduling on your part we will  
9 hold it until we see what the total situation is when we  
10 have the overall discussion on Tuesday. I take it you  
11 were not going to bring him down as part of OQA but  
12 rather just bring him down for our questions.

13 MR. ELLIS: That's right, Judge Brenner.

14 JUDGE BRENNER: When the other parties factor  
15 their time periods and put it together, if anybody else  
16 is going to have questions on ISEG of Mr. Alexander,  
17 factor that in and then we will see what the situation  
18 is and discuss it all on Tuesday.

19 In addition, it occurs to me now that Tuesday  
20 is election day and we did want to start at 8:30 to save  
21 some time, since that discussion will take at least a  
22 half hour and perhaps even a little longer and we may  
23 have some of it off the record and some on the record,  
24 if the polls are open late. But if that disrupts  
25 anybody's plans so that they would not be able to vote,

1 let me know tomorrow and we will maybe change it until  
2 Wednesday.

3 (A discussion was held off the record.)

4 JUDGE BRENNER: We will come back at 9:00  
5 tomorrow morning.

6 (Whereupon, at 5:00 o'clock p.m., the hearing  
7 recessed, to reconvene at 9:00 o'clock a.m., Friday,  
8 October 29, 1982.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the  
BEFORE THE ATOMIC SAFETY & LICENSING BOARD

in the matter of: Long Island Lighting Company (Shoreham Nuclear Power  
Station)

Date of Proceeding: October 28, 1982

Docket Number: 50-322 OL

Place of Proceeding: Bethesda, Maryland

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)