

NUCLEAR REGULATORY COMMISSION

ORIGINAL

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

LONG ISLAND LIGHTING COMPANY

(Shoreham Nuclear Power Station)

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:

DOCKET NO. 50-322-OL

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1 UNITED STATES OF AMERICA
 2 NUCLEAR REGULATORY COMMISSION
 3 BEFORE THE ATOMIC SAFETY AND LICENSING BOARD
 4 - - - - - x
 5 In the Matter of: :
 6 LONG ISLAND LIGHTING COMPANY : Docket No. 50-322-OL
 7 (Shoreham Nuclear Power Station) :
 8 - - - - - x

9 Third Floor, B Building
 10 Court of Claims
 11 State of New York
 12 Veterans Memorial Highway
 13 Hauppauge, New York 11787

14 Tuesday, September 14,
 15 1982

16 The hearing in the above-entitled matter
 17 convened, pursuant to recess, at 10:30 a.m.

18 BEFORE:

19 LAWRENCE BRENNER, Chairman
 20 Administrative Judge

21 JAMES CARPENTER, Member
 22 Administrative Judge

23 PETER A. MORRIS, Member
 24 Administrative Judge
 25

1 APPEARANCES:

2 On behalf of the Applicant, LILCO:

3 W. TAYLOR REVELEY, III, Esq.
4 ANTHONY F. EARLEY, Esq.
5 T.S. ELLIS, III, Esq.
6 Hunton & Williams
707 East Main Street
Richmond, Virginia 23212

6 On behalf of the NRC Regulatory Staff:

7 BERNARD BORDENICK, Esq.
8 DAVID A. REPKA, Esq.
9 Nuclear Regulatory Commission
Washington, D.C.

10 On behalf of Suffolk County:

11 LAWRENCE COE LANPHER, Esq.
12 ALAN ROY DYNNER, Esq.
13 Kirkpatrick, Lockhart, Hill,
Christopher and Phillips
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Washington, D.C. 20036

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C O N T E N T S

2 WITNESSES:

DIRECT CROSS REDIRECT RECROSS BOARD

3 John F. Alexander,
4 T. Tracy Arrington,
Frederick B. Baldwin,
5 Robert G. Burns,
William M. Eifert,
6 T. Frank Gerecke,
Joseph M. Kelly,
7 Donald G. Long,
8 Arthur R. Muller,
William J. Museler and
9 Edward J. Youngling

By Mr. Ellis

10,076

10 By Mr. Lanpher

10,084

11

(AFTERNOON SESSION--page 10, 108)

12 John F. Alexander,
13 T. Tracy Arrington,
Frederick B. Baldwin,
14 Robert G. Burns,
William M. Eifert,
15 T. Frank Gerecke,
Joseph M. Kelly,
16 Donald G. Long,
Arthur R. Muller,
17 William J. Museler and
18 Edward J. Youngling (Resumed)

By Mr. Lanpher

10,110

EXHIBITS

20

21. NUMBER

IDENTIFIED

RECEIVED

22 LILCO's 21 and 21A

10,080

10,080

23 LILCO Motion to strike portions of Suffolk County
testimony, 8-31-82, Response from Suffolk County,
24 9-3-82 and Letter from the Staff noting agreement
with LILCO motion dated September 2, 1982.....page 10,058
25

RECESSES: Morning - 10,073 Noon - 10,107 Afternoon - 10,153

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

2 (10:30 a.m.)

3 JUDGE BRENNER: Good morning. To those of you
4 who have survived the first 10,000 pages of this
5 proceeding, welcome back. Let's start off with a
6 mundane housekeeping matter; that is, the location of
7 the hearings after the break, beginning the week of
8 October 11th, actually, beginning on Tuesday, October
9 12th.

10 I had mentioned during our conference call
11 that the Board would be very amenable; in fact, have a
12 slight preference, for scheduling the hearings in
13 Bethesda for the month of October. And I want to know
14 if there are any objections to that.

15 MR. REVELEY: We have none.

16 MR. BORDENICK: None whatsoever.

17 MR. LANPHER: We have none, understanding that
18 it is just for that month of October. Some of the
19 subsequent hearings I think we would like to have up
20 here. But understanding that, with the Board's
21 schedule, that is no problem.

22 JUDGE BRENNER: I don't want to state it quite
23 the way you just did, Mr. Lanpher. We are contemplating
24 it for a particular time period and not for the rest of
25 the proceedings. So that is correct.

1 MR. LANPHER: Just for October is my
2 understanding.

3 JUDGE BRENNER: I don't want to state it that
4 way because if we are in the middle of a panel of
5 witnesses on a particular subject, it may be convenient
6 to extend it for one week, for example, into November.

7 MR. LANPHER: My understanding, Judge Brenner,
8 is that when we get to emergency planning issues I think
9 the county would prefer to have those hearings up here.

10 JUDGE BRENNER: Okay, no problem. And, in
11 fact, we may come back to Long Island even while there
12 are some other issues remaining.

13 All right. As we have previously discussed,
14 do not assume that there will be hearings for every week
15 in October in this proceeding. You can assume there
16 will be a hearing in this proceeding October 12th
17 through 15th. On October 12th, and unfortunately, not
18 before then, we will be able to tell you what the
19 schedule will be for the rest of October. But if there
20 are hearings beyond that in October, they will be in
21 Bethesda, including the week of October 12th. The
22 hearings will be in the NRC hearing room on the Fifth
23 Floor of the East-West Towers Building.

24 During the last two weeks, when we adjourned
25 in order for the parties to conduct negotiations towards

1 settling or narrowing issues, we had two conference
2 calls with the parties. As a result of those calls, the
3 parties, with the Board's approval, were able to
4 determine that there was no need for hearings the last
5 two weeks, along the lines that we had discussed because
6 the issues being discussed were sufficiently narrowed or
7 settled, as to avoid the need for litigation during
8 those two weeks.

9 We will await the written submission of the
10 settlement agreements, whether they be in whole as to an
11 issue or in part. And at some logical point, we will
12 take them all up together, or most of them together.
13 However, as the written agreements are executed, supply
14 them to the Board as soon as they are available so that
15 we can begin looking at them as they come in.

16 We do want to repeat what we said over the
17 phone. The parties are to be commended for their
18 negotiating approach. I think what was contemplated
19 when we started that approach and approved that approach
20 turned out to be true. In our view, substantially more
21 hearing time than the two weeks of recess has been
22 saved, probably, as a result of those negotiations as we
23 understand the results from the oral reports.

24 The Board has considered among ourselves
25 whether on our own we have questions on any further

1 safety relief valve testimony and on the water hammer
2 procedures testimony. We have reached some tentative
3 conclusions, but rather than announce them now, we want
4 to wait to see what the agreement between the parties on
5 issues that affect those two matters look like in
6 writing. We understand the agreements may be nothing
7 more than a decision not to cross examine that
8 testimony, but we want to see what they look like and
9 then we will let you know our views on it.

10 On another matter, we have had pending before
11 the Board our request for the status of many of the open
12 items in the SER, and also, our request for responses to
13 some matters that arose during limited appearances, and
14 also, our request to the staff that they inform us more
15 particularly of the bases as to why the Rivenbark-North
16 Anna findings are met by the staff's presentation on
17 unresolved safety issues in the SER. And we want to
18 address that at this time.

19 Putting the unresolved safety issues aside for
20 the moment, we have no further questions as to open
21 items in the SER other than the ones that Judge Morris
22 is going to discuss in a moment. And that also applies
23 to the responses to limited appearance questions.

24 Some of the matters Judge Morris will talk
25 about involve unresolved safety issues, and he will tell

1 you what the particular questions are about those after
2 he has completed -- or has, in general, pointed out the
3 unresolved safety issues which will include but not be
4 limited to the ones that Judge Morris has particularly
5 mentioned.

6 In addition to anything we say this morning,
7 of course, those issues that are affected by matters in
8 controversy -- and we have heard about quite a few of
9 them in the course of the testimony on some of the
10 contentions -- will be decided as part of the decision
11 on those matters to the extent they relate. As you
12 know, sometimes it is an overlap as opposed a generic
13 issue being wholly within a contention.

14 JUDGE MORRIS: Let me say first that we very
15 much appreciated the status reports that were received.
16 They helped us very much in understanding the status of
17 things. And what is left is a relatively few number of
18 items on which, at least in my own mind, I am not clear
19 where they stand.

20 The staff, on September 3rd, did update us on
21 the status of deferred contentions, so that I have no
22 questions on that.

23 With respect to the unresolved safety issues,
24 there are four which are not quite clear to me in terms
25 of their status. One is A44, station blackout. It is

1 my understanding that a further submittal from LILCO was
2 anticipated, and that the staff would need to review
3 that.

4 On A46, seismic qualification of equipment, at
5 last reading, in any event, there was to be a second
6 audit by the staff, as I understand it. I don't know if
7 that has taken place or whether a report has been issued
8 on it.

9 On A47, safety implications of control
10 systems, I understand that a supplement to the SER was
11 projected, but I don't believe we have received that yet.

12 On A24, environmental qualification of
13 electrical equipment, I believe the staff reference to
14 the status in the supplement to the SER was incorrect.
15 It may be that the status is the same anyway, but I
16 think that is sort of a housekeeping detail.

17 On the SER outstanding items, at my last
18 reading anyway, it was intended that Chapter 13 of the
19 FSAR would be revised, and I am not sure we have seen
20 that revision or have heard what the schedule is for it.

21 Under Outstanding Item 57, which refers to
22 NUREG-0737 items, the first one, 1.A.1.1, just raises a
23 question in my mind. I believe that the staff's
24 position is that they will review the qualifications of
25 shift technical advisors, and I am wondering if a

1 question to the staff is if there are some criteria
2 written anyplace, in a regulatory guide or internal
3 guidance, branch positions or whatever, as to how those
4 qualifications will be judged by the staff.

5 Item 1.A.2.3, the training program for
6 operators, I think the question is directed to LILCO. I
7 believe that in the program that was keyed in some way
8 or other to the date for fuel loading, certain things
9 were to take place prior to fuel loading. So, the
10 interest is in the status of that training and whether
11 it is proceeding on schedule and will, in fact, be done
12 according to the proposed schedule.

13 The same comments apply to 1.C.7, vendor
14 review of procedures. Again, a question for LILCO.

15 And once more, 1.C.8, pilot monitoring of
16 selected emergency procedures.

17 A different subject, but again directed to
18 LILCO, is II.D.3, the direct indication of safety relief
19 valve position. It is my understanding that two sensors
20 will be used, differential pressure and thermocouples.
21 The question I have is whether any consideration was
22 given to acoustic monitors.

23 And finally, Item 63 relates to design
24 verification and the two programs that are either
25 underway or close to being finished, being conducted by

1 Teledyne and Tory Pines. These, of course, have
2 particular significance in the context of the QA
3 considerations, and a fairly quick report on the status
4 of those items perhaps will come out in the discussions
5 in the context of the contention anyway, but I just want
6 to highlight the fact that we are quite interested in
7 the status of those studies.

8 That is all I had.

9 JUDGE BRENNER: All right. More generally, on
10 the unresolved safety issues, at the time the Board
11 asked for the reports -- and in this case, primarily but
12 not exclusively from the staff -- we pointed out that
13 some of the explanation might be in rather disparate
14 places within the SER without cross references, and, in
15 fact, in places other than the SER.

16 At the time, I believe we pretty much stated
17 that we did not think that was fully within the spirit
18 of North Anna and Rivenbark, and in any event, we want
19 now to pull it together from all of these places, some
20 of which were rather thick, generic NUREGs that were
21 referenced, and try to guess as to what points in those
22 NUREGs staff believed supported one of the alternative
23 findings at Rivenbark and North Anna.

24 Staff's response has helped us somewhat in
25 providing cross references that were earlier missing to

1 other parts of the SER. However, we still do not have
2 assembled what we envisioned, and maybe we did not
3 explain it correctly. And perhaps the way to get into
4 all of this is to ask the staff what findings they
5 intend to propose, the nature of the type of findings
6 they intend to propose as to these unresolved safety
7 issues in support of the North Anna-Rivenbark required
8 finding.

9 Do you intend to just propose a paragraph that
10 says all these are discussed in the SER; see Appendix B
11 and cross references? Or do you intend to write the
12 findings as to each unresolved safety issue,
13 demonstrating that those findings are met?

14 Incidentally, as you know, the findings from
15 the Appeal Board decisions are quoted at the bottom of
16 page B-2. That is, of Appendix B to the SER. As we
17 read that, we have to find as to unresolved safety
18 issues either that the problem has already been resolved
19 for Shoreham; or, in the alternative, there is a
20 reasonable basis for concluding that a satisfactory
21 solution will be obtained before Shoreham is placed into
22 operation; or, the unresolved safety issue problem would
23 have no safety implications until after several years of
24 reactor operation. And if it is not resolved by then,
25 alternative means will be available to insure the

1 continued operation would not pose an undue risk to the
2 public.

3 And I guess we had envisioned, rather than
4 waiting until the end of the finding stage, the findings
5 that would support those ultimate conclusions as to each
6 unresolved safety issue either assembled in one place in
7 the SER in the first instance, and then we gave you our
8 preliminary review that we did not find it so
9 assembled. And the response was not organized in such a
10 fashion that it assembled it.

11 Looking at that, we can infer in certain
12 places, now that we have given some of the additional
13 cross references, as to why the staff believes those
14 findings are met. But we have gone around it at least
15 one time now, and I think what we are looking for are
16 the precise findings as to each issue.

17 But let me return to the question as to what
18 the staff initially intended, and then you can give us
19 your view as to what has to be done to comply with those
20 Appeal Board decisions.

21 JUDGE BRENNER: Judge Brenner, we have really
22 not given any recent thought to the question of
23 findings, and it has been quite a while since we made
24 the filing. Frankly, we weren't really prepared to
25 address it this morning.

1 I think at minimum, we will go back and try to
2 assemble, as you have requested, everything in one page
3 -- in one place. I don't recall that, the details of
4 how we did it. I do know that we did discover that
5 there was a missing cross reference from the SER. We
6 had thought that that would resolve the problem, but
7 apparently in the Board's mind at least it has not. I
8 really am just not prepared to address it this morning
9 since I haven't looked at the filing in quite some
10 time. My recollection is the filing was made back in
11 June or July.

12 And on the findings aspect, we just haven't
13 given it that much thought, at least not recently.

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1 JUDGE BRENNER: Well, a response was helpful.
2 I don't want to imply that it was not. However, we
3 infer from the response that the staff believes
4 everything necessary to support those findings are
5 present somewhere in the SER, pursuant to the
6 requirements of the appeal board decisions. That is, no
7 additional new information was supplied. We view that
8 as an opportunity to do that, if the staff saw fit at
9 the time.

10 We do not propose to write a finding that very
11 generally says we have looked at everything and it is
12 okay. Based on what we now have before us, we might be
13 prepared to write such a finding if we had a particular
14 reference to everything in the same place, and we have
15 looked at it. There might be some items we would cull
16 out and discuss individually, or we might discuss them
17 all individually. It depends on the state of the
18 record.

19 A preference would be to be able to see it all
20 in one place in the first instance, and then
21 particularly discuss those that merited particular
22 discussion. As I said, the staff's response was helpful
23 to pull some of the things together, but it quickly
24 became the board performing the staff's job, quite
25 frankly, and even at that we had to draw some inferences

1 as to why the staff thought a particular paragraph
2 reference was pertinent.

3 Maybe the best way to approach it is to
4 request the findings as to each issue, and pursuant to
5 the job that findings are normally designed to perform
6 in general. These findings would assemble by reference
7 to the record, which presumably is the SER. Since we
8 have been provided little else on it, you are free to
9 reference your own response if you believe, contrary to
10 my impression, now, that there was additional technical
11 information of a substantive nature in that response,
12 and assemble the technical state of the review in
13 summary form, and in the context of which one of those
14 River Bend, North Ana findings are met. Normally we
15 could wait until the findings stage, but it might be
16 advantageous to you and to the other parties not to find
17 out at that late a stage that the board has a problem.

18 What about the end of October?

19 MR. BORDENICK: I was going to say, I think
20 the Board's suggestion is well taken. As far as how
21 much time that we will require, I don't know that. Now,
22 certainly the end of October is six weeks away. That
23 would seem to be sufficient time. However, if possible,
24 I would like to reconfirm that with you, say, by
25 tomorrow morning. Maybe we can do it sooner than that.

1 It may be that we require a little more time. But
2 offhand, I would think that six weeks would be
3 sufficient.

4 Again, the details of a lot of this escape me,
5 and I don't know just how much of an effort is going to
6 be consistent with the other matters that have to be
7 taken care of.

8 JUDGE BRENNER: All right. If it is later
9 than tha, it is not going to achieve its purpose very
10 well of giving the board and the parties an opportunity
11 to look at it in advance of the finding stage, when
12 everybody is going to be very busy anyway. Let's set it
13 that we receive it by Tuesday, November 2nd, but we
14 would hope that we would get it as soon as possible, and
15 if you can beat that date, that is fine. We would not
16 be very happy about getting it later than that date.

17 MR. BORDENICK: Under the circumstances, we
18 will meet that date.

19 JUDGE BRENNER: Obviously, if you have a
20 particular problem on one item, you can give us all the
21 items except that one item.

22 MR. LANPHER: Judge Brenner, can I ask for a
23 clarification, so that I know what the staff is putting
24 together? Is this in essence an SER update, not really
25 an amendment, but to pull together that -- there are

1 some things, for example, on A-47 in the hearing record,
2 of course, on 7-B, and A-46 and A-24 may both be
3 affected by deferred issues.

4 JUDGE BRENNER: We are asking for proposed
5 findings, and this is in effect an opportunity for the
6 staff not to get backed up and have to do everything at
7 the findings stage. So I don't think it is extra work.
8 It is just accelerating the work, unless the staff had a
9 totally different view from the board as to what
10 findings were required. And if that is the case, they
11 can come back to us. Where there are unresolved safety
12 issues that are materially affected by the litigation,
13 then that is not an unusual situation, and the staff for
14 those might wish to give us its view in summary
15 findings, and with the caveat that it would be more
16 extensively discussed in their later findings on the
17 contested issue.

18 We are primarily concerned here with the ones
19 for which the findings would not be made in the course
20 of the contested issue, and we will leave it to the
21 staff's judgment in the first instance. There are some
22 unresolved safety issues as to which a relatively minor
23 aspect is touched on by the contested issues, so the
24 ruling in the contested issue isn't going to meet the
25 River Bend, North Ana requirement.

1 On the other hand, there are others that are
2 pretty much totally subsumed within the contested issue,
3 and as to those, the staff -- It would certainly make
4 sense for the staff to indicate that its detailed
5 findings on that one, because more detailed findings are
6 merited by the nature of the controversy, would await
7 its later findings on the contested issue.

8 JUDGE MORRIS: Mr. Bordenick, perhaps it is an
9 unnecessary emphasis, but in my own mind what I was
10 seeking was a clear connection between the River Bend
11 criteria and the specific application of Shoreham.

12 JUDGE BRENNER: I don't want to belabor it
13 either. We discussed this. I think I made the point
14 that it is not an adequate finding to say it is going to
15 be okay because we are working on it. I think that is
16 self-evident, and it was our opinion until we were
17 pointed to other cross-references that some of Appendix
18 B in effect did not do a lot more than that. The staff
19 did not supply any additional substantive information.
20 It did supply additional places where information was
21 present, and in fact, as we indicated at the outset, we
22 had not read those other references at the time we made
23 our initial request in all cases.

24 But now we need it pulled together, because we
25 are still not sure it is all there, and we have had to

1 make too many inferences in the course of our study of
2 this matter to suit us to support our willingness to
3 make a general finding.

4 Changing subjects, the board has pending
5 before it the discovery dispute on emergency planning
6 documents. We did receive the further filing from the
7 county on Friday, and further filing from LILCO on
8 Monday. We will not have a decision out this week. A
9 decision will be in writing. Unless we have particular
10 questions that we think will be useful, we don't plan to
11 handle it on the record. We think we can go ahead and
12 reach our decision now in writing.

13 MR. LANPHER: Judge Brenner, if I could say
14 that the attorneys actively handling that would be
15 available this week through Thursday if the board had
16 any particular questions for Suffolk County.

17 JUDGE BRENNER: I will tell you frankly I have
18 given up trying to get the message through in terms of
19 what I thought the county could do. I don't think it is
20 a failure of communication. It is obvious that the
21 county believes strategically it should hold with its
22 position in effect to the hilt, to use the vernacular,
23 as opposed to attempting to cull out particular portions
24 of those documents.

25 So, we are just going to do the job. I guess

1 I should state for the record that we previously
2 expressed our opinion in the phone call that large parts
3 of those documents are not privileged, and our ruling is
4 going to reflect that.

5 On the other hand, others of the documents are
6 privileged, and we will enforce that privilege by ruling
7 that they need not be turned over, and we think that
8 both parties could have done a lot towards focusing the
9 dispute and narrowing it as to a fewer number of
10 documents. We think the dispute should not have been
11 surfaced as late as it was, and we do not think that
12 there was a rigorous adherence to the discovery schedule
13 that we imposed, and we will talk about that also in our
14 order.

15 Another discovery dispute which was before us
16 contrary to the emergency and in contrast to the
17 emergency planning dispute was settled. That was the
18 N&D analysis performed by Stone and Webster for which
19 LILCO had claimed a work product privilege, and LILCO
20 has determined to turn the document over. This was made
21 known to us in a phone call, so I want to put it in the
22 record here. I think it is fair to state that it was
23 turned over in the name of efficiency as distinguished
24 from any concession that LILCO did not believe its work
25 product argument was a correct one. Is that a fair

1 statement, Mr. Ellis?

2 MR. ELLIS: Yes, Judge Brenner.

3 JUDGE BRENNER: I stated to Mr. Ellis at the
4 time that we appreciated the decision, and I will repeat
5 that here, because I think that there was -- there were
6 non-frivolous arguments on both sides of that issue, and
7 we think it was efficient to turn it over, regardless of
8 what our ultimate decision might have been on the
9 motion.

10 Is there anything else before we begin matters
11 related to the quality assurance issue?

12 (No response.)

13 JUDGE BRENNER: One preliminary matter related
14 to the quality assurance issue is the LILCO motion to
15 strike portions of Suffolk County testimony which was
16 dated August 31, 1982. We received a response from the
17 county dated September 3rd, and a letter from the staff
18 noting agreement with LILCO's motion dated September
19 2nd, and I would like to bind those three documents into
20 the transcript at this point, and ask that they be
21 supplied to the Reporter.

22 (The material referred to follows.)

23

24

25

LILCO, August 31, 1982

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

LILCO'S MOTION TO STRIKE PORTIONS OF
SUFFOLK COUNTY TESTIMONY ON SUFFOLK COUNTY
CONTENTIONS 12, 13, 14 & 15 -- QUALITY ASSURANCE

Preliminary Statement

Long Island Lighting Company (LILCO) moves to strike certain portions of the prepared direct testimony of Richard B. Hubbard, regarding Suffolk County Contentions 12, 13, 14 & 15 -- Quality Assurance because:

- 1) by addressing QA for non-safety related structures, systems and components, the testimony falls outside the scope of SC Contentions 12 through 15;
- 2) by addressing the issues of systems classification and of non-safety related/important to safety QA, which have already been litigated as part of SC/SOC 7B, the testimony is unduly repetitious;

- 3) by seeking to impose 10 CFR Part 50, Appendix B on non-safety related structures, systems and components, the testimony impermissibly seeks to expand Appendix B; and
- 4) by discussing QA problems and the I&E Program at other plants without describing them or showing a link to Shoreham, the testimony includes irrelevant matter with no probative value.

It is well established in this and prior proceedings that Atomic Safety and Licensing Boards have the power to strike irrelevant, argumentative, repetitious and cumulative evidence. See 10 CFR §§ 2.718, 2.743(c) and 2.757(b).

I.

TESTIMONY REFERENCES TO NON-SAFETY
RELATED QA ARE OUTSIDE
THE SCOPE OF THE CONTENTIONS

LILCO's position on this point can be summarized in the following syllogism:

- A. SC Contentions 12-15 focus solely on compliance with the requirements of 10 CFR Part 50, Appendix B.
- B. 10 CFR Part 50, Appendix B, is exclusively concerned with the quality assurance requirements for safety related structures, systems and components. Appendix B is not applicable to non-safety related structures, systems and components.

- C. Therefore, the testimony on SC 12-15 must be limited to quality assurance for safety related structures, systems and components.

Each element of this syllogism is separately treated below.

A. Contentions 12-15 Relate Solely to 10 CFR Part 50, Appendix B

Each of the QA contentions, by its terms, is based solely on noncompliance with Appendix B. In particular,

- (a) SC 12 alleges that

"LILCO has failed to comply with 10 CFR Part 50, Appendix B as particularized in Appendix 1 attached hereto";^{1/}

- (b) SC 13 alleges that

"Shoreham . . . does not comply with 10 CFR 50.34(b)(6)(ii)^{2/} and 10 CFR Appendix B, Sections I to XVIII, with regard to . . .";

- (c) SC 14 alleges that

"the NRC Staff's Inspection and Enforcement (I&E) Program has not adequately verified that LILCO's

^{1/} Appendix 1 to the County's testimony purports to be a list of specific instances which the County contends illustrates that LILCO "has failed to comply with 10 CFR Part 50, Appendix B."

^{2/} Section 50.34(b)(6)(ii) sets out the requirements for the description of the Appendix B QA program in an FSAR.

quality assurance program for Shoreham has been implemented in accordance with the requirements of 10 CFR § 50.34(a) paragraph 7^{3/} and 10 CFR Part 50 Appendix B, Sections I through XVIII, in that . . ."; and

(d) SC 15 alleges that

"there is no assurance that LILCO has complied with 10 CFR § 50.55(e)^{4/} and 10 CFR Part 50, Appendix B, Sections XVII and XVIII."

Unmistakably, therefore, SC 12 through 15 focus solely on Appendix B. While SC 12 also references GDC 1, it does so only in the context of Appendix B. Accordingly, the reference to GDC 1 in SC 12 is limited by the subsequent particularization to Appendix B. Put another way, the scope of GDC 1 in SC 12 is explicitly limited to the scope of Appendix B. Further confirmation of this is found in the remainder of the contention which alleges non-compliance with Appendix B, Criteria II, III, and V-XVIII and then further refines SC 12 by attaching as Appendix 1 a long list of alleged failures to comply with Appendix B.

^{3/} Section 50.34(a)(7) sets out the requirements for the description of the Appendix B QA program in a PSAR.

^{4/} Section 50.55(e) concerns the reporting of deficiencies during construction of a nuclear power plant.

B. Appendix B Applies Only to
Safety Related Structures,
Systems and Components

The proposition that Appendix B applies only to safety related structures, systems and components has long been well established. It is expressly indicated in the regulations and indeed, in a rare demonstration of unanimity, it has been conceded by all the active parties in this proceeding.

Appendix B criteria apply to "all activities affecting the safety-related functions" of "structures, systems and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public." The "safety-related functions" are defined in Appendix A to 10 CFR Part 100 as those that involve:

- 1) the integrity of the reactor coolant pressure boundary;
- 2) the capability to shut down the reactor, maintaining it in a safe shutdown condition; or
- 3) the capability to prevent or mitigate the consequences of accidents which could result in potential offsite exposures comparable to the guideline exposures of Part 100.

Thus, the structures, systems and components to which Appendix B applies are those that perform the safety related functions defined in 10 CFR Part 100, Appendix A, and this is the safety related set of structures, systems and components. Appendix B, then, by its own terms, applies only to the safety related set.

So well settled is this conclusion that the parties all agree. NRC Staff 7B testimony, for example, states that 10 CFR Part 50, Appendix B applies exclusively to safety related structures, systems and components, and that the Staff has developed no QA requirements analogous to Appendix B for non-safety related structures, systems and components.^{5/} The NRC's published regulatory agenda confirms this fact by noting that the Commission has under consideration a rulemaking which would extend Appendix B to some non-safety related items.^{6/}

The County's consultants agree, as they must, that Appendix B applies only to safety related structures, systems and components. See, e.g., Tr. 1342-43, 1353 (Hubbard). Indeed, Mr. Hubbard said that QA standards for non-safety related equipment are still under development. Tr. 1454-1457 (Hubbard). And, in a recent deposition, Gregory C. Minor also concluded that there are no specific QA requirements for structures, systems and components important to safety:

^{5/} Prepared direct testimony of Themis P. Speis et al. for the NRC Staff, ff. Tr. 6356, at 8-9, and hearing testimony of Walter P. Haass for the NRC Staff on July 21, 1982, Tr. 7480, line 13.

^{6/} See 46 Fed. Reg. 53618 (1981).

Q. Well, the non-safety related but important to safety category in your scheme -- you will agree with me, won't you, that there is no defined or specified set of quality standards or quality assurance to be applied to that category?

A. Yes, I believe that is true -- that there's no specified QA requirements, let's say, such as 10 CFR 50 Appendix B. It isn't as though there were an Appendix C or some other designator that applies to the important of safety category but not necessarily to the safety related or visa versa. There is no defined requirement for this lesser category of important to safety.

Deposition of Gregory C. Minor on August 18, 1982, at 109-10.

Thus, under the accepted interpretation of NRC regulations, 10 CFR Part 50, Appendix B applies only to safety related structures, systems and components as defined by 10 CFR Part 100, Appendix A.

C. Therefore, SC 12 through 15 Address Only Safety Related Structures, Systems and Components

The conclusion that SC 12 through 15 address only safety related QA follows inescapably from the facts demonstrated above. SC Contention 12 through 15 are concerned exclusively with compliance with Appendix B. And Appendix B applies only to safety related structures, systems and

components. As a result, the testimony on SC 12 through 15 must be limited to QA for safety related structures, systems and components, and the following portions pertaining to non-safety related QA should be stricken:

page iii	lines 12-16
page iv	lines 5-14
page v	lines 3-5, 19-20
page 9	line 23
page 53	lines 19-23
page 58	lines 10-end
page 59	entire page
page 72	lines 31 & 32
page 73	lines 1-8
page 74	lines 6-9, 19-24
page 75	lines 1-16
page 80	lines 1 & 19
page 82	line 23
page 83	lines 15-20
page 84	last line
page 85	lines 1-4
page 96	lines 22-25
page 97	lines 21-23

page 98 lines 12-13

II.

NON-SAFETY RELATED QA
WAS FULLY LITIGATED IN SC/SOC 7B

SC/SOC Contention 7B addressed systems classification, including, among other things, the definition of systems, structures and components "important to safety." To illustrate the alleged significance of the definition, the County's direct testimony addressed GDC 1 and quality assurance for equipment "important to safety."^{7/} Similarly, LILCO and the NRC Staff covered the subject of quality assurance for non-safety related equipment in their direct testimony.^{8/} Moreover, the issue was thoroughly explored during the cross-examination of all parties.^{9/} So detailed was the direct and cross-examination, the Staff concluded that they knew more about Shoreham's non-safety

7/ See prepared direct testimony of Marc W. Goldsmith et al. for Suffolk County, ff. Tr. 1114, at 3, 19-22.

8/ See prepared direct testimony of Edward T. Burns et al. for LILCO, ff. Tr. 4356, at 41-55, 140-49, 159-61; Themis P. Speis et al. for the NRC Staff, ff. Tr. 6356, at 8-15.

9/ See, e.g., Tr. 1342-64; 1454-57; 1481-1500; 1564-67; 4424-30; 4442-46; 4457-58; 4771-72; 4866-70; 4918-36; 4948-52; 4958-79; 5425-49; 5512-19; 6536; 6958-59; 6966-84; 6988-7007; 7055-83; 7101-03; 7477-88; 7494-96; 7709-28; 7814-30; 7833-37; 7856-63.

related QA program than they knew about non-safety related QA programs for most, if not all, other plants. Tr. 7709 (Conran and Haass). As a result, the sections of the County's testimony dealing with QA for non-safety related equipment are redundant to testimony already received in litigating SC/SOC 7B. Thus the County is attempting, through these sections of its QA testimony, to take a second bite at the apple. Its admission would unnecessarily burden the litigation in an area already aptly described as a "trackless morass."^{10/} Therefore, the sections of the County's testimony dealing with non-safety related QA should be stricken. These portions are identified in Part II above.

III.

THE COUNTY SEEKS TO EXPAND
IMPERMISSIBLY THE SCOPE OF APPENDIX B

As stated above, LILCO believes that the County's experts, including Mr. Hubbard, have stated that there is no regulatory requirement to apply Appendix B to equipment important to safety.^{11/} If, however, the County seeks to repudiate

^{10/} Tr. 9142.

^{11/} Although LILCO believes the terms "important to safety" and "safety related" are synonymous and refer to the structures, systems and components that fulfill the safety

those statements and argue that non-safety related structures, systems and components are subject to Appendix B, then it seeks to expand the NRC's regulations, and the appropriate forum is the rulemaking to expand the scope of Appendix B now under consideration by the NRC. Since the County has not met the requirements of 10 CFR § 2.758, the County's testimony that LILCO's Appendix B QA program must include non-safety related (i.e. important to safety) structures, systems and components is an impermissible challenge to the NRC's regulations. Consequently, it should be stricken. The pertinent portions of the testimony are:

page iii	lines 12-16
page iv	lines 5-14
page 96	lines 22-25

footnote continued

functions listed in 10 CFR Part 100, Appendix A, Mr. Hubbard's testimony makes clear that he has something else in mind. He includes non-safety related structures, systems and components in his definition of "important to safety." See, e.g., prepared direct testimony of Richard B. Hubbard for Suffolk County on SC 12, 13, 14 & 15 at page iv, lines 3-14, and page 96, lines 20-25.

IV.

PORTIONS OF THE COUNTY'S
TESTIMONY ARE IRRELEVANT TO SHOREHAM

Several portions of the County's testimony discuss, in general terms, alleged breakdowns at the North Anna, Browns Ferry, Diablo Canyon, Zimmer, South Texas, Midland, Marble Hill, and TMI-2 plants. While SC 15 mentions some of these plants, the testimony is inadmissible because the County has failed to demonstrate its materiality to Shoreham. Absent from the County's testimony is any showing of a link between the instances at other plants and Shoreham. It is the County's responsibility to make this initial showing of relevance lest the parties litigate QA issues at other plants without knowing whether, ultimately, any applicability to Shoreham exists. Accordingly, the references to alleged problems at other plants have no probative value in this proceeding. These portions, therefore, should be stricken as irrelevant and immaterial. The pertinent material is:

page 7	lines 18-end
page 8	entire page
page 54	lines 3-end
page 55	lines 1 & 2

V.

For the reasons stated above, the indicated portions of Suffolk County's testimony on SC 12, 13, 14 and 15 should be struck.

Respectfully submitted,

LONG ISLAND LIGHTING COMPANY

TS Ellis / TR

T. S. Ellis, III
Anthony F. Earley, Jr.

Hunton & Williams
P. O. Box 1535
Richmond, Virginia 23212

DATED: August 31, 1982

CERTIFICATE OF SERVICE

In the Matter of
LONG ISLAND LIGHTING COMPANY
(SHOREHAM NUCLEAR POWER STATION, UNIT 1)
DOCKET NO. 50-322 (OL)

I certify that on August 31, 1982, LILCO'S MOTION TO STRIKE PORTIONS OF SUFFOLK COUNTY TESTIMONY ON SUFFOLK COUNTY CONTENTIONS 12, 13, 14 & 15 -- QUALITY ASSURANCE was served both by hand and first-class mail, postage prepaid, on those people noted with astericks below, and by mail on all others noted below:

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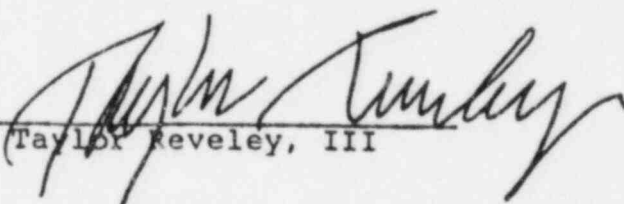
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DATED: August 31, 1982

Insert 1C

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)

LONG ISLAND LIGHTING COMPANY)

(Shoreham Nuclear Power Station,)
Unit 1))

) Docket No. 50-322 O.L.

SUFFOLK COUNTY RESPONSE TO LILCO'S MOTION TO STRIKE
PORTIONS OF SUFFOLK COUNTY TESTIMONY ON SUFFOLK COUNTY
CONTENTIONS 12, 13, 14 & 15 -- QUALITY ASSURANCE

On August 31, 1982, LILCO moved to strike portions of Richard B. Hubbard's Prefiled Testimony on Suffolk County Contentions 12-15 -- Quality Assurance. LILCO first seeks to strike those portions of Mr. Hubbard's testimony which address quality assurance ("QA") for systems, structures and components ("SS&C's") important to safety but not safety-related.^{1/} LILCO asserts that such discussion is outside the scope of Contentions 12-15 and is unduly repetitious because QA requirements and compliance for such SS&C's has allegedly been fully litigated in the context of Contention 7B. LILCO also moves to strike discussion of the QA

^{1/} LILCO in its motion mischaracterizes Mr. Hubbard's testimony as addressing QA for "non-safety-related" SS&C's. See, e.g., Motion, p. 1. In fact, Mr. Hubbard's testimony, consistent with the definitions in Appendix A of Part 50 and GDC 1 and with the Denton Memorandum of November 1981, addresses QA for items important to safety, including safety-related SS&C's. This is narrower in scope than all non-safety-related SS&C's which would include SS&C's which are not important to safety.

problems and NRC Inspection and Enforcement ("I&E") program at other plants as irrelevant and lacking in probative value.

Suffolk County strongly opposes LILCO's Motion. The bases for the County's position are set forth below.

I. Mr. Hubbard's Discussion of the QA Program for Items Important to Safety but Not Safety-Related is Within the Scope of Contentions 12-15 and Not Repetitious

A. LILCO first argues that Contentions 12-15 relate solely to Part 50, Appendix B and thus that any discussion of QA for non-safety-related SS&C's which are important to safety is irrelevant. This is not the case. First, Contention 12 plainly encompasses the QA for the entire class of items important to safety as it states in its first sentence:

Suffolk County contends that LILCO and the NRC Staff have not adequately demonstrated that the quality assurance program for the design and installation of structures, systems, and components for Shoreham was conducted in a timely manner in compliance with the pertinent portions of 10 C.F.R. 50, Appendix B, Sections I to XVIII, and 10 C.F.R. 50, Appendix A, GDC 1. (emphasis supplied).

Thus, failure to comply with GDC 1 requirements is squarely presented by the Contention. LILCO attempts to avoid the scope of Contention 12 as including SS&C's important to safety as provided by GDC 1 with the following statement:

While SC 12 also references GDC 1, it does so only in the context of Appendix B. Accordingly, the reference to GDC 1 in SC 12 is limited by the subsequent particularization to Appendix B. Put another way, the scope of GDC 1 in SC 12 is explicitly limited to the scope of

Appendix B. Further confirmation of this is found in the remainder of the contention which alleges non-compliance with Appendix B, Criteria II, III, and V-XVIII and then further refines SC 12 by attaching as Appendix 1 a long list of alleged failures to comply with Appendix B. (LILCO Motion, pp. 3-4).

The County respectfully suggests that LILCO's argument must be rejected. The Contention does allege that LILCO has not instituted a QA program which complies with Appendix B. However, the Contention also alleges no compliance with Appendix A, GDC 1. The QA program mandated by GDC 1 covers all SS&C's "important to safety," including those which are not safety-related. There is nothing in the Contention which limits its scope, as LILCO would suggest, to only safety-related SS&C's.

Second, LILCO omits to acknowledge that a portion of Contention 13 explicitly addresses QA requirements for items important to safety. Thus, Contention 13(c) alleges LILCO's:

Failure to ensure that replacement materials and parts of systems classified as components "important to safety" will be equivalent to the original equipment, that replacements will be installed in accordance with adequate process procedures, and that the repaired or reworked structures, systems, or components will be adequately inspected, tested, and documented in "as-built" drawings (emphasis supplied).

Third, LILCO cannot now move to strike portions of Mr. Hubbard's testimony which address QA requirements for non-safety-related SS&C's which are important to safety when LILCO's own testimony on Contentions 12-15 also addresses the same subject. Thus, at pages 14-15 of LILCO's testimony concerning the GE QA/QC program, it is stated:

The quality of items and services not considered "safety-related" has been controlled in accordance with the importance of the overall function or purpose to be performed by the item or service.

Similarly, on page 221, in testimony on the operating QA ("OQA") program, LILCO states:

Non-safety-related materials, parts and components are subject to administrative controls for procurement, installation and testing. Technical review determines the degree to which the controls are applied.

Finally, on page 3 of its testimony, LILCO makes the following broad assertion regarding its QA for items other than those which are classified as safety-related:

The quality of structures, systems, components, and services not classified "safety-related" has been controlled in accordance with the importance of the overall function or purpose to be performed by the item or service.

Thus, by including such discussion in its testimony, LILCO has implicitly acknowledged its understanding that the QA contentions were not rigidly limited to discussion of QA for safety-related items. Since LILCO has addressed these matters, the County of course is entitled to do so as well.^{2/}

B. LILCO's second argument is that Appendix B applies only to safety-related SS&C's. LILCO asserts that all active parties

^{2/} Under LILCO's reasoning, it would be permitted to make broad assertions on QA for items not classified as safety-related, but the County is not permitted to address the same subjects. Presumably LILCO would also object to cross-examination on those very subjects which are addressed in LILCO's testimony.

have agreed to this proposition. Based upon LILCO's first proposition that Contentions 12-15 only concern Appendix B (which the County has shown to be false in Part I.A, above), LILCO concludes that the Contentions and QA testimony must deal only with safety-related SS&C's.

First, it is not settled (as LILCO suggests) that Appendix B only applies to safety-related SS&C's. Indeed, the County submits that recent NRC statements document that Appendix B criteria always have been intended to apply also to items important to safety but not safety-related.

LILCO states that "[t]he NRC's published regulatory agenda confirms this fact [that Appendix B only applies to safety-related SS&C's] by noting that the Commission has under consideration a rulemaking which would extend Appendix B to some non-safety-related items." LILCO Motion, p. 5 (emphasis supplied). In fact, however, the NRC's most recent Regulatory Agenda does not state that Appendix B will be extended, but that Appendix B always has been intended to be applied to the full range of SS&C's important to safety and that the clarifying rule under consideration by the NRC could expand the NRC's substantive review. To the extent Appendix B has not been so applied in the past, parties have not been following existing regulatory requirements. Thus, in NUREG-0936, Vol. 1, No. 2 (July 1982), the NRC states:

The proposed rule is intended to clarify the Commission's original intent by revising Criterion 1 of Appendix A to state specifically

disingenuous

that the criteria to be used for the quality assurance program required in Appendix A are those criteria contained in Appendix B. Additionally, in order to eliminate confusion over definition of the terms "important to safety" as used in Appendix A and "safety-related" as used in Appendix B, the proposed rule would, in Appendix B, delete the term "safety-related." (p. 90). 3/

Second, LILCO asserts that Mr. Hubbard, the County's chief QA consultant, agrees that Appendix B applies only to safety-related SS&C's. LILCO Motion at 5, citing Tr. 1342-43, 1353, 1454-57. If the Board will simply review these pages, the Board will ascertain that LILCO has not fairly represented Mr. Hubbard's statements. For instance, the following was stated at pages 1342-43:

- Q. Now, as I understand your contention, Mr. Hubbard, it is that there is a large group of structures, systems, and components that are important to safety, and a subset of that group are safety related, and it is that subset which is entitled to Appendix B quality assurance standards. Is that right?
- A. No.
- Q. In what respects is it not correct?
- A. As I previously stated, the ones who are in the category of safety related should have the full Appendix B. The ones that are in the broader category of important to safety should have the appropriate ones of the 18 criteria which in some cases might be all of the 18 criteria.
- Q. So what I said was correct with the exception of the fact that the remainder of the structures, systems, and components other than safety related that are important to safety in your scheme would get

3/ For convenience, the relevant pages of NUREG-0936 are attached hereto.

something less than the full Appendix B, but some portions of Appendix B.

- A. No. They would get some portion of the 18 criteria up to including all 18 criteria. I could conceive there would be some that are important to safety that it might be appropriate to use all 18 criteria.

Mr. Hubbard did not state that Appendix B criteria were inapplicable to SS&C's important to safety but not safety-related as suggested by LILCO. Rather, he indicates that the Appendix B criteria must be applied commensurate to an item's importance to safety. In this regard, Appendix B makes the same requirement.

The quality assurance program shall provide control over activities affecting the quality of the identified structures, systems, and components, to an extent consistent with their importance to safety. 10 C.F.R. Part 50, App. B, Criterion II.

- C. LILCO next argues that the QA applicable to items important to safety but not safety-related was fully litigated during the hearing on Contention 7B and thus should be struck as unduly repetitious. The County submits that this argument clearly is wrong.

First, the County's direct testimony on Contention 7B did not address in the QA context the QA requirements applicable to SS&C's important to safety but not safety-related. LILCO asserts, however, that the County did address this subject at pages 19-22 of its 7B testimony. See LILCO Motion, p. 8 and n. 7. A review of pages 19-22 demonstrates that the County's 7B testimony addressed

inconsistencies in LILCO's classification system, not the details of LILCO's QA program. The QA program was mentioned in the classification context only because LILCO's classification table (FSAR Table 3.2.1-1) defines classification, inter alia, in terms of QA categories. This hardly constitutes direct testimony on the QA contentions and LILCO never so argued when it sought to strike portions of the County's 7B testimony. Thus, the County clearly is not attempting a "second bite at the apple" as LILCO asserts. See LILCO Motion, p. 9.^{4/}

Second, it is astonishing for LILCO to assert that its direct testimony fully covered QA requirements for items important to safety but not safety-related. That testimony with respect to design and construction addresses only briefly the GE and Stone and Webster programs and provides virtually no details of LILCO's program. With respect to OQA, that testimony is entirely silent.

Third, the undersigned, who conducted the County's cross-examination of those parts of the LILCO testimony dealing with QA, must take issue with the suggestion that the 7B hearing was intended to be the one and only opportunity to address the QA applicable to items important to safety but not safety-related. The undersigned personally limited his examination on QA matters

^{4/} LILCO does not even attempt to argue that the portions of the County's QA testimony which LILCO finds objectionable repeat statements made in the 7B testimony. If there were repetition -- and if it were in the same context -- there might be a scintilla of basis for LILCO's argument. However, the fact is that the 7B and QA testimony for Suffolk County are in a sharply different context and are not repetitious. Further, as noted later in this Response, a degree of repetition provides no basis for a motion to strike in the context of this case.

in the 7B hearing because Contention 7B focused on classification issues, not QA. It seemed far more appropriate to defer the details of such questioning (manuals used, audits conducted, etc.) until Contentions 12-15 were reached. Further, the LILCO 7B witnesses did not even purport to be QA experts, nor to have direct personal knowledge of the details of the respective QA programs. For that additional reason, in depth examination on QA details was viewed as inappropriate in the 7B context.

Finally, even if there is overlap between Contention 7B and the QA issues, that is no basis to strike the testimony. This Board has noted before that there is overlap between issues (for example, 7B and SC 3 overlap regarding the water level system; 7B and SC 16 overlap regarding the standby liquid control system; and SC 24 and SC 25 overlap regarding cracking of materials and ISI requirements). Such overlap may be inevitable in a complex case such as this one. It certainly does not support a motion to strike but only would argue for care by attorneys to ensure that the same questions are not repeated.

D. LILCO also argues that the three portions of the County testimony should be struck for the additional reason that the County has impermissibly attempted to expand the NRC's regulations without complying with 10 C.F.R. § 2.758. See LILCO Motion, pp. 9-10.^{5/} The County believes no detailed response is required beyond

^{5/} In footnote 11 at page 3 of its Motion, LILCO implies surprise that Mr. Hubbard would not define "important to safety" and "safety-related" as synonymous. There, of course, can be no real surprise in light of the testimony regarding Contention 7B. Indeed, Mr. Hubbard uses the same definitions as the Staff uses.

that provided previously which shows that the Contentions are not solely limited to QA for safety-related SS&C's and that the Appendix B criteria do have applicability to SS&C's important to safety.

E. The specific portions of the County testimony which LILCO moves to strike are set forth at page 7 of the LILCO Motion. The foregoing discussion, in the County's view, demonstrates why each allegedly objectionable item is, in fact, relevant and within the scope of the QA issues. In the interest of brevity therefore, the County, with one exception, will not address each item in turn.

The one exception is LILCO's suggestion that the discussion of the Kemeny Commission findings (pp. 58-59) is outside the scope of these Contentions. This discussion in the testimony addresses the proper scope and implementation of a QA program under Part 50, Appendices A and B, particularly in light of the TMI experience, and the adequacy of the NRC's I&E program. The criticisms of the NRC I&E program by the Kemeny Commission are particularly relevant because they concern I&E Region I, the same region which inspects Shoreham. Such matters are squarely relevant to Contentions 12-15.

II. The Portions of Testimony Regarding QA at Other Plants are Relevant

LILCO also argues that certain portions of Mr. Hubbard's testimony are inadmissible because the QA experience and breakdowns at other plants which are referenced by Mr. Hubbard are not linked

to Shoreham. LILCO Motion, p. 11. This argument must be rejected because it ignores the context in which the statements are made and the linkage to Shoreham which has been asserted in the testimony.

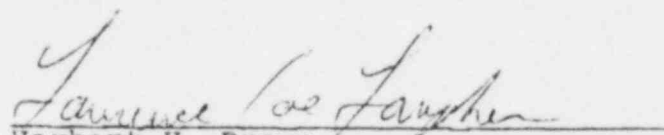
The allegedly objectionable statements on pages 7-8 concern the pervasiveness of QA requirements and how some plants have failed to comply. This is in the context of the section entitled, "Background and Importance to QA/QC." As such, Mr. Hubbard is attempting to provide a setting or context of concern for QA/QC matters which provides an introduction to his later detailed remarks regarding Shoreham. An expert is clearly entitled to provide such background data which provide a focus for his concerns.

The allegedly objectionable statements on pages 54-55 concern deficiencies in the I&E program -- a program which is squarely the subject of Contentions 14 and 15. If the NRC's I&E program has been inadequate at other plants, that evidence is relevant in considering the I&E program at Shoreham. Mr. Hubbard specifically states that these I&E breakdowns "are pervasive and systematic," making clear Mr. Hubbard's belief that the same deficiencies in the I&E program apply to Shoreham. Thus, the suggestion that Mr. Hubbard has not linked the problems to Shoreham is simply not true. Indeed, the title of the section on page 54 specifically links the deficiencies to Shoreham. Further, we expect in cross-examination of the Staff to determine whether there are any significant differences in I&E efforts

at Shoreham that would suggest that deficiencies in I&E inspections at other plants do not apply to Shoreham. Thus, this testimony is clearly relevant to Contentions 14 and 15.

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September 3, 1982

NRC Regulatory Agenda

Quarterly Report
April-June 1982

U.S. Nuclear Regulatory
Commission

Office of Administration



PART: 50

OTHER AFFECTED PART(S): None

FEDERAL REGISTER CITATION: Not yet published

SUBJECT: Applicability of Appendix B to Appendix A

SUMMARY: Description. The proposed rule would clarify the quality assurance program requirements for those structures, systems, and components of nuclear power plants which are important to safety. The proposed rule would also eliminate any possible confusion over the definition of the terms "important to safety" and "safety-related" and provide a clear statement in the Commission's regulations concerning the applicability of the quality assurance criteria (in 10 CFR Part 50) of Appendix B to the structures, systems, and components covered in Appendix A. The proposed rule could expand the extent of the review applied to nuclear power plant structures, systems, and components, and thus, it could help ensure the appropriate application of quality assurance program requirements during the construction of nuclear power plants.

*Don't say
Don't say*

Objective. To assure that the requirements of Appendix A to 10 CFR Part 50, Criterion 1, result in the establishment by licensees of effective quality assurance programs that are implemented in a manner that provides adequate assurance that structures, systems, and components covered in the appendix will satisfactorily perform their safety functions. Also, to assure that the requirements in Appendix B to 10 CFR Part 50 result in the establishment by licensees of adequate quality assurance requirements for the design, construction, and operation of certain structures, systems, and components that prevent or mitigate the consequences of postulated accidents that could cause undue risk to the health and safety of the public.

Background. In the aftermath of the Three Mile Island Unit #2 accident, a number of studies have concluded that the scope of the items to which the quality assurance criteria of Appendix B to 10 CFR Part 50 apply needs to be broadened to include the full range of safety matters as was originally intended. Typical examples of structures, systems, and components for which the Appendix B quality assurance program criteria may not have been fully implemented are in-core instrumentation, reactor coolant pump motors, reactor coolant pump power cables, and radioactive waste system pumps, valves, and storage tanks. The proposed rule is intended to clarify the Commission's original intent by revising Criterion 1 of Appendix A to state specifically that the criteria to be used for the quality assurance program required in Appendix A are those criteria contained in Appendix B. Additionally, in order to eliminate confusion over definition of the terms "important to safety" as used in Appendix A and "safety-related" as used in Appendix B, the proposed rule would, in Appendix B, delete the term "safety-related".

Legal Basis: 42 U.S.C. 2133, 2134, 2201, 2233.

TIMETABLE: Commission action on the proposed rule is scheduled for November 1982.

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Office of Nuclear Regulatory Research
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of)
)

LONG ISLAND LIGHTING COMPANY)
)

(Shoreham Nuclear Power Station,
Unit 1))
)

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

CERTIFICATE OF SERVICE

I hereby certify that copies of SUFFOLK COUNTY RESPONSE TO LILCO'S MOTION TO STRIKE PORTIONS OF SUFFOLK COUNTY TESTIMONY ON SUFFOLK COUNTY CONTENTIONS 12, 13, 14 & 15 -- QUALITY ASSURANCE have been served to the following this 3rd day of September, 1982 by U.S. Mail, first class, except as otherwise noted.

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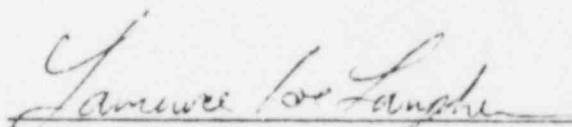
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DATE: September 3, 1982

* By Hand 9/3/82

By Federal Express


Lawrence Coe Lanpher
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September 2, 1982

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In the Matter of
Long Island Lighting Company
(Shoreham Nuclear Power Station, Unit 1)
Docket No. 50-322 (OL)

Dear Administrative Judges:

The NRC Staff fully supports, for the reasons noted therein, "LILCO's Motion to Strike Portions of Suffolk County Testimony on Suffolk County Contentions 12, 13, 14 and 15 - - Quality Assurance" which motion was filed (by telecopier) on August 31, 1982.

Sincerely,

Bernard M. Bordenick

Bernard M. Bordenick
Counsel for NRC Staff

cc: Matthew J. Kelly, Esq.
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Hon. Peter Cohalan

1 JUDGE BRENNER: In order to give the parties
2 an expeditious ruling on that matter, since it affected
3 the parties' plans for cross examination, we did rule in
4 a conference call last week, and we denied the motion,
5 and in very brief summary, we disagreed with the
6 assertion in LILCO's motion that there was agreement
7 that Appendix B did not apply to the category of
8 systems, structures, and components important to safety
9 but not safety related.

10 In the course of conversation on the phone it
11 became clear to the board that those words were too
12 simple a discussion to say that Appendix B did not
13 apply. We think there is fair agreement in the
14 testimony of all witnesses that in general not all
15 aspects of Appendix B rigorously applied point to point
16 to non-safety related equipment, although the county's
17 witness holds out the possibility in some of his
18 testimony that there could be some such equipment as to
19 which all points would apply.

20 The staff has testified that the ideas of
21 Appendix B, if not Appendix B per se, that is, the
22 criteria in Appendix B, would apply to equipment
23 important to safety but not safety related, depending
24 upon the importance of the function of the equipment.
25 And in fact this is not inconsistent with LILCO's

1 testimony either.

2 The problem, I think, is that LILCO reads all
3 of the county's testimony every time it mentions
4 Appendix B and important to safety. I think all
5 criteria automatically apply per se with full force and
6 effect. For purposes of a motion to strike, it is not
7 clear to us that the testimony says that, and even if it
8 did as to some items, that, too, is a subject for cross
9 examination.

10 The staff witness took some pains to state his
11 belief that the proposed rulemaking or clarification,
12 and he used different descriptions at different times,
13 to apply under the aegis of GDC 1, and Appendix B type
14 gradated system, to matters important to safety was not
15 a new rule so much as a clarification of Appendix B.
16 And that, I think, is consistent with the Board's belief
17 that the simple statement that if all parties agree that
18 Appendix B does not apply to equipment important to
19 safety is too simplistic, although we now understand
20 from the phone conversation what the county -- what
21 LILCO had in mind in objecting or in making that
22 statement.

23 Some of what the board looked at, and this was
24 not intended to be an assembling of a full record on
25 this point, which came out in the course of the 7-B

1 litigation, but we took the opportunity to confirm our
2 recollection. We looked at the references cited in the
3 motion. We also looked at Question and Answer 5 in the
4 staff's 7-B testimony in the course of the phone call.
5 We have not looked at that before, but Mr. Rawson
6 pointed it out to us, and we paused in the phone call
7 and looked at it then.

8 We also looked at Transcript Page 7,480,
9 Transcript Page 7,822, and et cetera. There were about
10 ten pages thereafter in which there was a dialogue
11 involving Mr. Haass and others, and we also looked at
12 Transcript Page 7,858. Putting all that together, that
13 supported our view not to grant the motion to strike.

14 In addition to that, and another reason why we
15 were reluctant to grant the motion to strike, is, even
16 if we agreed with LILCO as to the application or
17 non-application, I should say, of Appendix B, it was not
18 sufficiently clear that the contention was strictly
19 limited to Appendix B, due to the reference to GDC 1 in
20 one contention and the reference in another contention
21 to components important to safety.

22 Now, LILCO's reading of those references is a
23 permissible one. That is, that they were rather narrow,
24 and in one case narrowed the GDC 1 references to be
25 limited to the Appendix B reference, but that is not the

1 only permissible reading, and for purposes of a motion
2 to strike, we did not choose to read it that way,
3 particularly given the record that I have just discussed
4 on Appendix B itself.

5 LILCO also made the point in its view that
6 this would be a repetition of Contention 7-B if we did
7 not grant the motion to strike. I suppose in some way
8 they were raising a parade of horrors before us. I
9 can assure you we will not relitigate Contention 7-B.
10 The county's view is a correct one in the posture of a
11 motion to strike, that there are better ways of
12 enforcing that concern through not allowing repetitious
13 testimony. To some extent there is some overlap in this
14 subject, but then the focus will be decidedly
15 different. Of course, at the end, after the record is
16 fully adduced, counsel is free to use one portion of the
17 record for the other contention and vice versa.

18 There were portions of the record, and I don't
19 have the cites to it now, where on at least one occasion
20 for each, staff witness and county counsel indicated
21 that the matter would be better pursued in the context
22 of quality assurance, but that is not the main reason
23 for our ruling. I just point that out.

24 Another aspect of the LILCO motion to strike,
25 and in fact this was directed to different portions of

1 the county testimony, is the reference in the county
2 testimony to assert its quality assurance, quality
3 control problems at other nuclear power plants, and the
4 objection is that this was irrelevant, because it was
5 not tied up in the testimony to the matters we have to
6 decide here in the context of the Shoreham plant.

7 For purposes of the motion to strike, we
8 denied the motion for two reasons. There was in some
9 cases the assertion of a connection. That is pretty
10 much the bare statement in the testimony, that these
11 same problems could cohere or this demonstrates problems
12 with the staff's program, even though the staff was
13 involved in the other facilities. That thin reed by
14 itself might have been a close call as to whether
15 testimony should have been stricken, but buttressing our
16 decision not to strike the testimony is the fact that
17 the contention itself references these other
18 facilities. This contention was ultimately agreed upon,
19 I believe. In any event, it was admitted.

20 So, the parties cannot claim surprise. They
21 were on notice through the contention, and the
22 contention makes the assertion as to why the happenings
23 at these other facilities in the county's view are
24 assertedly relevant. The county could have chosen to
25 offer no direct testimony on those points, and yet have

1 been free to cross examine opposing witnesses, given the
2 express wording of the contention. So, the fact that
3 they have included some reference to these other plants
4 does not give rise to a motion to strike them.

5 How probative the county's testimony is as to
6 the other plants is a totally different matter, and in
7 fact you can tell from the tone of my voice if not my
8 words, and I think we said this in the phone call also,
9 is not very probative, that the county's testimony as it
10 stands does little other than make the assertions of
11 these other problems. They don't connect it well, if at
12 all, to the asserted particular problems at Shoreham.

13 However, county's counsel represented to us
14 that there would be cross examination on these points,
15 and we will wait for the whole record to be assembled
16 and decide in our findings how probative the references
17 were.

18 I think that accurately summarizes what has
19 been our oral ruling during the conference call. Had we
20 been in session that week, we would have done it on the
21 record in the first instance.

22 Let me turn to one other matter involving the
23 contention after this one, detection of inadequate core
24 cooling. We would propose a date by which we would
25 receive the cross examination plans of October 12th,

1 with the thought that that gives you plenty of time, and
2 it is still after the break. At the same time, it gives
3 us more time before we start the testimony than we have
4 had with the quality assurance cross plans.

5 MR. LANPHER: Judge Brenner, I believe those
6 cross plans on Suffolk County Contention 3 have been
7 filed eons ago. That is my recollection. They may be
8 -- we are undertaking a review of this plan to try to
9 avoid repetition.

10 JUDGE BRENNER: You are right. They were
11 filed on June 29. I am sorry.

12 The next point I was going to get to, and it
13 might relate back to my error here, is whether further
14 discussions would take place between now and October
15 12th such that we can get a definitive report on that
16 date, and my thought was that the cross plans would then
17 reflect further work or further discussions. We have
18 had some other issues where the discussions run right up
19 to the wire, and I don't want that to happen here, and
20 since we are going to have a break, and I am even giving
21 you an additional week, well, I am asking you for a
22 report after the two-week break, if that sounds
23 reasonable to the board.

24 If we are missing something, and the parties
25 believe it unreasonable, we are willing to hear, but

1 unless we hear different, we would like a report as to
2 what discussions took place, whether anything has been
3 narrowed, and where the crux of the dispute still lies
4 in an oral report from counsel. You can make it a
5 written report if you like, but we won't require it.
6 And as before, we expect experts and counsel for the
7 staff, LILCO, and the county to get together on it and
8 report back to us by October 12th. If there are no
9 material modifications to the cross plan, we will use
10 the ones filed on June 29th for our guidance. If there
11 are some material modifications, you will have an
12 opportunity to make them.

13 I guess October 12 would also be a good time
14 to hear about the status of negotiations on the issues
15 which were deferred. And I remind the parties and
16 myself that we are going to get a report with respect to
17 Phase One of the emergency planning issues on September
18 21st.

19 (Pause.)

20 JUDGE BRENNER: All right. We can take a
21 quick break so that the witnesses can get comfortable,
22 unless there is something before then.

23 MR. ELLIS: Judge Brenner, I have three
24 preliminary housekeeping matters that I think might be
25 useful to take up now. First, one of our witnesses, Mr.

1 Jack Alexander, is the leader of the Independent Safety
2 Engineering Group, ISOG, and is a member of this panel,
3 I believe, chiefly at the request of the board, and his
4 reference in the QA testimony amounts to a fairly small
5 portion of the overall QA testimony, and I would request
6 that Mr. Alexander not be required to be present here
7 during the entire period, but that when the county
8 decides or perhaps the board may decide when it wishes
9 to take up that particular subject, we will then have
10 Mr. Alexander come back.

11 Certainly two or three days, if he has to be
12 here two or three days on an overlap, that is no
13 problem, but I wanted to avoid two weeks of sitting, if
14 at all possible.

15 JUDGE BRENNER: Well, you can't avoid it, but
16 we can avoid it for Mr. Alexander.

17 MR. ELLIS: Thank you.

18 MR. BORDENICK: Mr. Ellis, may we interject, I
19 have a similar request with respect to one of the staff
20 witnesses. That is somewhat down the road, but the
21 parties could be thinking about it. Mr. Rivenbark
22 essentially has a very minor portion of the testimony,
23 and it would be helpful if again there is no problem
24 with a few days' overlap, but I don't think it is
25 necessary for him to sit with the panel throughout the

1 staff's tenure on the stand.

2 JUDGE BRENNER: You have plenty of time to
3 work that out with the parties. Why don't you do that
4 and then come back to us with the solution you have
5 arrived at, particularly since we will be in Bethesda?

6 Going back to Mr. Ellis's request, that is
7 acceptable to the board. Does the county have any
8 objection to working out a particular schedule for that
9 one witness?

10 MR. LANPHER: No. Mr. Earley had asked us
11 earlier about that, and we had told him while we thought
12 we would do some qualifications the day after that, we
13 can defer to when QA is generally taken up, and we can
14 give him an exact date with a couple of days' notice,
15 hopefully.

16 MR. ELLIS: My second housekeeping matter is
17 similar, but I think it raises a unique problem for us.
18 Mr. Muller is about to be a proud papa, and he has an
19 advantage over some of us, because I think the
20 predictions are pretty clear that the process will begin
21 tomorrow, and carry over to Wednesday, and I stuck my
22 neck out, Judge Brenner, and told him that the board
23 would give favorable consideration to his request to be
24 absent for that period, provided he promises to be back
25 here Thursday -- Friday, excuse me, having already one

1 child home that he remembers well when he was very
2 young. He welcomes the opportunity to come back on
3 Friday.

4 (General laughter.)

5 JUDGE BRENNER: You don't think I'd rule
6 against apple pie and motherhood, do you?

7 (General laughter.)

8 JUDGE BRENNER: We should state for the record
9 we have had preliminary discussions with the board and
10 the parties during conference calls as to the projection
11 of how long the county's cross would last, and the
12 projection was it would last at least two weeks. Does
13 the county have any trouble adjusting to taking in the
14 second week?

15 MR. LANPHER: We advised LILCO that there is
16 no objection to that at all. My understanding is that
17 he will be here today.

18 MR. ELLIS: He is here today, and so is Mr.
19 Alexander.

20 The third item is a housekeeping matter, but I
21 would like to give a short background. An integral part
22 of the arrangement that led to the second week of the
23 two-week hiatus was that the county would identify
24 documents they intended to use in cross examination.
25 The reason for this request is that QA, unlike many

1 other contentions, the number of documents is
2 overwhelming. It is voluminous, and many of the
3 documents are interrelated, and the county agreed to
4 attempt to do this. There were literally many thousands
5 of documents, and I think we all recognize that it was
6 unfair to question witnesses about complicated matters
7 that were present in voluminous documents without giving
8 the witnesses an opportunity to review these.

9 In any event, on the 7th of September, Mr.
10 Lanpher sent us an attempt to define the documents, and
11 I think in the course of the telephone conversation had
12 indicated that Mr. Lanpher thought he had identified a
13 number, and we were dissatisfied, and in any event we
14 agreed to go back and talk about it.

15 Mr. Lanpher pointed out in the telephone call
16 that that was his first cut. He intended to furnish us
17 with more information on Friday. He in fact was in
18 touch with us. I think Mr. Earley and Mr. Lanpher were
19 in touch on several occasions, and the long and short of
20 the matter is that Mr. Lanpher has furnished us with
21 more specificity, but not what we think we should have,
22 which is, I think, what one might expect. We think more
23 should be supplied.

24 I don't suggest that the board should engage
25 in a review. Mr. Lanpher thinks he has done a good

1 faith effort. We don't question his good faith. We
2 merely think we should have had much more specificity.
3 But we don't suggest that the board get involved in
4 deciding whether they ought to give us more or not on
5 the basis of what has happened before, but what we do
6 think is important in order to conserve the litigation
7 time of this board and in order to have the matters
8 presented as fairly as we can is to have as much warning
9 as possible on specific documents.

10 I don't think, as I mentioned previously, this
11 ought to be a trial by ambush on the voluminous
12 documents that are available in this, and all we ask is
13 that as much in advance as possible, that we have some
14 indication, we have some identification of the documents
15 so that the witnesses don't have to say, I need an
16 opportunity to review this or that or something else too
17 often. It is going to happen anyway, because there is
18 just a great deal, a great many documents.

19 And so, in summary, I suggest that the county
20 advise us in advance, as much in advance as possible of
21 each session of the documents they plan to use, so that
22 we can fairly prepare and save the hearing time.

23 JUDGE BRENNER: We have been patient on other
24 contentions when events have transpired such that we
25 have had to take breaks for other witnesses to read

1 documents because they have not been apprised in
2 advance, and we will proceed on the same basis here, and
3 if we discern a lack of good faith or other untoward
4 abuses of that, and I am not saying that is going to
5 occur, but if it does, we will be prepared to act,
6 including the possibility of cutting off the cross
7 examination.

8 I don't want to preclude the possibility that
9 the county may have some particular documents that they
10 want to supply the witness with. If that is your
11 particular strategy, that is acceptable, but it should
12 be limited to those relatively narrow areas in this type
13 of litigation where that type of approach is useful.

14 MR. LANPHER: I don't believe any response is
15 required from me. I just want it to be clear that I
16 disagree with Mr. Ellis's characterizations.

17 JUDGE BRENNER: Well, we will see it unfold
18 before us, and if there is suddenly extensive cross
19 examination from a lot of documents that the witness was
20 not informed particularly would be the basis for
21 questioning, as distinguished from some large category
22 of documents that the document falls within, we will see
23 it right in front of us, as to what occurred.

24 So it might be a good idea, given the
25 extensive amount of documents, to have a counsel

1 conference, a brief counsel conference every day at an
2 appropriate time, at the beginning of the day or the end
3 of the day, as to what documents are going to come up in
4 the next day or two, and I would expect that when the
5 other parties are cross examining the county's witness,
6 the same approach would be taken, so that we can get a
7 rapid, up to date status among the parties, and the
8 board does not have to hear it, as to what documents
9 they are going to use.

10 It seems to me that would obviate the problem
11 and also avoid any dispute as to whether you gave enough
12 detail. This would be your chance to be reacting to it
13 as the case is developing, and inform other counsel what
14 documents you are going to use so the witnesses can take
15 a look at them. So, we will require that that procedure
16 be followed.

17 Any questions?

18 MR. ELLIS: No, Judge.

19 MR. LANPHER: No.

20 JUDGE BRENNER: All right. Let's take a
21 ten-minute break, and get the witnesses up on the stand.

22 (Whereupon, a brief recess was taken.)
23
24
25

1 JUDGE BRENNER: Mr. Bordenick, I forget to set
2 a staff date for the responses to Judge Morris on the
3 items he wanted a status on. I would not like that to
4 be as late as the other matter on the overall responses
5 to unresolved safety issues. I was going to suggest
6 October 12th as a good date, because you will have a
7 two-week break.

8 MR. BORDENICK: That is fine, Judge Brenner.
9 Obviously, we won't need much time for that portion of
10 it.

11 JUDGE BRENNER: The status of some of the open
12 items may change between now and October 12. I don't
13 know. And that would be a good time for us to take
14 another look at them.

15 MR. BORDENICK: We will file a general status
16 report. I think we have been trying to do that on a
17 fairly regular basis, so we will make the next one on
18 that date if not sooner.

19 JUDGE BRENNER: All right.

20 Now, there was a reason why we called the
21 items down. There are some items for which the staff
22 has its review open. We are no longer interested in
23 pursuing the status for reasons of our views on the
24 status to date. So you can restrict the report to the
25 items Judge Morris included, plus, of course, if there

1 are any changes in the ones that we relate to the
2 deferred issues.

3 MR. BORDENICK: That is fine.

4 JUDGE BRENNER: Gentlemen, could you all
5 please stand, now that you are comfortable?
6 Whereupon,

7 JOHN F. ALEXANDER,

8 T. TRACY ARRINGTON,

9 FREDERICK B. BALDWIN,

10 ROBERT G. BURNS,

11 WILLIAM M. EIFERT,

12 T. FRANK GERECKE,

13 JOSEPH M. KELLY,

14 DONALD G. LONG,

15 ARTHUR R. MULLER,

16 WILLIAM J. MUSELER and

17 EDWARD J. YOUNGLING

18 were called as witnesses by counsel for LILCO and, after
19 being first duly sworn, were examined and testified as
20 follows:

21 MR. ELLIS: Judge Brenner, we have a very
22 brief informal statement. Do you want that now or after
23 the presentation of the testimony?

24 JUDGE BRENNER: Well, let's get the testimony
25 in, and I am open to suggestions as to how mechanically

1 to treat the testimony. I would suggest that we
2 probably want to depart from the procedure of binding it
3 in.

4 MR. ELLIS: Shall I begin?

5 JUDGE BRENNER: Yes.

6 DIRECT EXAMINATION

7 BY MR. ELLIS:

8 Q Gentlemen, would you please state for the
9 record your name, your residence and your business
10 affiliation, beginning with Mr. Burns at this end,
11 please.

12 A (WITNESS BURNS) My name is Robert G. Burns, my
13 residential address is 30 French Street, North Quincy,
14 Massachusetts. My business affiliation is Stone &
15 Webster Engineering Corporation.

16 A (WITNESS LONG) My name is Donald G. Long, I
17 reside at 3235 Oak Wood Court in Morgan Hill,
18 California. I work for the General Electric Company
19 located at 175 Curtner Avenue in San Jose, California.
20 The Nuclear Energy Business Operations of the General
21 Electric Company.

22 A (WITNESS EIFERT) My name is William M. Eifert,
23 I live at 31 Stanford Drive in Hingham, Massachusetts.
24 I work for Stone & Webster Engineering Corporation in
25 Boston.

1 A (WITNESS BALDWIN) My name is Frederick B.
2 Baldwin, I reside at 11 Fox Lane, Milford, Mass., and I
3 work for Stone & Webster Engineering Corporation, Boston.

4 A (WITNESS GERECKE) My name is T. Frank Gerecke,
5 my resident address is 121 Village Lane, Hauppauge. I
6 work for the Long Island Lighting Company in Hicksville.

7 A (WITNESS MUSELER) My name is William J.
8 Museler, my business address is P.O. Box 618, Wading
9 River, New York. I work for the Long Island Lighting
10 Company.

11 A (WITNESS KELLY) My name is Joseph M. Kelly, my
12 business address is Post Office Box 618, Wading River,
13 New York. I work for the Long Island Lighting Company.

14 A (WITNESS ARRINGTON) My name is Tracy
15 Arrington, my address is Sam's Path, Rocky Point, New
16 York. I work for Stone & Webster Engineering
17 Corporation at the site.

18 A (WITNESS MULLER) My name is Arthur R. Muller.
19 My business address is Post 628, Wading River, New
20 York. I am employed by LILCO.

21 Q That was all said without a trace of
22 nervousness.

23 A (WITNESS YOUNGLING) My name is edward J.
24 Youngling, my business address is Box 518, Wading River,
25 New York. I am employed by the Long Island Lighting

1 Company at the Shoreham Nuclear Power Station.

2 A (WITNESS ALEXANDER) My name is John F.

3 Alexander, I work for the Long Island Lighting Company,
4 my business address is Shoreham Nuclear Power Station,
5 Wading River, New York.

6 MR. ELLIS: Judge Brenner, the spokesman for
7 the panel has been designated as Mr. Museler, and I will
8 now direct my questions concerning the testimony to Mr.
9 Museler.

10 BY MR. ELLIS (Resuming):

11 Q Mr. Museler, do you have a copy of the quality
12 assurance testimony submitted on behalf of LILCO on June
13 29, 1982, before you?

14 A (WITNESS MUSELER) Yes, I do.

15 Q And do you also have a copy of the changes to
16 that testimony, the errata sheet?

17 A (WITNESS MULLER) Yes, I do.

18 MR. ELLIS: Judge Brenner, a copy of the
19 testimony, together with the errata sheet, has been
20 supplied to counsel and to the reporter, and I believe
21 the changes have been made in the copy given to the
22 reporter.

23 BY MR. ELLIS (Resuming):

24 Q Mr. Museler, on behalf of the panel, is the
25 quality assurance testimony true and correct, together

1 with the changes, to the best of the knowledge and
2 belief of you and the panel?

3 A (WITNESS MULLER) Yes, it is.

4 MR. ELLIS: At this time, Judge Brenner, we
5 would offer the quality assurance testimony and the
6 attachments, together with the change sheet, into
7 evidence in this record, and present the panel for cross
8 examination.

9 JUDGE BRENNER: You skirted my mechanical
10 suggestion. I suggest that we make it all an exhibit,
11 as distinguished from binding it in. And we would be up
12 to LILCO Exhibit 21, according to our records. And the
13 attachments would simply stay numbered as they are;
14 however, they would be Attachments, whatever number, to
15 LILCO Exhibit 21. I am making this up as I go along,
16 but I would suggest that we can call the errata sheet
17 21A as a sub-exhibit.

18 As a result of all that, the reporter will
19 ultimately need three copies of everything for the
20 official record.

21 MR. ELLIS: We will supply those, Judge
22 Brenner.

23 JUDGE BRENNER: In the absence of objection,
24 as identified, we will accept the LILCO testimony and
25 attachments, along with the errata sheet, into evidence

1 as LILCO Exhibits 21 with attachments, and also, 21A for
2 the errata sheet.

3 (The documents referred
4 to were marked LILCO
5 Exhibits No. 21 and 21A
6 for identification and
7 were received in
8 evidence.)

9 BY MR. MR. ELLIS (Resuming):

10 Q Consistent with the Board's previous rulings,
11 we would now like to have Mr. Museler give a brief
12 summary of the testimony.

13 A (WITNESS MULLER) My name is Bill Museler, I am
14 the Lighting Company's Manager of Construction and
15 Engineering for the Shoreham Power Plant. My company is
16 vitally interested in building and operating a safe and
17 reliable plant at Shoreham.

18 As our testimony demonstrates, we have taken
19 all the necessary steps to design and construct that
20 plant properly. We have established a vigorous and
21 thorough quality assurance program, and we implement
22 that program continuously.

23 Quality assurance at Shoreham has always
24 benefited from effective and sophisticated quality
25 assurance planning and procedures. We have staffed that

1 program with knowledgeable individuals in sufficient
2 numbers to assure proper coverage. And we have backed
3 that program with sufficient management commitment and
4 concern.

5 Our quality assurance program has resulted in
6 a carefully-constructed plant at Shoreham which will
7 ensure a safe operating plant when we enter into that
8 phase of the project.

9 To illustrate the quality that has been built
10 into Shoreham, over 750,000 inspections have been
11 conducted at Shoreham, and well over 2.4 million man
12 hours of quality assurance inspector time have been
13 expended. With that, only approximately one-half
14 percent of these inspections resulted in any findings.

15 Throughout this testimony, much will be said
16 about these findings. It must be remembered that they
17 are the exception. Literally, millions of tasks were
18 involved in the construction of Shoreham. Not only are
19 the findings are insignificant in terms of numbers; many
20 of them are also insignificant from a safety
21 standpoint. Any problems found at Shoreham have been
22 corrected and the causes of these problems have been
23 rectified.

24 What is more, LILCO has undertaken a number of
25 programs to ensure further the quality of Shoreham,

1 including an independent review of safety systems and a
2 design verification.

3 NRC inspections at Shoreham have identified
4 fewer concerns on average than at other nuclear power
5 plants in the country. And significantly, Shoreham's
6 positive response to NRC findings and concerns has
7 resulted in no finds ever having been levied against the
8 Lighting Company, Stone & Webster, or General Electric.
9 No serious infractions as designated by the NRC have
10 been identified in the over ten years of the
11 construction of this plant, and no need has ever arisen
12 for the NRC to call a special management meeting to
13 insure that LILCO management takes proper corrective
14 action.

15 We have taken our quality assurance
16 responsibilities seriously, and we believe that it shows
17 in the final product. But no matter how large the
18 quality assurance program may be, and no matter how
19 inspectors may be dedicated to it, quality has to be
20 built into the plant, and the adequacy of the final
21 product is what really counts. I think here is where
22 Shoreham excels.

23 I have been associated with the Shoreham
24 project for almost ten years, and I know large numbers
25 of the men and women who designed and built it. From

1 the design engineers to the welders, these people are
2 dedicated to producing a quality product. They are
3 interested in it because they are professionals and they
4 are dedicated to their trade, and proud of it. Many of
5 them are our neighbors here on Long Island and have an
6 added personal interest in insuring that this plant is
7 built and operated safely.

8 Thus, our testimony shows that the entire team
9 of engineers, designers and craftsmen has built an
10 excellent plant at Shoreham. Our quality assurance
11 program has been thorough, and it has confirmed that the
12 plant will provide reliable and safe electrical service
13 to the people of Long Island.

14 MR. ELLIS: The panel is now ready for cross
15 examination, Judge Brenner.

16 JUDGE BRENNER: County?

17 MR. LANPHER: Judge Brenner, is that summary
18 going to be considered part of the evidence?

19 JUDGE BRENNER: No. Consistent with what we
20 have been doing.

21 MR. LANPHER: That is fine, because I think
22 there were some statements that are not in the
23 testimony, but if it is not evidence, then I don't need
24 a copy of it.

25 CROSS EXAMINATION

1 BY MR. LANPHER:

2 Q Gentlemen, I am going to start with some
3 questions regarding qualification, and accordingly, I
4 will be making reference to Attachment 3 of the prefiled
5 testimony.

6 Mr. Museler, since you started, we will come
7 back to you first. I believe in your resume you
8 indicate that you supervise UNICO Construction
9 engineering and licensing, correct?

10 A (WITNESS MULLER) That is generally correct,
11 sir. UNICO Construction is one entity of engineering,
12 and licensing power another entity. But I supervise all
13 of those.

14 Q You supervise those three?

15 A (WITNESS MULLER) Yes, sir.

16 Q Are you part of the -- in your position, sir,
17 are you part of the Quality Assurance Department of
18 LILCO?

19 A (WITNESS MUSELER) No, sir, I am not part of
20 the Quality Assurance Department.

21 Q Does UNICO have its own quality assurance
22 department?

23 A (WITNESS MUSELER) UNICO, as a construction
24 management organization, does not have a separate
25 quality assurance department or division. The quality

1 assurance activities conducted on the construction site
2 are administered and effected by independent Stone &
3 Webster and LILCO quality assurance organizations

4 I would add that in certain areas of
5 non-safety related equipment, the construction
6 management organization does perform quality type
7 inspections.

8 Q Mr. Museler, when you use the term "non-safety
9 related", maybe we should try to get that defined
10 upfront. Are you including the class of everything that
11 is not classified by LILCO as QA Category 1?

12 A (WITNESS MUSELER) That is the general
13 application of that term, yes, sir.

14 Q You said the general application. Let me ask
15 it a different way, then. My understanding is QA
16 Category 1 is synonymous in LILCO's terminology with
17 safety-related. Is that correct?

18 A (WITNESS MUSELER) That is correct.

19 Q If I understand your testimony, there are
20 certain inspections which are conducted by the UNICO
21 Construction organization.

22 A (WITNESS MUSELER) That is correct.

23 Q Concerning non-safety related and non-QA
24 Category 1 items.

25 A (WITNESS MUSELER) Yes, sir. It is not a very

1 simplistic answer. Construction management personnel and
2 contract personnel also inspect safety-related
3 equipment, but not to the exclusion of quality assurance
4 personnel. In the case of some non-safety related
5 equipment, the contractor and construction management
6 personnel conduct those inspections exclusively.

7 Excuse me, Mr. Lanpher, I should add just for
8 additional clarity, there is a cross-over of quality
9 assurance inspections into the non-safety related area
10 as well. Quality assurance does inspect also some
11 non-safety related components or materials.

12 What is a rigid fact is that the quality
13 assurance organizations at Shoreham inspect all of the
14 safety-related components, equipment and processes.

15 Q Mr. Museler, in your previous answer you said
16 quality assurance does inspect some non-safety related.
17 Now, when you are referring to quality assurance, are
18 you talking about LILCO quality assurance or Stone &
19 Webster?

20 A (WITNESS MUSELER) Both.

21 Q And what items, what non-safety related items
22 are inspected by Stone & Webster and/or LILCO or GE?

23 A (WITNESS MUSELER) To give you an exhaustive
24 list I would have to refer to some additional records.
25 But to give you a few examples, quality assurance

1 personnel inspect non-safety related concrete; they
2 inspect the document control system. Those are two.

3 They also conduct inspections of the storage
4 and maintenance of equipment prior to its installation
5 for non-safety related as well as safety-related
6 equipment.

7 If you would like a more exhaustive list, we
8 would have to take a few minutes to put it together.

9 Q Is that list part of your testimony, prefiled
10 testimony, sir?

11 A (WITNESS MUSELER) No, it is not.

12 Q Mr. Museler, from what I would call the
13 attribution page at the front of the testimony where
14 people's responsibility is set forth, it is indicated
15 that you are responsible or partly responsible for Parts
16 I and II of the testimony; then the design portion, the
17 construction portion and the conclusion. Were you the
18 primary author of any portions of that testimony? And
19 if so, can you indicate what portions?

20 A (WITNESS MUSELER) Yes, sir. If you would just
21 bear with me, I will do it by using the Table of
22 Contents. This will just take me a moment, so if you
23 will bear with me.

24 MR. LANPHER: Judge Brenner, for the
25 information of the Board, I am going to try to get this

1 information so that later, I can direct questions to the
2 appropriate people.

3 JUDGE BRENNER: Is that the only reason you
4 are asking? Because there is a more efficient way of
5 doing it, if that is the only reason.

6 MR. LANPHER: Maybe during a break we could do
7 that. That would be fine with me. Though I might want
8 to follow up on it afterwards. And if you would rather
9 --

10 JUDGE BRENNER: Yes, why don't we do that.
11 And in particular, on what you call the attribution
12 page, it is evidence that some sections have more than
13 one author, and whether the breakdown is as to
14 particular subsections or whether there is an overlap.
15 Just for the purpose of asking questions, because you
16 probably have enough with just the attribution page, I
17 think the witnesses can decide which one of several who
18 are involved in that section would be the appropriate
19 one to answer.

20 However, I can understand why you might feel
21 more comfortable with a little more detail, and I think
22 you can get that during the break. We don't need it on
23 the record for our purposes for now. To the extent you
24 see something that interests you in terms of why a
25 certain person is offering a certain subsection, you can

1 follow up on that as opposed to having to get everything.

2 So let's just move on, and we will work out
3 that particular information as soon as possible. If you
4 can't complete it by lunchtime, perhaps by the
5 mid-afternoon break. Or maybe LILCO can take the Table
6 of Contents and indicate in a particular subsection
7 which witnesses -- and we understand there may be more
8 than one -- for a particular subsection. And if one can
9 properly be called the principal author, so indicate.

10 We will run until about 12:30, for your
11 information.

12 BY MR. LANPHER (Resuming):

13 Q Mr. Museler, you indicated with respect to QA
14 Category 2, or non-safety related items, UNICO conducts
15 inspections. Does UNICO conduct other quality assurance
16 activities for non-safety related items?

17 (Panel of witnesses conferring.)

18 A (WITNESS MUSELER) Yes, sir. Just to enumerate
19 a few of them, the control of special processes that
20 apply to non-safety related equipment is partially the
21 responsibility of UNICO, and also partially the
22 responsibility of the contractors. The control of
23 design documents for non-safety related equipment is
24 partially a responsibility of UNICO. So in aspects we
25 do conduct other activities related to quality for

1 non-safety related equipment.

2 Mr. Lanpher, Mr. Youngling would like to add
3 something to that last statement.

4 A (WITNESS YOUNGLING) I would like to add to
5 that, Mr. Lanpher, in the area of start-up testing, the
6 quality assurance organization does perform an
7 inspection function on non-safety related test
8 activities. We designate tests in the start-up area as
9 pre-operational tests and acceptance tests. Certain
10 pre-operational tests are performed on non-safety
11 related activities. These tests are witnessed by the QA
12 organization.

13 Q When you say QA organization, that is both
14 Stone & Webster and LILCO? Or now are we talking about
15 operational QA, LILCO alone?

16 A (WITNESS YOUNGLING) We are talking about
17 operational QA alone.

18 Q So it is just LILCO you are referring to?

19 I (WITNESS YOUNGLING) Yes.

20 Q I believe your testimony was that they observed
21 just some of the startup testing, not all of it?
22 Correct?

23 A (WITNESS YOUNGLING) The operational quality
24 assurance organization reviews all safety-related
25 testing, and in addition, certain non-safety related.

1 Q Is there a listing of what non-safety related
2 startup testing is observed by LILCO quality assurance?

3 A (WITNESS YOUNGLING) Yes. All pre-operational
4 tests are witnessed by the OQA organization, and that
5 listing of tests is available.

6 Q I guess I missed an earlier statement. I
7 thought you had earlier said, sir, that 100 percent of
8 the startup tests related to safety-related are observed
9 by LILCO QA, but only some of the startup tests relating
10 to non-safety related are observed by LILCO QA. But
11 then your next answer, I thought you said 100 percent of
12 both.

13 A (WITNESS YOUNGLING) Let me clarify for you.
14 The startup testing activities for all components in the
15 plant is divided into two parts; pre-operational tests
16 and acceptance tests. Pre-operational tests are
17 performed on all safety-related systems. In addition,
18 LILCO has imposed pre-operational testing to certain
19 non-safety related systems, which it deems necessary to
20 support reliability of the product.

21 This grouping of testing activities called
22 pre-operational tests are witnesses by the OQA
23 organization.

24 Q You stated that there was a listing. Where is
25 that located? A listing of those non-safety related

1 systems or items that are witnesses by LILCO QA, the
2 startup testing?

3 A (WITNESS YOUNGLING) No, I stated that the
4 pre-operational test listing is available.

5 Q And that includes the non-safety related?

6 A (WITNESS YOUNGLING) Yes.

7 Q Is that part of your testimony, sir?

8 A (WITNESS YOUNGLING) No, it is not.

9 (Panel of witnesses conferring.)

10 Mr. Lanpher, Mr. Museler reminded me that you
11 do have a copy of our startup manual, and in the startup
12 manual there is a complete listing of the
13 pre-operational tests.

14 Q Thank you. Mr. Alexander, as lead engineer
15 for ISEG, what are your responsibilities?

16 A (WITNESS ALEXANDER) My responsibilities, as
17 stated in my testimony, are that I am responsible for
18 directing the day-to-day activities of the group at the
19 plant.

20 Q Excuse me, I see one of the changes you made.
21 Your procurement responsibilities, which previously were
22 indicated in the resume, are no longer part of your
23 responsibilities with ISEG?

24 A (WITNESS ALEXANDER) That is correct. The
25 procurement referred to an operator license. Since

1 then, I have obtained a certification from General
2 Electric as an SRO, and currently am in the licensing
3 program. So that has been changed.

4 Q What are the day-to-day ISEG activities that
5 you are responsible for?

6 (Pause.)

7 A (WITNESS ALEXANDER) Basically, my first duty
8 is purely administrative; that is, to handle the
9 administrative functions of the personnel, the engineers
10 who work for me. Just the basic day-to-day, mundane
11 work.

12 In addition to that managerial responsibility,
13 I have a technical responsibility. The technical
14 responsibility is to oversee the work of the engineers
15 involved in the independent safety engineering group and
16 to verify that it is technically correct, and to assist
17 them when they run into particular problems. Basically,
18 get involved in doing reviews of different operating
19 experiences, information, and assist them in finding --
20 helping them to find out information or to get help from
21 sources if they need that help.

22 In addition, I review their work product. I
23 do give it an initial first cut to make sure that it is
24 doing what is supposed to be done by the independent
25 safety engineering group. I take care of scheduling of

1 the peer review of that work product.

2 I am also involved in consulting with various
3 outside groups for the independent safety engineering
4 group, and I act as more or less a liaison with the
5 other parts of the company.

6 Q You refer to engineers working for you. What
7 is the size of your staff, sir? Professional
8 engineering staff.

9 A (WITNESS ALEXANDER) In addition to myself,
10 there are currently three engineers actively working at
11 the site. In addition, one more has been hired and is
12 scheduled to start shortly. In addition, we are
13 concluding bringing on a consultant on a long-term basis
14 to provide input to the group. In addition, we have
15 access to other consulting groups which we are actively
16 discussing with these people. And finally, I have one
17 member who provides clerical assistance.

18 Q Mr. Alexander, as lead engineer, who do you
19 report to?

20 A (WITNESS ALEXANDER) I report to the Chairman
21 of the Independent Safety Engineering Group, and that is
22 Bryan McCaffry.

23 Q Mr. Alexander, those three engineers that you
24 mentioned at the site, are they permanent members of the
25 ISEG staff, or do they have other responsibilities as

1 well?

2 A (WITNESS ALEXANDER) They are permanent members
3 of the staff and they have no other responsibilities,
4 other than to ISEG.

5 Q And that would be true also for the fourth
6 that you mentioned, that has been hired?

7 A (WITNESS ALEXANDER) That is correct, and it is
8 also true for the consultant we are interviewing to take
9 on.

10 Q Mr. Arrington, I would like to turn to your
11 statement of qualifications. I understand from review
12 of your resume that you are a superintendent in the
13 Field Quality Control Division. What does it mean to be
14 a superintendent?

15 A (WITNESS ARRINGTON) Part of my responsibility
16 as Superintendent of the Field Quality Control is to
17 administer the Stone & Webster Field Quality Control
18 Manual as it relates to Stone & Webster's quality
19 assurance program for the Shoreham project.

20 I also have administrative responsibilities
21 for all Stone & Webster field quality control personnel
22 assigned to the Shoreham project.

23

24

25

1 Q As superintendent, you were the chief person
2 on the site for Stone and Webster within the field
3 quality control division? Is that correct?

4 A (WITNESS ARRINGTON) That is correct. I am
5 the senior rep for the field quality control division.

6 Q How long have you been assigned to that
7 position at Shoreham?

8 A (WITNESS ARRINGTON) As we have stated my
9 qualifications, I received that title in April of 1978.

10 Q You have been at Shoreham since that time
11 also?

12 A (WITNESS ARRINGTON) That is correct.

13 Q Were you at Shoreham prior to April, 1978,
14 sir?

15 A (WITNESS ARRINGTON) Yes.

16 Q When did you first begin working on Shoreham
17 matters for Stone and Webster?

18 A (WITNESS ARRINGTON) I was transferred to the
19 Shoreham project in February of 1975.

20 Q And that was in field quality control?

21 A (WITNESS ARRINGTON) Yes.

22 Q In your position as superintendent at the
23 Shoreham site, have you conducted any mechanical
24 inspections?

25 A (WITNESS ARRINGTON) Have I personally

1 conducted mechanical inspections?

2 Q Yes.

3 A (WITNESS ARRINGTON) I have not been
4 responsible for the mechanical discipline. However, I
5 have witnessed inspections and been a part of the
6 inspections in the mechanical discipline.

7 Q Then your statement -- excuse me.

8 (Whereupon, counsel for Suffolk County
9 conferred.)

10 Q In the position of superintendent, have you
11 personally conducted any electrical inspections?

12 A (WITNESS ARRINGTON) No, I have not. I have
13 also witnessed inspections in the electrical discipline.

14 Q Now, in your earlier positions with Stone and
15 Webster assigned to the Shoreham project from 1975 until
16 April of 1978, did you personally conduct any mechanical
17 inspections?

18 A (WITNESS ARRINGTON) As I indicated earlier, I
19 have not personally conducted the inspection. I have
20 been a part of the mechanical inspections at various
21 times, witnessing those inspections that have been
22 performed by people who are responsible to me. I have
23 had direct responsibilities for the civil discipline as
24 far as inspections are concerned.

25 Q Would you define in a little more detail what

1 you mean by the civil discipline? Would that be things
2 like concrete?

3 A (WITNESS ARRINGTON) That would be the
4 concrete, the soils inspection, the laboratory testing,
5 structural steel erection.

6 Q Mr. Arrington, what is the size of the Stone
7 and Webster professional staff which you supervise at
8 the site?

9 A (WITNESS ARRINGTON) The professional staff
10 would be approximately 50 percent of our total staff.
11 Professional staff would be the salaried or monthly paid
12 individuals. That would be approximately 40 to 45
13 people at this point in time.

14 Q These are the people that conduct inspections,
15 conduct audits? Is that correct?

16 A (WITNESS ARRINGTON) Yes.

17 Q In your position as superintendent, do you
18 personally conduct audits in any of the areas of the
19 plant?

20 A (WITNESS ARRINGTON) Not personally, no. I
21 have people who are responsible to me that perform these
22 audits personally. I do review their results.

23 Q Prior to the time that you became
24 superintendent at the site in April, '78, did you
25 personally perform audits in any areas?

1 A (WITNESS ARRINGTON) Yes. I was accompanying
2 a couple of individuals on various audits.

3 Q Would that again be in the civil discipline?

4 A (WITNESS ARRINGTON) Yes.

5 Q When you said that you conducted audits within
6 the civil discipline, we will get into the testimony a
7 little more a little later about what an audit is, but
8 in those audits, were you covering all of the Appendix B
9 criteria as applied in those disciplines, for instance,
10 things like document control and corrective action, or
11 were you concentrating on a particular Appendix B
12 criterion?

13 A (WITNESS ARRINGTON) The audits that I
14 referred to were being performed by our Boston staff. I
15 was accompanying those individuals that were performing
16 those audits. They were applied to Appendix B criteria,
17 yes.

18 Q Is it generally the case that audits, field
19 quality control audits performed by Stone and Webster at
20 Shoreham are performed by Boston based staff as opposed
21 to the personnel that are based at the site?

22 A (WITNESS ARRINGTON) Yes. The site Stone and
23 Webster field quality control division does not perform
24 site audits. These audits are performed by our Boston
25 staff of the quality assurance division, and field

1 quality control people. That is one of the departments
2 that would be audited, as well as the construction
3 department or engineering.

4 Q Then does field quality control, the staff
5 personnel, the site personnel, excuse me, field quality
6 control for Stone and Webster, it limits itself to
7 inspection activities and other activities of a lesser
8 order than auditing? Is that correct?

9 A (WITNESS ARRINGTON) Our responsibilities
10 would be for the first line inspection, in process
11 inspection and surveillance inspection of the site
12 activities.

13 Q Is auditing the only quality assurance
14 function that is performed by Stone and Webster
15 personnel from off-site. Is everything else, in other
16 words, handled by your staff on site?

17 A (WITNESS ARRINGTON) As far as it relates to
18 the Stone and Webster program, yes. We do the first
19 line inspection. The safety related components. The
20 Cat 1 components.

21 A (WITNESS BALDWIN) Mr. Lanpher, could I add to
22 that?

23 Q Sure. Any time anyone wants to offer
24 something, go ahead.

25 A (WITNESS BALDWIN) Thank you very much. I

1 think one of your questions was, does Boston Stone and
2 Webster staff only do QA audits of the construction
3 site. Is that correct? Is that your question to Tracy,
4 or Mr. Arrington?

5 Q No, my question was, with respect to field
6 quality control audits of the work at Shoreham, are all
7 those audits conducted by personnel from off-site? And
8 he had mentioned Boston.

9 A (WITNESS BALDWIN) Presently they are, yes.
10 In the ten or twelve years of activity on this
11 construction site, in the early stages I believe, Mr.
12 Arrington, you did do some audits, or the FQC people did
13 do some audits on the construction site.

14 A (WITNESS ARRINGTON) That is correct. In the
15 early stages of the project, I think they were called
16 audits.

17 Q Can one of you gentlemen define what you mean
18 by the early stage or time period?

19 A (WITNESS BALDWIN) I recall that field quality
20 control audit number 1 was, I think, in '71 or '72. Mr.
21 Arrington might have a better reflection on when they
22 started at the construction site. They, his group, and
23 also the group from Boston, there were two groups up to
24 a period of time. There has always been the Boston
25 group. The Boston quality assurance group.

1 Q Mr. Arrington, if I could go back to a
2 statement I believe you made, I think you stated that
3 these field quality control audits covered Category 1
4 items, correct? Or audit, the Category 1 items?

5 A (WITNESS ARRINGTON) I indicated that our
6 first line inspections covered the Category 1. The
7 first line inspection covered the Category 1 or safety
8 related activities.

9 Q Field quality control, Stone and Webster field
10 quality control does not inspect Category 2 items? QA
11 Category 2 items?

12 A (WITNESS ARRINGTON) There are some items that
13 have been designated by the engineer to be inspected by
14 the field quality control division.

15 Q But as a general matter, that is not the
16 case?

17 A (WITNESS ARRINGTON) Generally speaking, we do
18 not do the first line inspection for the non-safety
19 related or Cat 2 areas. There are some areas that we do
20 do inspections. Mr. Museler had indicated there are
21 some concrete testing that we perform. We also do
22 inspection on the documentation systems of the storage
23 as it pertains to non-safety related items. It is the
24 same program.

25 Q Does Stone and Webster, or have you compiled

1 any analysis which breaks down the percent of time which
2 field quality control spends on safety related or
3 Category 1 items as opposed to the non-safety related
4 items, Category 2?

5 A (WITNESS ARRINGTON) No, we do not. Our time
6 is charged to the same number.

7 Q Would it be fair to say that the vast majority
8 of the time or effort by field quality control is
9 applied to safety related items?

10 A (WITNESS ARRINGTON) I am not sure what you
11 mean.

12 Q Ninety to 95 percent of the time,
13 understanding that this is just an estimate.

14 (Whereupon, the witnesses conferred.)

15 A (WITNESS ARRINGTON) From a total standpoint,
16 from the beginning of time, I think our involvement in
17 the non-safety related is much greater than it would be
18 today. Today's activities, we are not necessarily
19 involved with the total process of non-safety related,
20 but in the earlier stages, considering the amount of
21 concrete that was placed, the numbers were unusually
22 high then as opposed to now, where the concrete or the
23 civil area is one of the smaller operations.

24 Q Is it correct, sir, that up until some time in
25 1978 or 1979, LILCO field quality control performed

1 first line inspections on non-safety related items?

2 A (WITNESS ARRINGTON) You mean Stone and
3 Webster field quality control?

4 Q Yes.

5 A (WITNESS ARRINGTON) Yes, we did perform
6 inspection on certain Category 2 and non-safety related
7 items or processes.

8 Q And was there a change in that process in 1978
9 or 1979?

10 A (WITNESS ARRINGTON) There was a change in
11 1978 in some disciplines where my responsibility ceased
12 in certain disciplines. That was assumed fully by the
13 UNICO or the construction management organization. They
14 had been performing those inspections up until that
15 point. It was a redundant inspection. They assumed the
16 inspection responsibilities for those systems.

17 A (WITNESS MUSELER) Mr. Lanpher, excuse me. I
18 believe you asked -- well, in answer to one of your
19 questions earlier, we had indicated that the UNICO
20 construction management organization did perform first
21 line inspections on certain non-safety related
22 components, as well as inspections in front of Mr.
23 Arrington's people on safety related components. I
24 emphasize that the inspection requirements that are used
25 by the UNICO construction management personnel are the

1 same ones that were used by Mr. Arrington's organization
2 and in fact the procedures, inspection requirements that
3 are used for the non-safety related equipment which are
4 indicated in a different manual than the quality
5 assurance manual are reviewed by the quality assurance
6 department to ensure that the inspections are
7 appropriate for that kind of component or process.

8 The change that you referred to was made at
9 that point in time for two purposes, to rely a more
10 definitive focus of the quality assurance inspectors on
11 the safety related equipment, and to make use of, quite
12 frankly, the experience and the knowledge of the
13 construction management personnel in the review and the
14 inspection of components that were erected by the
15 various contractors, non-safety related components.

16 Q Mr. Museler, you made passing reference to
17 another manual. Attachment 11 to the LILCO testimony is
18 entitled UNICO Engineering QA Manual. My understanding
19 is that that covers more than just engineering. It also
20 covers construction. Is that correct?

21 A (WITNESS MUSELER) Yes, sir, but that is not
22 what I was referring to. What I was referring to was
23 the construction site construction manual, of which I
24 believe you have a number of the specific CSI procedures
25 in your possession, and the entire CSI manual, I

1 believe, was also part of the various discovery
2 processes that have taken place over the last number of
3 months.

4 That is the manual I was referring to.

5 Q Then let me get an answer to my earlier
6 question, though. Attachment 11, the LILCO engineering
7 QA manual, as it has been labeled, really covers more
8 than engineering, correct?

9 A (WITNESS MUSELER) Yes, it does. I think Mr.
10 Kelly could speak to that.

11 A (WITNESS KELLY) That manual covers all
12 activities up to operations.

13 Q All LILCO activities?

14 A (WITNESS KELLY) No, that manual and that
15 program is passed down to the architect-engineer and all
16 suppliers to meet with the LILCO requirements specified
17 in that manual.

18 Q And this manual covers safety related
19 activities? Is that correct?

20 A (WITNESS KELLY) Yes, that's correct.

21 JUDGE BRENNER: Mr. Lanpher, whenever it is
22 convenient, we can take a break.

23 MR. LANPHER: I was going to suggest that this
24 is a convenient time right now.

25 JUDGE BRENNER: Let me make sure I was

1 informed about Mr. Muller's schedule correctly.
2 Apparently he has things better scheduled than I have
3 ever been able to do in this proceeding, but he is
4 available for all of today?

5 MR. ELLIS: Yes, sir, he is available all of
6 today, but not tomorrow or the following day.

7 JUDGE BRENNER: Does he have a strong
8 preference to try to get out of here early, even today?

9 MR. ELLIS: I don't know, sir. He is
10 available entirely today.

11 JUDGE BRENNER: Mr. Muller, does it matter?

12 WITNESS MULLER: No problem.

13 JUDGE BRENNER: Otherwise, I was going to
14 suggest that we inquire into Mr. Muller's qualifications
15 as soon as we got back from lunch, but if it doesn't
16 matter, I will leave it up to you, as long as you get to
17 him today.

18 MR. LANPHER: We will get to him today.

19 JUDGE BRENNER: Apparently when Mr. Muller
20 sets his schedule, he sets his schedule.

21 (General laughter.)

22 JUDGE BRENNER: We will take a break now until
23 1:40.

24 (Whereupon, at 12:35 p.m., the board was
25 recessed, to reconvene at 1:40 p.m. of the same day.)

1 AFTERNOON SESSION

2 (1:40 p.m.)

3 JUDGE BRENNER: Back on the record.

4 Whereupon,

5 JOHN F. ALEXANDER,

6 T. TRACY ARRINGTON,

7 FREDERICK B. BALDWIN,

8 ROBERT G. BURNS,

9 WILLIAM M. EIFERT,

10 T. FRANK GERECKE,

11 JOSEPH M. KELLY,

12 DONALD G. LONG,

13 ARTHUR R. MULLER,

14 WILLIAM J. MUSELER and

15 EDWARD J. YOUNGLING,

16 the witnesses on the stand at the time of recess,

17 resumed the stand and, having been previously duly

18 sworn, were examined and testified further as follows:

19 JUDGE BRENNER: Judge Morris pointed out to me that
20 when we admitted the LILCO testimony into evidence, I
21 didn't particularly give the number of attachments that
22 were coming in as attachments to LILCO Exhibit 21. Of
23 course, they are listed after the Table of Contents in
24 the main testimony, which is Exhibit 21. But there are,
25 in fact, 50 of them, and the reason we mechanically

1 handled the evidence in the fashion we did is as is
2 obvious to all of us here, the sheer bulk of the
3 testimony and the attachments made it too large to bind
4 even just the testimony into the record, and certainly,
5 the attachments.

6 WITNESS ARRINGTON: Mr. Lanpher?

7 JUDGE BRENNER: Excuse me. It is not even
8 Friday. Have I lost control already?

9 (Laughter.)

10 MR. ELLIS: He had a clarification to an
11 answer that he gave Mr. Lanpher.

12 JUDGE BRENNER: All right. I am going to
13 point out that usually, we wait for the questions. You
14 have a clarification, Mr. Arrington, to your previous
15 answer?

16 WITNESS ARRINGTON: Yes, sir.

17 JUDGE BRENNER: All right, we are going to
18 proceed with the cross examination now. Let's let Mr.
19 Arrington do that and then you can continue, Mr. Lanpher.

20 WITNESS ARRINGTON: I would like to clarify
21 the answer to the question we had earlier with regard to
22 the size of my staff that is considered to be
23 professional.

24 I indicated that approximately 50 percent was
25 professional. By Stone & Webster terminology, that is

1 in compensation with the salaries; they are either
2 weekly or monthly paid. However, approximately 80
3 percent of our total staff, which is about 60 people, is
4 qualified to the ANSI standards. And in that sense of
5 the word, they are considered to be professional because
6 they are certified to ANSI requirements.

7 CROSS EXAMINATION -- Resumed

8 BY MR. LANPHER:

9 Q Then it is your testimony that there are about
10 60 members of your staff who actively participate in
11 inspections and other quality assurance-related
12 activities at the site?

13 A (WITNESS ARRINGTON) That is correct. Those
14 individuals are either directly responsible for the
15 first line inspection or the supervision thereof.

16 Q Mr. Arrington, in the Stone & Webster
17 hierarchy, who do you report to?

18 A (WITNESS ARRINGTON) I report to the Manager of
19 the Field Quality Control Division in Boston.

20 Q And that Field Quality Control Division, in
21 turn, is part of the Stone & Webster Quality Assurance
22 Department? Is that correct?

23 A (WITNESS ARRINGTON) That is correct. It is a
24 division of the Quality Assurance Department.

25 Q Mr. Arrington, in your statement of

1 professional qualifications, you list courses which you
2 took related to civil discipline and concrete testing,
3 correct?

4 A (WITNESS ARRINGTON) Yes.

5 Q Are there other courses of a quality assurance
6 or quality control-related nature that you have taken?

7 A (WITNESS ARRINGTON) Yes, there are several
8 inhouse Stone & Webster programs that I have
9 participated in. This is part of the Continuing
10 Education Division of the Stone & Webster Corporation.

11 Q So except for the concrete testing, all of
12 your quality assurance/quality control testing has been
13 the inhouse continuing education and the on-the-job
14 training that I assume you get, obviously?

15 A (WITNESS ARRINGTON) That is correct.

16 Q Earlier, before lunch, you had indicated that
17 at least now and probably since fairly early in the
18 project, all SQC audits are conducted by personnel from
19 off site. When audit deficiencies or audit observations
20 are noted, who is responsible for undertaking corrective
21 action?

22 A (WITNESS ARRINGTON) There are various
23 organizations for activities that pertain to the Stone &
24 Webster program. Under the Field Quality Assurance
25 Manual, I would be responsible to take corrective action

1 for those items.

2 Q In other words, if there are any deficiencies
3 -- and I use that term broadly -- do you call them audit
4 observations or deficiencies, or what?

5 A (WITNESS ARRINGTON) These are audit findings.

6 Q Okay. For any audit findings, then, the site
7 personnel under your direction would be required to
8 institute a corrective action program to address those?

9 A (WITNESS ARRINGTON) If those findings were
10 against the field operations, that is true.

11 Q Mr. Arrington, what is the difference between
12 corrective action and preventive action?

13 A (WITNESS ARRINGTON) Would you repeat that?

14 Q Sure. What is the difference, sir, between
15 corrective action and preventive action?

16 A (WITNESS ARRINGTON) Corrective action is the
17 action that you take in order to correct the individual
18 finding that has been cited. The preventive action
19 would be the steps that you would take to make sure that
20 this particular case does not reoccur again.

21 Q Is both corrective and preventive action taken
22 in all instances of audit findings?

23 (Panel of witnesses conferring.)

24 A (WITNESS ARRINGTON) To the extent where it is
25 appropriate, it is taken.

1 Q How do you determine whether preventive action
2 is appropriate?

3 (Panel of witnesses conferring.)

4 A (WITNESS ARRINGTON) If the infraction or the
5 item that is identified is considered to be an isolated
6 case, there would be no need for a preventative action.
7 Also, to clarify that, if the item that was identified
8 was the last of those activities, it would not require a
9 preventative action in that case, if it was deemed to be
10 the last.

11 Q Does Stone & Webster have a procedure or some
12 other mechanism for determining whether an audit finding
13 is an isolated case? Is there a routine by which you
14 determine whether it is? In which case, you would only
15 take preventive -- excuse me, -- only corrective action?

16 (Panel of witnesses conferring.)

17 A (WITNESS ARRINGTON) There are procedures that
18 define the responsibilities for the audit findings. It
19 is a judgment factor on the individual's part as to
20 whether or not preventative action would be required in
21 that particular case. As I stated earlier, if it was an
22 isolated case, there would be no need for preventative
23 action. But there are procedures that are used in these
24 cases.

25 Q Can you identify those procedures, sir?

1 A (WITNESS ARRINGTON) These would be the quality
2 assurance procedures issued out of our Boston office.

3 Q Are they contained in the Stone & Webster
4 Quality Assurance Manual, Attachment 5 to the prefiled
5 testimony?

6 A (WITNESS BURNS) I would like to assist Mr.
7 Arrington in this response. Those particular procedures
8 are issued as part of the Quality Standards Manual, and
9 they are issued out of the Boston office. The procedure
10 in question would be QS18.1; that is 18.1. That
11 describes the corporate audit program and would also
12 describe the measures to be taken by the audit
13 respondees.

14 Q Do those procedures -- did that finish your
15 answer, Mr. Burns?

16 A (WITNESS BURNS) Yes.

17 Q What was that manual you referred to, again?

18 A (WITNESS BURNS) That would be the Quality
19 Standards Manual.

20 (Counsel for Suffolk County conferring.)

21 Q Mr. Burns, if I could follow up on your
22 answer, then, do these procedures -- or, does this
23 specific procedure, 18.1, identify what is an isolated
24 case, or set criteria for how to determine what an
25 isolated case is?

1 A (WITNESS BURNS) I don't believe it uses the
2 words "isolated case." It does describe the actions
3 taken by the audit activity, and the requirement that
4 they evaluate each one of the findings to determine
5 whether or not the finding warrants both corrective and
6 preventive action.

7 Even in instances where the term "corrective
8 action" is used singularly, the inference and the
9 practice has always been to take preventive action if it
10 were appropriate, and they would recommend appropriate
11 action as part of their finding in the audit report.

12 Q And when we review audit reports -- which I
13 advise your counsel that we will be doing later in this
14 examination -- when preventive action is ordered, that
15 signifies a determination by the auditor that it is not
16 an isolated case; is that correct?

17 A (WITNESS BURNS) It indicates that preventative
18 measures may be effective in preventing recurrence.
19 Isolation would not be the only criterion for preventive
20 action. There are instances of occurrences that may not
21 be isolated that also don't lend themselves to
22 preventive action.

23 Q Can you give an example of that?

24 A (WITNESS BURNS) Certain types of welding
25 defects that may be inherent in the process.

1 Q What kind of defects?

2 A (WITNESS BURNS) You want an example of a type
3 of defect?

4 Q Yes, please.

5 A (WITNESS BURNS) Porosity in manual metal arc
6 welding.

7 Q What is the nature of the defect there that
8 does not lend itself to preventive action?

9 A (WITNESS BURNS) The defect is inherent in the
10 process itself. The process produced has, by its very
11 nature, a certain degree of porosity, and then the
12 determination has to be made as to whether or not that
13 porosity produced exceeds certain acceptance limits or
14 criteria. So there is a certain level of this kind of
15 condition that is inherent in certain processes. That
16 happens to be one of the processes.

17 Q And is that a defect?

18 A (WITNESS BURNS) Is that a defect?

19 Q Is that a defect that would result in an audit
20 finding -- that that is something inherent and nothing
21 can be done to avoid it?

22 A (WITNESS BURNS) If it exceeded acceptable
23 limits, it would be.

24 Q In that case, wouldn't the preventive action
25 be to insure that those limits are not exceeded in any

1 case?

2 A (WITNESS BURNS) That could be the instance, if
3 it were exceeded. That could be the case.

4 A (WITNESS MUSELER) Mr. Lanpher, let me add
5 something to the particular example that Mr. Burns is
6 mentioning. That particular type of finding is inherent
7 in that particular type of welding process, and it is
8 certainly true that if any kind of -- if it were
9 indicated that particular audit findings in this area
10 were not isolated instances, and it were indicative of
11 any type of trend along those lines, that certainly --
12 that would merit some further action.

13 And in fact, it just turns out that in the
14 particular example that Mr. Burns took for a range of
15 conditions in welds, that the program at the site
16 addresses just that type of condition in that records
17 are kept on all the welders. So that even though as a
18 normal part of the metal arc welding porosity does occur
19 -- and that is not necessarily harmful to the strength
20 of the weld -- there are code requirements that it meet
21 certain criteria.

22 If a particular welder -- and that is what we
23 are talking about; we are talking about the people who
24 are doing the work. If a particular welder showed a
25 recurring incidence of exceeding the code requirements,

1 that is kept on what we call a score card, and welders
2 who continuously exhibit non-conformance to code
3 standards would be either removed from welding or
4 transferred to a lower level of weld activities.

5 So I think Mr. Burns characterized it
6 properly, that it has to be evaluated on a case-by-case
7 basis. The fact that porosity exists in that particular
8 type of welding process is normal. Too much of it is
9 not acceptable. And that particular attribute is
10 tracked in terms of the contractor's records on welder
11 performance. And that may or may not find its way into
12 responses to the audit findings, depending upon a
13 particular situation that was inherent in the audit that
14 was performed.

15 So, it is not something that you can, I guess,
16 procedurally go down a checklist, because it depends on
17 the judgment of the auditors involved and the judgment
18 of the departments responding to that audit as to
19 whether or not something is significant and needs
20 followup. That is what you are speaking of when you
21 speak of preventative action.

22 (Counsel for Suffolk County conferring.)

23 Q Mr. Burns, if I could come back to you, you
24 stated that whether an item is an isolated case or not
25 is not the only criterion for determining whether

1 preventive action will be required.

2 My first question is in every instance I
3 assume corrective action is required, correct, where
4 there is an audit finding?

5 A (WITNESS BURNS) Yes. There would be some
6 corrective action required; at least a response
7 indicating what corrective action would be taken, and if
8 corrective action were not to be taken there would have
9 to be an explanation on what basis that would be.

10 Q What other factors besides a determination of
11 whether an item is an isolated case are considered in
12 determining whether preventive action is necessary?

13 A (WITNESS BURNS) There are some occurrences,
14 certainly those involving -- not necessarily related to
15 the QA program -- but there are certainly are
16 occurrences that we would never want to have happen even
17 in a singular event. And those would be cases that
18 would endanger personnel. Safety, for example, on a job
19 site.

20 There would be certain instances where
21 corrective action, even for one instance, might be
22 called for because it might result in injury to
23 personnel. That would be a case of one case being too
24 many.

25 Q Then would it be fair to state that a second

1 factor that is considered when preventive action is
2 determined, whether it is necessary, is the severity or
3 potential danger of that sort of a defect; whether it be
4 a danger to the worker or a danger to the plant?

5 (Panel of witnesses conferring.)

6 A (WITNESS BURNS) Yes. There are other factors,
7 and you mentioned some just a moment ago. We would
8 certainly consider that. The evaluation of any finding
9 would include a look at the severity of the occurrence,
10 whether or not it was something of significance in the
11 judgment of the auditor, whether or not it was something
12 that could lead to a worsening condition and thereby
13 lead to other things that might be adverse, say, to
14 quality. And also, certainly, anything that would
15 endanger personnel or equipment might be a factor that
16 would also be considered.

17 MR. LANPHER: Judge Brenner, I am going to
18 leave this area of questioning for a while, mindful that
19 I want to get to Mr. Muller this afternoon. I have
20 other things here that I am going to take up in
21 connection with the cross plan at page 30, in that
22 area. It probably lends itself better to that, and I
23 want to make sure that I complete this line of
24 examination with Mr. Muller on that today.

25 JUDGE BRENNER: Okay. Do you anticipate -- I

1 was going to jump in in a few minutes, not solely for
2 reasons of Mr. Muller. It is kind of a wide-ranging
3 subject here, and you are going to make your comments
4 better if we are keyed in, and we are using your cross
5 plan to do that.

6 So I recognize that in the course of examining
7 on the qualifications, some of this came up. I think in
8 the future, don't even go as far as you went unless you
9 are going to key us into the context. It will be better
10 for you, too, because we will be more appreciative of
11 the points you are making on the subject.

12 MR. LANPHER: That is why I am going to try to
13 stop it here and let you know where I will bring that up
14 again, for your information.

15 JUDGE BRENNER: Okay.

16 (Counsel for Suffolk County conferring.)

17 BY MR. LANPHER (Resuming):

18 Q Mr. Baldwin, I would like to turn to your
19 statement on professional qualifications next, sir.
20 What have your responsibilities, Mr. Baldwin, been with
21 respect to the Shoreham project?

22 A (WITNESS BALDWIN) My responsibilities in
23 respect to the Shoreham project go back as far as
24 January of 1968, which you will see from my professional
25 qualifications is when I joined Stone & Webster. I was

1 involved in the early stages from 1968 to 1974 in what
2 we call our Field Quality Control Division. So I was
3 directly involved with the project during those years,
4 early on in the project.

5 From 1974 to the present, I have been involved
6 with the Shoreham project in various aspects as it
7 pertains to the responsibilities of Stone & Webster's
8 Quality Assurance Department, which evolved over those
9 years from a small group to a department made up of
10 several divisions.

11 Q Mr. Baldwin, let's go back to 1968 through 74
12 when you were in the FQC Division. You said you were
13 directly involved with the Shoreham project. What does
14 that mean? Did you conduct audits on the project?

15 A (WITNESS BALDWIN) I recall one instance in
16 doing an audit for the project, that is right, and I was
17 the lead auditor. And it was in 1970 and it had to do
18 with procurement in a vendor shop. I think if I went
19 back and looked into the records, since I was probably
20 the individual with a few others who was actually
21 responsible for starting the auditing within the group
22 that we had at the time -- and I am sure you will look
23 at some of the earlier reports -- that I was either
24 active or present in some of those audits. But I would
25 have to go back to all of the details.

1 Q There is only one that you specifically
2 remember being the lead auditor on?

3 A (WITNESS BALDWIN) Yes, and the reason I
4 remember that is because it was the first audit, I
5 believe, for the Shoreham project in the procuremen area.

6 Q Did you participate in any audits that Field
7 Quality Control Division worked at the Shoreham site?

8 A (WITNESS BALDWIN) I would have to say yes, but
9 which ones I coulin't recollect right now. As I
10 indicated earlier, I was the person, with a few others,
11 that was instrumental in starting the program. I not
12 only audited or helped audit or assisted in the
13 auditing, but was also involved in the development of
14 the programs and procedures that started back then, and
15 not just on the Shoreham project, but other projects
16 like Surry and Maine Yankee and several others.

17 Q You were not stationed at the Shoreham site
18 during that time period?

19 A (WITNESS BALDWIN) No, I was not stationed at
20 the Shoreham job site at that time.

21 Q From 1974 to present, you have been stationed
22 in Boston in the QA Department, is that correct?

23 A (WITNESS BALDWIN) That is correct.

24 Q You stated that you had worked on the Shoreham
25 project in various aspects. Would it be fair to

1 characterize your work with respect to the Shoreham
2 project, in the later years from 1974 on, as
3 administrative supervision of the work?

4 A (WITNESS BALDWIN) I wouldn't call it
5 administrative; I would call it management.

6 Q Did you participate in any audits during that
7 period?

8 A (WITNESS BALDWIN) From 1974 on, my
9 participation can be best characterized as being a
10 member of management, responsible for the audits that
11 were conducted on Shoreham, responsible for the specific
12 schedules, revisions to corporate QA auditing procedures
13 that affected Shoreham, and specifically, for sitting in
14 on exit audits, post-audit conferences and communicating
15 with the audit teams or audit team leaders, including
16 the client; not just those audits at the construction
17 site, but also those that were performed for the
18 Shoreham project at Boston headquarters. That would
19 also include any audit of our procurement activities
20 related to the project.

21 Q And your responsibilities in your present job
22 as Assistant Manager, which you have held since 1974 I
23 believe, do those responsibilities relate just to field
24 quality assurance, or engineering assurance also, or
25 what?

1 A (WITNESS BALDWIN) Those responsibilities
2 relate to the Stone & Webster Quality Assurance
3 Department that is made up of several divisions across
4 the board.

5 Q Those divisions include the project office -- ?

6 A (WITNESS BALDWIN) Those divisions include the
7 Field Quality Control Division, the Procurement Quality
8 Assurance Division, the Non-Destructive Testing
9 Division, the Quality Assurance Cost and Auditing
10 Division, and our Project Management Division and
11 Quality Systems Division.

12 Q Is it your testimony that you sit in on all of
13 the audits and the exit interviews of audits of those
14 divisions?

15 A (WITNESS BALDWIN) I sit in on a large majority
16 of them. Because of my responsibilities I do travel,
17 but I do sit in on a large majority of them. One of my
18 other responsibilities is one of the divisions I
19 mentioned, the Project Quality Assurance Management, I
20 would cast that or characterize that as being a sole and
21 direct responsibility; that being a Project Quality
22 Assurance Management Division. We have many people
23 associated with the Shoreham project that I am directly
24 involved with.

25 Q This question is for either you, Mr. Baldwin,

1 or Mr. Burns. You appear to have the same job titles;
2 Assistant Manager in the QA Department. How do your
3 responsibilities differ?

4 A (WITNESS BALDWIN) I wil answer first and then
5 Mr. Burns can add to it. If you take a look at Stone &
6 Webster's corporate -- which includes everything
7 including the Shoreham project QA organization, at the
8 top of the organization, the format, if you will, you
9 will see a Vice President and a Manager, one person.
10 Within that same block you will see Vice President and
11 Manager of the department; within that same block you
12 will see two assistant managers of the department.
13 Below that, you will see the several divisions that I
14 just referred to.

15 Mr. Burns and I have very similar
16 responsibilities. We assist the Vice President and
17 Manager in running the department. I have direct
18 responsibility or sponsorship, if you will, for the
19 Project Division in addition to the overall
20 responsibility of assisting and running the department.
21 And Mr. Burns has a direct responsibility or sponsorship
22 of two of the other divisions.

23 Mr. Burns might want to add to that.

24 Q Mr. Burns, if you do have something to add to
25 that, could you also indicate what those two other

1 divisions are that you have the direct responsibility
2 for?

3 A (WITNESS BURNS) I direct the Quality Systems
4 Division and the Non-Destructive Testing Division.
5 Those two divisions provide what would be called in
6 possibly other businesses as the quality engineering
7 support activity for the company.

8 (Counsel for Suffolk County conferring.)

9 Q Mr. Baldwin, in the pre-1974 period when you
10 were in the Field Quality Control Division, were you
11 only working on the Shoreham project?

12 A (WITNESS BALDWIN) No, I was not.

13 Q What other projects were you working on, or
14 how many other projects? I don't need to know the names.

15 A (WITNESS BALDWIN) It would be easier if I gave
16 you the names.

17 Q Let me ask it a different -- let me withdraw
18 that question and give you an easier way to answer.

19 Approximately what percent of your time was
20 spent on Shoreham-related work during that period from
21 1968 to 74?

22 A (WITNESS BALDWIN) I would have to say 100
23 percent. That might confuse you, but you have to
24 appreciate that in 68 we were formulating a more formal
25 organization within Stone & Webster towards quality

1 assurance. We had informal programs and organizations
2 prior to that. But in the formal organization and
3 structure, we started primarily at the construction
4 sites and procurement. And very shortly thereafter, in
5 1969, in engineering.

6 The systems, the programs and the procedures
7 that were developed then were developed for Shoreham and
8 other plants. Now, what we developed was implemented by
9 them and was also implemented by others. Much of my
10 management and supervision was to see that development
11 and implementation of those programs and procedures for
12 Shoreham and the other plants was to communicate daily,
13 to visit, to be involved in Shoreham and the other
14 plants. But a great bit of it was development and
15 implementation. That is why I say 100 percent.

16 Q It is not your testimony, though, that 100
17 percent of your time was credited to the Shoreham
18 project in terms of billing or something like that, is
19 it? In terms of billing your time?

20 A (WITNESS BALDWIN) In terms of billing, no.
21 The point that I am trying to make is that all of my
22 time was spent during that period of time involved in
23 the construction and field quality control in the
24 development of programs, procedures and in organization
25 and administration of personnel for all of our FQC

1 construction efforts, which included Shoreham.

2 Q During that time period, your responsibilities
3 did not include design-related work, is that correct, or
4 Engineering Assurance Division work?

5 A (WITNESS BALDWIN) Could you ask that question
6 again?

7 Q During that time period, pre-1974, I believe
8 you said a number of times that you were working on
9 development and implementation of Stone & Webster's
10 construction QA program, or the FQC program.

11 A (WITNESS BALDWIN) That is correct.

12 Q You were not involved in the development or
13 the engineering assurance program and the design program
14 for Stone & Webster, design quality assurance.

15 A (WITNESS BALDWIN) Yes, I was.

16 (Panel of witnesses conferring.)

17 Q What was your involvement in that?

18 A (WITNESS BALDWIN) One of association,
19 communications, working with our engineering assurance
20 people and group at that time, developing, implementing
21 and establishing the across-the-board quality assurance
22 program for Stone & Webster. The engineering assurance
23 effort, as it affected the construction effort and the
24 construction FQC as it affected the engineering part --
25 we were all involved in pulling that together. I was

1 not directly responsible for that program, but as I
2 said, I assisted, supported and was associated with it.
3 Just as I was with the procurement effort that I
4 mentioned earlier.

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1 Q So during that time period you were involved
2 in at least three major areas, construction, quality
3 assurance development, engineering and design, quality
4 assurance development and procurement, quality
5 assurance. Is that correct?

6 A (WITNESS BALDWIN) I was involved in all of
7 those, but primarily field quality control. That was my
8 assigned responsibility at the time, but they all
9 interconnect. They all interface.

10 (Whereupon, counsel for Suffolk County
11 conferred.)

12 JUDGE BRENNER: Mr. Lanpher, maybe you are
13 seeing something in all of this so far that I am not. I
14 am having trouble understanding how I am going to
15 usefully apply this information in a material way, given
16 the time we are spending on it. You know, usually if
17 you are going directly to qualifications where somebody
18 is unqualified to present the testimony or arguably to
19 even hold a position, and therefore by inference to
20 present the testimony, I could see it. But it looks
21 rather as we are going to perhaps in argument later as
22 to what weight we should give some of the assertions in
23 the testimony, given some of the things you are asking
24 about now, I don't know, but it is going to be very
25 disparate in what is going to be lengthy examination of

1 many, many days, with many, many people.

2 I suggest that if it is the latter point that
3 you are going to, it might be more valuable to go
4 directly to the substantive testimony, and then when you
5 get something that you want to probe, ask the witness,
6 you know, how do you know, what is your basis, did you
7 do this yourself, did somebody tell you, that type of
8 thing, because I am just having trouble staying with the
9 flow here, and I want to.

10 MR. LANPHER: Judge Brenner, I have tried to
11 keep this examination relatively brief at this point. I
12 personally feel that if you are going to examine a total
13 of eleven witnesses, you have got to get to know them a
14 little first, to tell you the truth. I think this is
15 going to be useful in knowing what to probe later, and
16 there are some areas that I haven't gone into because I
17 am going to go into them later, specifically in the
18 manner you suggested.

19 JUDGE BRENNER: I am afraid it is all going to
20 be repeated again when we go into it later, and unless
21 there is a particular witness here whose credentials you
22 are really after, you know, and I do draw that
23 distinction, if not the length per se, it is the
24 usefulness given the length of examination. I am not
25 going to cut you off. I am just cluing you in that you

1 are losing me.

2 MR. LANPHER: Okay. I will try to bring you
3 back.

4 JUDGE BRENNER: For example, some of what you
5 asked Mr. Burns and Mr. Baldwin is stated directly in
6 their professional qualifications. Yes, they have the
7 same title, but their direct responsibilities I thought
8 were spelled out, and yet you asked them the very
9 information which is presented in their qualifications.
10 That is just one example.

11 (Pause.)

12 BY MR. LANPHER: (Resuming)

13 Q Mr. Burns, can you please say for us the
14 specific Shoreham related work that you performed for
15 Stone and Webster?

16 A (WITNESS BURNS) Yes. During the period 1970
17 to '73, I was a member of the engineering assurance
18 division, and participated in engineering and design
19 audits. Those would have been conducted in the Boston
20 office on the engineering project. Subsequent to that
21 period, I was transferred from the engineering assurance
22 division where I had been the acting chief engineer for
23 some period of time, and went on to head up a new
24 division in the quality assurance department which was
25 the quality systems division.

1 Q That was in 1974?

2 A (WITNESS BURNS) That was in 1974. The
3 quality systems division activity encompassed the
4 preparation of procedures, the preparation of training
5 programs, ASME interface with both job sites and with
6 the authorized inspection agencies, and report
7 activities. In all those areas, we had contact and
8 serviced the project at various times and in various
9 capacities. Procedures were in use by procurement
10 quality assurance people applied to products that were
11 provided to the Shoreham project and were inspected in
12 those procedures.

13 Personnel were subject to various training
14 programs that would be prepared by the systems division,
15 and we worked with the Shoreham project to arrange for
16 and successfully complete ASME's survey activities which
17 ultimately resulted with the extension of the end
18 certificate to the Shoreham nuclear project.

19 So, it was in the service mode that we served
20 the project in that period, or that I was associated
21 with the project in that period.

22 Q That is the period subsequent to 1974?

23 A (WITNESS BURNS) That is correct.

24 Q Since taking that position in 1974, have you
25 personally participated in audits or inspections at the

1 Shoreham site?

2 A (WITNESS BURNS) No, I have not.

3 Q Have you personally participated in audits or
4 inspections related to any activities being performed
5 specifically for Shoreham, even off-site?

6 A (WITNESS BURNS) Yes, I have.

7 Q What are those?

8 A (WITNESS BURNS) ASME surveys that were
9 conducted in headquarters, NRC surveys and audits,
10 particularly audits or inspections that were conducted
11 in Boston that might also involve project personnel.
12 Those types of activities.

13 Q Were these activities specifically designed or
14 specifically focused on the Shoreham project? Or did it
15 relate to the program in general?

16 A (WITNESS BURNS) They were, in both instances,
17 they were either related as Shoreham being one of the
18 projects of interest, or they were directly related to
19 Shoreham. In the case of ASME, they would be directly
20 related to Shoreham. Additionally during that period
21 all audit reports actually from the period of 1974 right
22 through until today, all audit reports in the Shoreham
23 project would pass through me at one time or another.

24 I would see them either in draft, in draft
25 being the initial issue, or I would see them in the

1 final form with the responses, especially as they might
2 affect the activities of the systems division, or the
3 activities of the NBT division, but in any event, even
4 if they didn't affect those two divisions, as an
5 assistant manager, I would see them and be aware of what
6 the findings were. So, I would participate to that
7 extent.

8 A (WITNESS BALDWIN) Excuse me, Mr. Lanpher.
9 Could I add something to some of the information that I
10 passed to you earlier? I would like to echo what Bob
11 said as being his counterpart as an assistant to a
12 manager in the department and involved in the audit
13 cycle program, and I would like to, and I think I might
14 have mentioned it earlier, indicate that on many
15 occasions I have been part of the audits as related to
16 the Shoreham project. As another addition to that would
17 be, I indicated my sponsorship, if you will, or direct
18 responsibility for the project, QA management division.

19 There have been over the past several years
20 many people from that division assigned specifically
21 full-time to that project, and they reported to me
22 directly.

23 Q Mr. Eifert, with respect to your professional
24 qualifications, I would like to ask you the same
25 question. What specific work have you performed on the

1 Shoreham project?

2 A (WITNESS EIFERT) I joined the engineering
3 assurance division in 1972, and from 1972 until 1978 I
4 was in the procedures development activity, being
5 supervisor of the group in design control procedures.
6 Those procedures which were prepared by me and under my
7 supervision reflected design control program that was
8 applied on the Shoreham project. These procedures were
9 directly applicable and used on the project. Since
10 1978, when I became assistant chief engineer in the
11 engineering assurance division, I took on the
12 responsibility for the internal audit program which was
13 applied to the Shoreham project --

14 Q Excuse me. I missed the first word of that.
15 Which audit program?

16 A (WITNESS EIFERT) The internal audit program.
17 I then became responsible for the procured services
18 group in engineering assurance, and the group that
19 administers the corporate problem report system. All of
20 these three activities are staff activities performed by
21 the engineering assurance division, all of which are
22 applied to the Shoreham project.

23 Going back to the internal auditing, my
24 involvement is direct involvement in the scheduling of
25 the audits for the Shoreham project, participation and

1 involvement from a supervisory standpoint during the
2 actual conduct of the audit, involvement, direct
3 involvement in the majority of the post-audit
4 conferences held at the end of the audit, and then the
5 management involvement in evaluation of audit responses
6 and the follow-up activities with respect to our
7 internal audits.

8 Similarly for the procurement services area
9 and the problem reporting areas, as assistant chief, I
10 was directly responsible for managing those activities
11 as they are applied to the Shoreham project.

12 Q During your period of involvement from 1972 to
13 1978 relating to design control procedures, was it your
14 responsibility to draft those or to also follow the
15 implementation of those procedures with respect to each
16 project?

17 A (WITNESS EIFERT) I joined in '72, and for
18 approximately one year I was an engineer in that group,
19 drafting the procedures. From 1973 until 1978, I was
20 supervisor of the group, so I didn't draft them myself,
21 but in the context of your question, we developed the
22 procedures. The internal auditing program is the
23 organization in the engineering assurance division which
24 monitors their implementation.

25 During those years, and while we were

1 developing those procedures, I encouraged and in some
2 cases insisted that my procedures writers actually
3 participate in the auditing on the various projects, so
4 that they could better understand and be in a position
5 to develop better procedures, but we of the group were
6 not responsible for filing the implementation.

7 Q In your work since 1978, that is one of your
8 responsibilities, correct?

9 A (WITNESS EIFERT) That is correct.

10 Q In that work, have you participated or
11 actually personally conducted any of the engineering
12 assurance audits of engineering assurance activities
13 pertaining to Shoreham?

14 A (WITNESS EIFERT) I did not participate as an
15 auditor, okay. I participated in the audit planning,
16 post-audit conference and reporting activities, but not
17 as an auditor.

18 Q Mr. Gerecke, is it correct that you became the
19 quality assurance manager in 1972 for LILCO?

20 A (WITNESS GERECKE) That's correct.

21 Q Prior to 1972, what quality assurance work had
22 you performed?

23 A (WITNESS GERECKE) As I noted in my resume
24 which is attached to -- part of Attachment 3, I spent
25 over six years, almost six and a half years in the

1 engineering organization up in Long Island Lighting
2 Company. During this period, many of the duties I
3 performed and responsibilities I had were actually
4 quality assurance type activities, preparation and
5 review of specifications, preparation and review of
6 procurement documents, drawing review, vendor
7 surveillance, contractor performance, review of welder
8 welding procedures, welder qualifications, review of
9 non-destructive examination procedures, and personnel
10 qualifications.

11 All of these are quality assurance type
12 activities. I performed them through the six and a half
13 years I was with the engineering organization of Long
14 Island Lighting.

15 Q So would it be fair to say that prior to 1972,
16 your quality assurance related activities were as a line
17 engineer with Long Island Lighting performing
18 engineering work, including things like the design
19 verification?

20 (Whereupon, the witnesses conferred.)

21 A (WITNESS GERECKE) What you say is true, but
22 also prior to coming with LILCO, I was with the United
23 States Navy. Here, particularly on shipboard duty,
24 almost everything is governed by procedures or
25 instructions, and the responsibility of an officer in

1 the Navy, one of his responsibilities, at least, is to
2 ensure that these procedures and instructions are
3 followed, to verify that they are followed. In this
4 sense, much of the Navy experience can be considered as
5 quality assurance experience.

6 Q Sir, since taking over as manager of the LILCO
7 quality assurance department, do you personally conduct
8 audits?

9 A (WITNESS GERECKE) I review the audit
10 schedules, audit procedures, audit checklists, review
11 the audit reports. I have not participated as a member
12 of the audit team except in a few cases, although I have
13 sat in on the exit conferences of a number of our
14 audits.

15 Q Have you conducted any inspections since
16 becoming the manager of quality assurance?

17 A (WITNESS GERECKE) No, the quality assurance
18 department does not conduct inspections as such.

19 Q You said that you had conducted a few audits,
20 I believe, since 1972. When was the last one, if you
21 recall, that you personally conducted?

22 A (WITNESS GERECKE) I don't think I can recall
23 the actual date. It was early in my period in the
24 quality assurance organization. Probably back in 1973,
25 maybe in that era. I would like to clarify a statement

1 I just made relative to the quality assurance department
2 not performing inspections. We don't perform
3 inspections per se, but we do perform in addition to
4 audits surveillance type activities.

5 Q Have you conducted any surveillance
6 inspections?

7 A (WITNESS GERECKE) No, I have not.

8 Q Would it be fair to state that your
9 responsibilities are primarily managerial or
10 administrative?

11 (Whereupon, the witnesses conferred.)

12 A (WITNESS GERECKE) My responsibilities, I
13 believe, can be classified as managerial to assure that
14 the program as developed is properly implemented, that
15 the program works the way it is supposed to.

16 Q Mr. Kelly, I would like to direct --

17 JUDGE BRENNER: Mr. Lanpher, are you finished
18 with Mr. Gerecke?

19 MR. LANPHER: Yes, I am.

20 JUDGE BRENNER: Am I pronouncing that
21 correctly?

22 WITNESS GERECKE: Yes.

23 JUDGE BRENNER: Mr. Gerecke, your department
24 is described as a corporate quality assurance
25 department. Does it have responsibility for all of

1 LILCO's activities or just for the nuclear activities?

2 WITNESS GERECKE: Our responsibility is almost
3 entirely for the Shoreham nuclear power plant.

4 Occasionally, we get requested to perform a quality
5 assurance service for possibly another power plant, but
6 very seldom. Most of our responsibility, most of our
7 effort is devoted to Shoreham.

8 JUDGE BRENNER: Thank you.

9 BY MR. LANPHER: (Resuming)

10 Q Mr. Kelly, in your present position as field
11 quality assurance manager for LILCO, are your
12 responsibilities directed to the construction efforts at
13 the plant? And those entities performing construction
14 activities?

15 A (WITNESS KELLY) Yes, it primarily relates to
16 the construction, but I also have responsibilities for
17 auditing in the start-up area, and later on in
18 operations.

19 Q So your area of responsibility covers both --
20 you are part of the OQA department also? Is that
21 correct?

22 A (WITNESS KELLY) No. The quality assurance
23 department consists of two divisions. There is another
24 section. It is called the OQA section, that is
25 responsible for the start-up activities, and also for

1 the direct start-up activities, I mean, operations
2 activities. During start-up, we perform op audits of
3 the operational QA section to verify that they are
4 complying with all the procedures. During operations,
5 that same type of activity would continue, including
6 review of their procedures on non-conformance reports.

7 Q So your involvement with the operational QA is
8 in an auditing role?

9 A (WITNESS KELLY) As I say, it is auditing
10 procedure review, non-conformance review, and any other
11 activities that would be associated with those.

12 Q In your work for LILCO, have you had
13 responsibility for auditing in the design area?

14 A (WITNESS KELLY) People in my organization
15 perform audits of the engineering and design
16 coordination report effort that goes on at the site.

17 Q Have you personally been involved with that
18 effort?

19 A (WITNESS KELLY) Personally from the
20 standpoint that the people in my organization report
21 directly to me, and the fact that I approve prior to the
22 conduction of any audits, I approve those checklists, I
23 approve those audit reports before they are issued, and
24 quite frequently I am present at the exit conferences.

25 Q I don't want to mischaracterize what you said

1 earlier, but did I hear you correctly that your
2 involvement in the design area has been with respect to
3 the E and DCR program?

4 A (WITNESS KELLY) That's correct.

5 Q So it is site engineering activities that you
6 have been involved in?

7 A (WITNESS KELLY) Yes, primarily.

8 Q You have not been involved in auditing, for
9 instance, Stone and Webster engineering in Boston?

10 A (WITNESS KELLY) No, that is not the
11 responsibility of my division. It is covered by the QA
12 department, but just not my division.

13 A (WITNESS GERECKE) Mr. Lanpher, I would like
14 to add there are two divisions within the quality
15 assurance department, field quality assurance division,
16 of which Mr. Kelly is division manager. They are
17 responsible for the quality assurance activities at the
18 Shoreham site. Our other division, quality systems
19 division, located in Hicksville, it is responsible for
20 procurement, quality assurance activities, and for
21 audits of major suppliers such as Stone and Webster in
22 Boston, General Electric in San Jose.

23 (Whereupon, counsel for Suffolk County
24 conferred.)

25

1 Q Mr. Long, with the corrections that were
2 provided this morning with the prefiled testimony, I
3 understand that your current job is a special assignment
4 to the Manager, Quality Assurance and Reliability
5 Operations. Is that correct?

6 A (WITNESS LONG) Yes, sir, that is correct.

7 Q What responsibilities do you have in this
8 position?

9 A (WITNESS LONG) In the new position?

10 Q Yes, sir.

11 A (WITNESS LONG) At the moment, primarily to
12 participate in the Shoreham LILCO public hearing. We
13 had a recent reorganization within GE between the time
14 that I prepared the testimony and now. And that is the
15 reason for the special assignment.

16 Q From your resume, Mr. Long, you indicate that
17 you prepared PSAR input for the Shoreham facility. That
18 was prepared back in the late sixties, early seventies,
19 is that right?

20 A (WITNESS LONG) Yes, sir, that would be correct.

21 Q Did you also prepare input for the FSAR?

22 A (WITNESS LONG) Yes, sir. The quality
23 assurance program description relative to the General
24 Electric scope of supply would have been prepared by
25 people who worked for me, or by me. I was responsible

1 for the basic input.

2 Q Do you recall whether you actually prepared
3 that yourself or reviewed it yourself before it was sent
4 for inclusion into the FSAR?

5 A (WITNESS LONG) A proper characterization would
6 be that as a minimum, I reviewed it. Yes.

7 Q Aside from your work on PSAR and FSAR inputs,
8 have you had any other direct involvement in the
9 Shoreham project, except again for this testimony?

10 A (WITNESS LONG) For the last 14 years, prior to
11 my present assignment, I was basically responsible for
12 structuring and documenting the structure of the overall
13 quality system, within which specific quality assurance
14 programs are developed. And this would apply not only
15 to Shoreham but to specific quality assurance programs
16 for many other nuclear power plants. That would cover
17 design, procurement, manufacturing, project management,
18 interest areas.

19 For two years prior to that point in time, --
20 that would be 1966 to 1968 -- I held a position where I
21 was responsible for the same basic kinds of system
22 documentation for procurement and manufacturing
23 activities.

24 (Counsel for Suffolk County conferring.)

25 Q Mr. Long, is it fair to state that your

1 involvement with Shoreham has been in the preparation
2 and updating, I presume, of the overall GE quality
3 assurance program?

4 A (WITNESS LONG) That would be one way of
5 characterizing it, yes.

6 Q Have you been responsible for determining
7 whether that program has actually been implemented? For
8 instance, whether it was properly implemented in design
9 activities by GE in San Jose or manufacturing activities
10 by the Manufacturing Division?

11 A (WITNESS LONG) I believe I should provide a
12 little more explanation. I am representing a very large
13 organization. We are talking about some 7000, 7500
14 people. We have a quality system that encompasses the
15 procedures, the manpower, the utilization of facilities,
16 that we employ to help us satisfy our corporate quality
17 objectives.

18 Now, within this quality system we identify
19 interest areas like design control and procurement
20 control an auditing, and many other program aspects.
21 That is the overall quality system.

22 Certain elements of that system would then be
23 applied to a particular product or a particular
24 project. I have no day-to-day responsibility for
25 applying elements of the system to a particular project,

1 except as I indicated earlier, with regard to
2 preparation and maintenance of PSAR inputs and
3 preparation and maintenance of our quality assurance
4 licensing topical report.

5 Q Then you don't have responsibility, for
6 instance, for auditing the performance at various QA
7 activities within GE?

8 A (WITNESS LONG) That is not one of my basic
9 responsibilities. However, I have participated on a
10 number of audits of the operating line components.

11 Q Do you recall what audits those were?

12 A (WITNESS LONG) I have audited in the control
13 and instrumentation manufacturing area. I have audited
14 in the Wilmington manufacturing area wherein we
15 manufacture nuclear fuel. I have been involved in
16 audits of our design control activities.

17 Q Mr. Muller, as a quality control engineer in
18 the Operating QA Division, who do you report to?

19 A (WITNESS MULLER) I report to the operating
20 quality assurance engineer.

21 Q How many other engineers are there at your
22 level?

23 A (WITNESS MULLER) The Operational Quality
24 Assurance Section consists of the operating quality
25 assurance engineer, quality control engineer and quality

1 assurance engineer. Both the QC engineer and QA
2 engineer report to the operating QA engineer.

3 (Panel of witnesses conferring.)

4 In addition to the OQAE, the QC engineer and
5 QA engineer, we also have four additional LILCO
6 inspectors; two of which have engineering or science
7 degrees. They report to either myself or the QA
8 engineer.

9 I would like to also add that the section now
10 consists of 17 people; the three management personnel,
11 the rest are designated as inspectors. Some of the
12 inspectors, in fact, -- the other inspectors than the
13 LILCO inspectors also have either engineering degrees or
14 have many years of QA or QC experience.

15 Q Mr. Muller, your statement of qualifications
16 indicates that one of your responsibilities is in the
17 area of implementing the operational QA procedures. Do
18 you have responsibilities also in developing those
19 procedures?

20 A (WITNESS MULLER) Yes, I do.

21 Q Can you describe those responsibilities?

22 A (WITNESS MULLER) The operational quality
23 assurance procedures are prepared either by myself or
24 any member of the Operational Quality Assurance
25 Section. I would review, along with the QA engineer and

1 the operating QA engineer, any of those procedures. We
2 would then submit those procedures for review to the
3 Quality Assurance Department, plant management, startup
4 and other organizations. We would then have those
5 procedures approved.

6 Q Who approves the OQA procedures?

7 A (WITNESS MULLER) The plant manager approves
8 the OQA procedures, and they are concurred in by the
9 Quality Assurance Department Manager. By plant manager,
10 I am talking about the Shoreham plant manager.

11 Q Mr. Museler?

12 A (WITNESS MULLER) No, that would be Jim Rivello.

13 Q Okay, I am sorry.

14 Mr. Youngling, in your position as startup
15 manager, you are not part of the LILCO QA Department or
16 the Operational QA program, is that correct?

17 A (WITNESS YOUNGLING) That is a true statement.

18 Q You refer in your professional qualifications
19 to construction relief meetings, I believe. What
20 exactly are those?

21 A (WITNESS YOUNGLING) A construction relief
22 meeting is a process whereby Mr. Museler's organization
23 makes a formal transfer of components and systems from
24 the construction organization to the Shoreham startup
25 organization.

1 Q Does that transfer mean that the item, what
2 items are being transferred, are complete from a
3 construction point of view?

4 A (WITNESS YOUNGLING) That is a true statement,
5 and what that means is that formal transfer of
6 responsibility and ownership for those components now
7 rests with the Shoreham startup organization and the
8 Long Island Lighting Company.

9 Q Does that mean that there is no further
10 construction work remaining to be done on those items?

11 A (WITNESS YOUNGLING) There may be construction
12 work on the items. Those are handled as master punch
13 list items, yes.

14 Q What is the purpose of a punch list, or the
15 master punch list?

16 A (WITNESS YOUNGLING) Master punch list, the
17 major purpose of that document is to have a depository,
18 if you will, whereby we can put all of the items that
19 have to be completed on a particular system or a
20 component, to be sure that we address each and every one
21 of them.

22 MR. LANPHER: Judge Brenner, this completes
23 the questions I was going to ask on qualifications. It
24 might be an appropriate time to take an afternoon
25 break. I don't know what the Board's schedule is.

1 JUDGE BRENNER: That is okay. It is just a
2 few minutes earlier. We will take it now.

3 MR. LANPHER: I could go on if you prefer.

4 JUDGE BRENNER: Let's take it. It is a good
5 spot for it. We will take a 15-minute break and come
6 back at 3:20.

7 (A short recess was taken.)

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1 JUDGE BRENNER: All right, Mr. Lanpher, you
2 can continue.

3 MR. LANPHER: Judge Brenner, for your
4 information, I am on page 10 of the outline.

5 JUDGE BRENNER: Should we clue the other
6 parties in as to the total pages? They are going to
7 hear it page by page. It is 66 pages.

8 MR. LANPHER: I have covered 10 pages
9 already? I have got to slow down.

10 JUDGE BRENNER: You could continue without me
11 if you slow down.

12 (Laughter.)

13 MR. LANPHER: Is that a promise?

14 (Laughter.)

15 BY MR. LANPHER (Resuming):

16 Q Gentlemen, I am going to direct some questions
17 regarding the overview section of your prefiled
18 testimony. At page 1, you quote from Appendix B
19 regarding the definition of quality assurance. Would
20 you agree that the definition of -- the words "quality
21 assurance" as they appear in General Design Criterion 1
22 also mean the same thing as Appendix B, except that it
23 may differ only in scope commensurate with the
24 importance to safety of a particular item?

25 (Panel of witnesses conferring.)

1 MR. ELLIS: Mr. Lanpher, after the panel is
2 ready, I would like to have that question repeated for
3 me.

4 MR. LANPHER: That was suggested by my
5 colleague, also.

6 BY MR. LANPHER (Resuming):

7 Q Gentlemen, let me start over. Referring your
8 attention to General Design Criterion 1, that states, "A
9 quality assurance program shall be established and
10 implemented in order to provide adequate assurance that
11 these structures, systems and components satisfactorily
12 perform their safety functions." And that is with
13 reference to structures, systems and components
14 important to safety.

15 Are you familiar with General Design Criterion
16 1?

17 A (WITNESS MUSELER) Yes, I believe we are
18 generally familiar with that GDC.

19 Q And when they use the words "quality
20 assurance" there, how do you interpret that term,
21 quality assurance?

22 A (WITNESS MUSELER) We interpret the term
23 "quality assurance" as defined in our testimony, as
24 applicable to safety-related equipment and components
25 and structures. If you would like me to read the

1 testimony, I would be glad to do that.

2 Q No. Let me ask a further question. The words
3 "quality assurance" in GDC-1, in your opinion then, do
4 have reference to the kinds of quality assurance
5 activities which are specified in Appendix B to Part 50,
6 the quality assurance organization design control,
7 document control, that kind of activity? Correct?

8 A (WITNESS MUSELER) Those activities -- I would
9 agree with your characterization of it, that those
10 activities constitute quality assurance activities as
11 applicable to safety-related components, systems,
12 structures, et cetera.

13 Q Turning your attention to page 3 of your
14 prefiled testimony, you state that the quality assurance
15 program for non-safety related structures, systems and
16 components was discussed in LILCO's testimony on SC/SOC
17 Contention 7(b). Gentlemen, did you review that
18 testimony and the cross examination?

19 (Panel of witnesses conferring.)

20 A (WITNESS MUSELER) Most of us have reviewed at
21 least portions of that testimony.

22 Q Is it fair to state that the testimony which
23 is being sponsored as Exhibit 20, LILCO Exhibit 21, your
24 QA testimony which was introduced today, addresses only
25 the quality assurance program as it relates to

1 safety-related systems, structures and components?

2 A (WITNESS MUSELER) No, that is not the thrust
3 of our testimony. Our testimony primarily, or in large
4 measure, relates to the quality assurance program that
5 addresses safety-related components and structures.
6 However, I believe it is clear from our testimony that
7 we have also outlined those quality measures that are
8 taken in the non-safety related area to insure that
9 components which are not safety-related but which are
10 important to the operation of the plant from a
11 reliability standpoint and which may have a secondary
12 effect on safety-related systems are, in fact, or do, in
13 fact, have the appropriate design considerations,
14 testing considerations and documentation considerations.

15 So our testimony, while its principal thrust
16 does go to safety-related components and the Appendix B
17 type quality assurance type program, I believe also
18 gives a significant insight into the way non-safety
19 related portions of the plant are treated.

20 Q Mr. Museler, just because you answered -- but
21 anyone else can also respond to this question -- can you
22 show me where in your testimony you provide the
23 significant insights into the program as it addresses
24 non-safety related systems, structures and components?

25 (Panel of witnesses conferring.)

1 MR. ELLIS: Judge Brenner, if it will save
2 time, there were references to non-safety related, in
3 fact, in my argument on motion to strike. Those were
4 thrown in my face, as I recall, and I don't think there
5 is any secret about the fact that it was focused chiefly
6 on safety-related, because that is how we interpreted
7 the contentions.

8 But if they want us to give them a listing of
9 where we mentioned non-safety related, if it will save
10 time, we will go tonight and do that.

11 JUDGE BRENNER: I am always interested in
12 saving time, but that was not the question, Mr. Ellis.
13 The witness made a statement, and Mr. Lanpher is
14 entitled to follow up on where particularly the support
15 for that statement by the witness lies. Mr. Lanpher
16 didn't ask him, show me every place you have referenced
17 important to safety but not safety related. The
18 question, as you know, is quite a bit different than
19 that, so it is fair game for cross examination.

20 WITNESS MUSELER: Again, if we wanted to
21 reference every place in the testimony where the
22 testimony might be applicable to non-safety related
23 equipment, that would take a while.

24 However, in Section III.C, a substantial part
25 of that section relates to items which are both

1 safety-related and non-safety related.

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1 BY MR. LANPHER: (Resuming)

2 Q Mr. Museler, you are talking about the
3 construction section?

4 A (WITNESS MUSELER) The construction section,
5 that's correct, and I will just give you one example of
6 that in Section C-3-D, which speaks to a particular
7 program called the final "A" release program. That
8 program is applied to all systems in the plant, not just
9 the safety-related system, and it is the same, it is
10 essentially the same program.

11 JUDGE BRENNER: I am sorry, Mr. Museler. I am
12 not with you. What section is that?

13 WITNESS MUSELER: If you are looking at the
14 index, it is on Page VI.

15 BY MR. LANPHER: (Resuming)

16 Q It might help if you could give us page
17 numbers.

18 A (WITNESS MUSELER) 188.

19 JUDGE BRENNER: Thank you.

20 WITNESS YOUNGLING: Mr. Lanpher, on Page 198,
21 we describe as part of the start-up program the C&IO
22 program. That particular program is applied not only to
23 safety related components, but also non-safety related
24 components.

25 BY MR. LANPHER: (Resuming)

1 Q Does that apply to 100 percent of the
2 non-safety related components?

3 A (WITNESS YOUNGLING) That is applied to
4 essentially all active components within the power
5 station.

6 (Pause.)

7 Q Are there any others, Mr. Museler, that come
8 to mind?

9 A (WITNESS MUSELER) As I said, there is one
10 more, if you would like Mr. Baldwin to expand on it.
11 Those are the ones we can come up with very quickly. As
12 a matter of fact, there are two others, one in
13 procurement and one in the testing program, where the
14 entire C&IO testing program is handled, whether it be
15 safety related or non-safety related. Those are three
16 areas. If you want, I don't know where you want to go
17 from there.

18 Q I only noted two. I must have missed one.
19 The final "A" release and the C&IO.

20 A (WITNESS MUSELER) Test program and the
21 procurement.

22 Q Is there specific reference, a page reference,
23 Mr. Baldwin?

24 A (WITNESS BALDWIN) Yes. Are you talking to a
25 specific reference to the word "non-safety related," or

1 are you talking about systems, processes that have been
2 used in non-safety related application as related to
3 procurement?

4 Q What I am talking about is reference to Mr.
5 Museler's previous testimony, and I apologize if I am
6 mischaracterizing it, because it was about five minutes
7 ago, but I believe he stated that while the testimony
8 mostly addresses the QA-QC program for safety related,
9 it also gives significant insight or significantly
10 addresses that for non-safety related. I asked where it
11 does.

12 A (WITNESS BALDWIN) Okay. In regard to
13 procurement, then, I would like to draw your attention
14 to Section B, Procurement, 1, LILCO, Stone and Webster,
15 specifically, C2, 3, and 4, but actually that whole
16 section. What I would like to indicate is that LILCO
17 and Stone and Webster's policy is that a quality
18 assurance program shall be in effect for the procurement
19 of Category 1 or safety related. We shall also have
20 quality requirements in effect for non-safety related
21 procurement.

22 To give you an idea of the magnitude, there
23 are approximately 80 to 90 safety related suppliers on
24 this project. That broken down to certain purchase
25 orders, a supplier having several purchase orders, is

1 somewhere in the neighborhood for safety related of
2 around 300, and for non-safety related it is
3 approximately 150 to 175.

4 To give you some further insight on some
5 particulars there --

6 Q Mr. Baldwin, I don't mean to interrupt you,
7 and please come back to it, but is this all contained in
8 the testimony, your statement, this discussion of what
9 is applied to non-safety related? Is that set forth in
10 this section of the procurement testimony?

11 A (WITNESS BALDWIN) By specific reference to
12 non-safety related and safety related, no. But in those
13 sections, that is what we are talking about. We are
14 talking about quality assurance and quality requirements
15 upon both safety and non-safety related procurement.
16 And quite an extensive amount of quality assurance
17 requirements as related to non-safety related are
18 Category 2, and if you would like those examples I can
19 give them to you.

20 Q I am not going to cut you off, Mr. Baldwin, if
21 you want to give them. I was just asking for the places
22 in the testimony where it is referenced. So, if that
23 completes that answer, that would be fine, unless you
24 want to expand.

25 A (WITNESS BALDWIN) Could you repeat that?

1 Q I was only asking, following up on my initial
2 question of Mr. Museler, where in the testimony there is
3 reference or discussion relating to non-safety related
4 systems, structures, and components is contained.

5 A (WITNESS MULLER) Mr. Lanpher, I would like to
6 interrupt. Please note on Page 221 we refer
7 specifically to non-safety related parts, materials, and
8 components, as far as purchasing is concerned for plant
9 operations.

10 A (WITNESS YOUNGLING) I might also add on that
11 very same page we follow on in the testimony to describe
12 a repair control procedure used during the operational
13 phase, which is the maintenance work request on Page
14 222. If you follow the testimony through there, you
15 will see that that particular device which is a
16 carefully controlled mechanism, work control mechanism,
17 is applied at the judgment of the responsible management
18 personnel to not only safety related but non-safety
19 related components.

20 In addition, in the start-up program, we have
21 a similar device, work control device called a repair
22 rework. This device is applied in much the same manner
23 and with the same judgmental factors involved.

24 Q Gentlemen, is LILCO's program for quality
25 assurance as applied to items which are important to

1 safety but not safety related described in the final
2 safety analysis report?

3 (Whereupon, the witnesses conferred.)

4 A (WITNESS MUSELER) Mr. Lanpher, LILCO's
5 quality assurance program as defined in the FSAR applies
6 to items which are safety related and in those areas
7 where we refer to items with the term important to
8 safety. That term is synonymous to safety related. So,
9 the program, the quality assurance program referenced in
10 the FSAR in accordance with Appendix B is a program that
11 is applied to safety related components, structures, et
12 cetera, which are safety related and where we have used
13 the term in a few places he FSAR important to
14 safety, that to us is synonymous with safety related.

15 There are several portions of the FSAR -- Mr.
16 Youngling just mentioned to me one which he can
17 elaborate on if he would like in the operations area,
18 where the FSAR does describe the treatment of the entire
19 plant, safety related and non-safety related, and there
20 are probably other areas where that is referenced. But
21 I believe the correct answer to your question is that
22 the term important to safety and safety related in the
23 FSAR are synonymous. They both mean safety related, and
24 that the quality assurance program described therein is
25 a description of the Appendix B program which is applied

1 primarily to those items, although as we have, I
2 believe, already discussed today, that program is
3 applied in certain instances directly to non-safety
4 related equipment and non-safety related equipment in
5 addition where it does not fall under the Appendix B
6 quality assurance program does receive appropriate
7 quality requirements, the engineering, procurement,
8 construction, inspection, and testing levels.

9 Q Mr. Museler, LILCO uses a QA Category 2
10 classification, correct?

11 A (WITNESS MUSELER) Yes, we do.

12 Q Is the quality assurance program which applies
13 to QA Category 2 described in the FSAR?

14 A (WITNESS MUSELER) As I say, the quality
15 assurance program that is described is applied to
16 certain Category 2 items which are identified in the
17 FSAR, but not to all of them. The rest of the Category
18 2 items are subject to quality requirements defined by
19 engineering and implemented by in some cases engineering
20 and in some places quality assurance. In some cases,
21 construction organizations.

22 But I believe the answer to your question is
23 that the non-safety related quality assurance program is
24 described to the extent that the Appendix B program
25 applies to certain non-safety related components, that

1 the quality program as applied to the balance of the
2 non-safety related components is described to the extent
3 that the engineering and design process for the entire
4 plant is described somewhat in the FSAR, but not in the
5 same breakout as a specific quality assurance program.

6 Q And the program as applies to your previous
7 testimony gives your position or your statement -- I
8 shouldn't say position, that LILCO does have a program,
9 a quality assurance program for non-safety related
10 systems, structures, and components commensurate with
11 their importance to safety, correct?

12 A (WITNESS MUSELER) Yes, sir. We believe that
13 is how we operate.

14 Q But that program is not described, for
15 instance, in Chapter 17 of the FSAR, is it?

16 A (WITNESS MUSELER) Again, Chapter 17 describes
17 the Appendix B quality assurance program which is
18 applied to some of the non-safety related equipment, but
19 that program is not the program that is applied to all
20 of the non-safety related equipment.

21 A (WITNESS EIFERT) If I could clarify from
22 Stone and Webster's engineering and design control
23 standpoint, we have at Stone and Webster one design
24 control program, one design control process, and it is
25 applied to all of our engineering work. Our nuclear

1 safety related aspects of the design, the non-nuclear
2 safety related aspects of the design, and many of our
3 non-nuclear projects.

4 We have one design control process, so, from
5 Stone and Webster's standpoint for engineering and
6 design, it is the same program that we apply.
7 Similarly, in procurement, we apply the same procurement
8 program to a degree commensurate with the item's
9 importance that we apply to Category 1. We apply it to
10 the non-safety related equipment that had been so
11 designated by engineering for application to the QA
12 program.

13 So, in that sense the FSAR description is a
14 description of the program that we are applying to
15 non-safety related, but we don't specifically use those
16 words and call that out in the FSAR description.

17 A (WITNESS YOUNGLING) I would like to also add
18 to that. During the operating phase, as I mentioned,
19 the work control mechanisms, MWR's, again, we have one
20 mechanism, the MWR for safety related work. It behooves
21 the corporation to have that one mechanism, and where we
22 see fit, we do apply that to non-safety related rather
23 than develop two different control mechanisms.

24 The MWR is just one example. There are other
25 examples of that kind of process being applied to

1 non-safety related.

2 A (WITNESS LONG) I would like to add also that
3 for the General Electric scope of supply, we have one
4 basic overall quality assurance program that we apply to
5 both safety related and non-safety related items. The
6 differences I found in detailed implementation. When
7 you talk addressing the basic criteria in 10 CFR 50
8 Appendix B, yes, all of the criteria are considered with
9 regard to application, regardless of whether the item is
10 safety related or non-safety related, and the degree of
11 application for the non-safety related items in detailed
12 implementing practice is dependent upon the overall
13 function served by the item.

14 JUDGE MORRIS: Excuse me, Mr. Long. Is that
15 true for both safety related and non-safety related
16 items? The degree to which you apply criteria?

17 WITNESS LONG: No, sir, it is not. That was
18 the point I was trying to make. It is in the detailed
19 implementation of certain aspects of the program that
20 you will find differences. If we were looking in the
21 design control area, as an example, all of the designs
22 are design verified. However, if we are talking a
23 safety related item, you would find an extensive,
24 possibly an extensive design verification program with
25 documentation to support it. If we are talking a

1 non-safety related item, it would be designed, verified,
2 but possibly not to the same depth, and possibly not to
3 the same extent of recordkeeping.

4 WITNESS MUSELER: Judge Morris, let me add to
5 that. Just so there are gradations in the level of
6 quality assurance applied to Category 1 or safety
7 related equipment, especially in the area of seismic
8 piping, Class 1, 2, or 3, all of which are safety
9 related, but all of which have various levels of quality
10 assurance treatment given to them, the same process just
11 extends in our view to the non-safety related
12 equipment. So just as there are gradations in quality
13 assurance requirements for safety related equipment,
14 there are gradations in the requirements for non-safety
15 related equipment, and I think what we are all trying to
16 say is that the quality assurance or the quality
17 measures that are required of the various components or
18 systems in the non-safety portion of the plant are
19 looked at from the standpoint of their importance to the
20 plant, and at the appropriate, whether it be design
21 control or control of inspections during erection or
22 whatever, it is applied to those systems or components
23 in the same -- with the same general thought process
24 that goes into applying those requirements to the safety
25 related portions of the plant.

1 JUDGE MORRIS: You responded very well to the
2 question I thought I wanted to ask. I would then ask
3 both the GE and Stone & Webster if that is their
4 understanding, too.

5 WITNESS LONG: Speaking for General Electric,
6 yes, sir, it is.

7 WITNESS EIFERT: Speaking for Stone & Webster,
8 yes, it is.

9 JUDGE MORRIS: Thank you.

10 JUDGE BRENNER: Mr. Ellis, I don't want to
11 beat a dead horse, but for what it is worth, my
12 perception of the testimony we have been hearing for the
13 last 15 minutes is it is consistent with what I believe
14 to be the position of LILCO through the 7(b) testimony,
15 and also, although worded somewhat differently, the
16 position at different time -- the position of the staff
17 witnesses, and is there a reason -- partly the reason
18 why your motion to strike was denied.

19 That is, we disagree with what we perceive to
20 be the assertion in the motion to strike that a
21 reference to Appendix B in the contention ipso facto
22 must therefore limit all evidence to safety-related. I
23 think that was point B in your syllogism.

24 Our other point of disagreement was that we
25 were not ready, in the context of the motion to strike,

1 to assert that the contentions were limited to Appendix
2 B due to the other references we discussed. We were
3 sure, based on the testimony of the staff and the
4 county's witnesses, that you couldn't assert that there
5 was no disagreement with your point B. And now, my own
6 recollection is supported again by LILCO's witnesses
7 who, as I say, would not support your motion to strike,
8 as we read it.

9 MR. ELLIS: I understand your point, Judge
10 Brenner. Our point was a different one. Our point was
11 that Appendix B, as a regulatory requirement, applies
12 only to safety-related structures, systems and
13 components. That was our central point, and that was
14 supported both by the language that introduces Appendix
15 B -- but I understand the point you just made which I
16 think is a slightly different one from the point that I
17 just made and the one I intended in our motion.

18 JUDGE BRENNER: Okay. Your point is much
19 narrower and would not have supported striking the
20 portions of Mr. Hubbard's testimony that you directed us
21 to in your motion. Since there was no written ruling
22 issued, I am pointing it out, because if you have a
23 problem with all of this, you are going to have a shot
24 at redirect, and it may be a long time before you get
25 that shot.

1 MR. ELLIS: Thank you.

2 BY MR. LANPHER (Resuming):

3 Q Mr. Long, I want to come back to the question
4 that Judge Morris asked you originally, and I understood
5 your answer, your first answer, to be that when you came
6 to Appendix B, all systems -- to safety-related, excuse
7 me -- all systems that are classified safety-related by
8 GE get an identical level of quality assurance. And
9 that when you come to non-safety related systems, the
10 leve of quality assurance varies, consistent with their
11 importance to safety. Was that your earlier answer, or
12 did I misunderstand you?

13 A (WITNESS LONG) No, sir, I do not believe that
14 that was my earlier answer. If you construed it in that
15 manner, I would like to clarify. Let me finish, please.

16 The 18 criteria in 10 CFR 50, Appendix B are
17 applied to safety-related structures, systems,
18 components and services as appropriate, commensurate
19 with the importance of the safety-related functions that
20 are performed by the item or the related service. Does
21 that answer your question?

22 Q That answers it perfectly, thank you. I
23 iin't think that was the answer you had given the first
24 time, and I think there may have just been a confusion
25 in my question.

1 Mr. Muller, I would like to turn your
2 attention to Attachment 4 to the LILCO testimony, the
3 LILCO Quality Assurance Manual. This is the operating
4 QA Manual, correct?

5 (Discussion off the record.)

6 JUDGE BRENNER: Why don't you proceed, Mr.
7 Lanpher.

8 BY MR. LANPHER (Resuming):

9 Q Mr. Muller, Attachment 4 to the LILCO
10 testimony, is this the Operating QA Manual?

11 A (WITNESS MULLER) Yes, this manual describes
12 the quality assurance program in effect during
13 operations of the Shoreham Nuclear Power Station.

14 Q Now, on the cover page, it is noted to be an
15 uncontrolled copy which will not be maintained up to
16 date. To the best of your knowledge, is this up to date
17 as of today?

18 A (WITNESS MULLER) Yes.

19 Q I would like to turn your attention to the
20 corporate statement of quality assurance policy, which
21 is Section iii, it is really the third page of this
22 manual.

23 A (WITNESS MULLER) I have it in front of me.

24 Q It is true, is it not, that the LILCO
25 corporate statement of quality assurance reads as

1 follows. "The Long Island Lighting Company quality
2 assurance policy applies to the activities affecting the
3 safety-related functions of nuclear station structures,
4 systems and components..." and it continues. Is that
5 correct?

6 A (WITNESS MULLER) This manual does address the
7 10 CFR 50, Appendix B program applied by the Long Island
8 Lighting Company.

9 Q This is the manual that applies to
10 safety-related structures, systems and components during
11 operation, is that correct?

12 A (WITNESS MULLER) That is correct.

13 Q Is it a manual that addresses non-safety
14 related structures, systems and components?

15 (Panel of witnesses conferring.)

16 A (WITNESS MULLER) The station implementing
17 procedures or station procedures address both
18 safety-related and non-safety related systems,
19 components and activities.

20 Q Mr. Muller, my question is, does this manual
21 specify the quality assurance activities for items which
22 are not classified safety related?

23 (Panel of witnesses conferring.)

24 A (WITNESS MUSELER) Mr. Lanpher, I think this
25 question is basically of the same type that you asked

1 before. That is, that this particular manual addresses
2 our quality assurance program as applied where required
3 by Appendix B. This program in part in some cases; in
4 other cases, as a whole, and Mr. Youngling gave a few
5 examples before, is also applied not as an Appendix B
6 requirement, but as a quality program to the non-safety
7 related portions of the plant.

8 So -- and I guess the only difficulty we are
9 having is trying to keep clear for purposes of
10 responding properly to your question the differences
11 between safety-related and non-safety related. This
12 program definitely covers all of the safety-related
13 equipment in the plant. The program, the manual and the
14 implementing procedures from the manual constitute
15 really the entire program, and that program in some
16 cases as a whole, in other cases in part where
17 appropriate, is applied to the entire plant.

18 Q Mr. Museler, I understand your general
19 statement about how you are applying a program
20 everywhere. I am trying to find the documentation in
21 your testimony for that. Isn't it true that this manual
22 applies to the quality assurance program for operations
23 to be applied to those systems, structures and
24 components and activities which are classified as safety
25 related?

1 (Panel of witnesses conferring.)

2 A (WITNESS MUSELER) Your statement I believe is
3 correct when you say, is this manual the manual that
4 implements either directly or through its implementing
5 procedures the Appendix B requirements for
6 safety-related components, systems and structures for
7 the Shoreham plant during the operating phase. The
8 answer to that question is yes, it is, and it does.

9 Q Does this manual, by its terms, implement a
10 quality assurance program for systems, structures and
11 components or services which are non-safety related?

12 (Panel of witnesses conferring.)

13 A (WITNESS MUSELER) The Lighting Company insures
14 that the appropriate quality measures are applied to
15 both safety and non-safety related structures, systems
16 and components in the plant. In some cases, this
17 program is applied to non-safety related structures,
18 systems and components. In other cases, during the
19 operating phase, other plant procedures are the
20 implementing or the governing documents for the control
21 of the quality of the plant.

22 MR. LANPHER: Judge Brenner, my question
23 wasn't answered. My question was, does this manual, by
24 its terms, apply to the quality assurance for systems,
25 structures and components which are not safety-related.

1 I would like to have an answer to my question.

2 JUDGE BRENNER: Okay. In fairness to the
3 witness, the answer he gave would have qualified as
4 explanation. So I don't want to imply that it was not
5 pertinent. But sometimes it is useful to get the short
6 yes or no, or that is possible, and then the explanation
7 in the nature that you gave.

8 Mr. Lanpher, when he uses the phrase "by its
9 terms" means "expressly." So the question is, -- I
10 infer from your explanation that the answer is no. That
11 is, this manual expressly, by operation of the manual
12 itself, does not apply the requirements of the quality
13 assurance manual to non-safety related items. That is
14 not to say, however, -- and I am attempting to
15 characterize your answer -- that is not to say, however,
16 that the manual may not be applied on whole or in part
17 to such activities. Is that a fair summary of what you
18 are trying to testify to?

19 (Panel of witnesses conferring.)

20 WITNESS MUSELER: Yes, I believe that is a
21 correct summary of the explanation we gave, Judge
22 Brenner.

23 JUDGE MORRIS: Mr. Museler, if you would turn
24 to page 4, the second paragraph, that is page iv, --

25 WITNESS MUSELER: I believe that is what we

1 said, Judge Morris, that elements of the program are
2 applied as necessary to items, functions, et cetera, et
3 cetera. Just what you are reading.

4 If that means -- and again, I am not familiar
5 with whether there is a specific legalistic meaning to
6 the term "by the terms" of what it says -- but if that
7 means is there anywhere in this particular QA manual
8 where we state that portions of this program are applied
9 to non-safety related structures, systems and
10 components, then the answer is yes, as you point out,
11 right at this point on page iv.

12 I guess we are really having a tough time
13 providing a satisfactory answer to this question.

14 JUDGE BRENNER: I think we are getting the
15 picture now.

16 BY MR. LANPHER (Resuming):

17 Q Directing your attention to that sentence on
18 page iv, which reads, "Elements of the program are
19 applied as necessary to items and functions described in
20 appendices to this manual that are not classified as
21 safety-related..." I believe that is the sentence that
22 Judge Morris was referring your attention to.

23 It is true, is it not, that the appendices
24 which are referred to are Appendices G through K? For
25 clarity of the record, I am referring to Section ii. It

1 is really the Table of Contents, I guess, the second
2 page of the manual.

3 A (WITNESS GERECKE) That is correct.

4 Q And is it true that four of five of those
5 appendices are labeled as "later" and are not contained
6 in this manual which was introduced into evidence?

7 A (WITNESS GERECKE) That is correct.

8 Q The one appendix which is present is the fire
9 protection appendix. The others are security -- the
10 others which are not there are security, environmental
11 monitoring, packing and shipping of radioactive
12 material, and emergency planning. Is that correct?

13 A (WITNESS GERECKE) That is correct.

14 Q Is it your testimony that those five
15 appendices would cover all non-safety related systems,
16 structures and components?

17 A (WITNESS GERECKE) No, it is not.

18 Q Is that a listing, however, -- I am referring
19 you back to that sentence which Judge Morris brought to
20 your attention -- are those the areas which have been
21 determined to be necessary to have this manual applied
22 to?

23 (Panel of witnesses conferring.)

24 A (WITNESS MUSELER) Mr. Lanpher, I believe these
25 have been included in this quality assurance manual

1 because the entire scope of the quality activities
2 governing these four really systems or particular
3 processes will be and are subject to the quality
4 assurance program, and that quality assurance program
5 for these non-safety related systems and components is
6 administered by the Quality Assurance Department within
7 LILCO.

8 That is not to say that the discussion we had
9 a little earlier about the other types of components,
10 systems, processes in the plant which may be non-safety
11 related are not covered or are not covered either by the
12 implementing procedures which flow from this manual for
13 non-safety related components. I guess what I am saying
14 is that these don't constitute a total and exhaustive
15 list of everything that is covered by the Quality
16 Assurance Department during the operation phase.

17 Again, other portions of control of processes
18 or quality of the plant are covered by other plant
19 procedures. I believe your question was, is this the
20 total scope of the non-safety related quality assurance
21 involvement. The answer to that question is no.

22 Q This is the total -- do you have another
23 comment? I didn't mean to interrupt.

24 (Panel of witnesses conferring.)

25 A (WITNESS GERECKE) I might just add that these

1 are included as appendices because they are not -- they
2 don't really come under the requirements of Appendix B.
3 There are other regulations, Reg Guides, NUREGs and so
4 forth which specify QA requirements for these five
5 areas. We, therefore, have included them as appendices
6 rather than just incorporating them as several of the
7 items to which the Appendix B program applies.

8 (Counsel for Suffolk County conferring.)
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1 Q Mr. Museler, just so I understand, it is your
2 view that there are other elements, there are other
3 areas to which the elements of this program would be
4 applied but they are not expressly referenced or
5 expressly identified in this manual?

6 A (WITNESS MUSELER) That is a true statement,
7 Mr. Lanpher.

8 Q Staying with LILCO manuals, I would like to
9 turn to Attachment 11 of the prefiled testimony, which
10 is labeled LILCO Engineering QA Manual. My memory is
11 short, and I apologize, but Mr. Kelly, didn't we
12 establish -- I believe we established before that this
13 is not just a manual for engineering, but it has been
14 changed through amendments so that it applies to
15 construction, procurement, and engineering. Is that
16 correct?

17 A (WITNESS KELLY) The only reason that manual
18 had the word Engineering Quality Assurance is because at
19 one point in time the title of our department was the
20 Engineering Quality Assurance Department. At no time
21 did it just relate to the engineering function, but it
22 was more just the title of the department.

23 Q Fine. To the best of your knowledge, is this
24 manual up to date as it appears in the testimony today?

25 (Whereupon, the witnesses conferred.)

1 A (WITNESS KELLY) Yes, we believe so.

2 Q Turning your attention to Section 1, Page 1 of
3 the manual, under the section Scope, I guess I would
4 call it the second paragraph, the first part of it, it
5 says "Requirements of this program apply to safety
6 related activities, including," and it goes on to
7 design, purchasing, et cetera. Is that a correct
8 statement of the scope of this manual?

9 MR. ELLIS: What page again, Mr. Lanpher?

10 MR. LANPHER: Page 1 of Section 1.

11 MR. ELLIS: Thank you.

12 BY MR. LANPHER: (Resuming)

13 Q Do you see where I was reading from, Mr. Kelly?

14 A (WITNESS KELLY) This manual specifically
15 addresses Appendix B requirements, yes. The safety
16 related items, which is as we described before. There
17 are programs in effect that provide quality for every
18 item in the plant commensurate with its function in the
19 plant.

20 Q This manual by its express terms, however,
21 addresses only the quality assurance requirements for
22 safety related items, correct?

23 (Whereupon, the witnesses conferred.)

24 A (WITNESS KELLY) Yes, the intent of this
25 manual is specifically to describe those quality

1 activities applied to safety related systems,
2 components, and structures, but as we discussed before,
3 other sections of this would be applied to non-safety
4 related functions, activities, and structures.

5 Q Gentlemen, so I understand from LILCO's point
6 of view, am I correct that as items are turned over to
7 start-up, this manual becomes inoperative, and
8 Attachment 4 of the operating QA manual becomes
9 operative?

10 A (WITNESS KELLY) No, when it is turned over to
11 a plant operation group from the start-up organization,
12 then the other manual becomes in effect.

13 Q Then this manual no longer would apply? Is
14 that right?

15 A (WITNESS KELLY) For those items, yes.

16 (Whereupon, counsel for Suffolk County
17 conferred.)

18 Q Gentlemen, I would like to turn your attention
19 now to Attachment 5 of the prefiled testimony, entitled
20 Stone and Webster QA Program Manual. Gentlemen, is this
21 document to the best of your knowledge up to date?

22 A (WITNESS BALDWIN) Excuse me. We don't have a
23 copy available.

24 (Pause.)

25 A (WITNESS BALDWIN) Could you repeat your

1 question again, please, Mr. Lanpher?

2 Q Yes, sir. To the best of your knowledge, is
3 this manual current, up to date?

4 A (WITNESS BALDWIN) Yes, sir.

5 Q And are all aspects of this manual applied to
6 Stone and Webster's activities on the Shoreham project?

7 A (WITNESS BALDWIN) Excuse me? Could you
8 repeat that, please?

9 Q Certainly. Are all aspects of this manual
10 applied to Stone and Webster's activities on the
11 Shoreham project?

12 A (WITNESS BALDWIN) Yes.

13 Q From the prefiled testimony, the list of
14 attachments, it states that Appendix V, Roman Numeral V,
15 is no longer in effect, and the manual is currently
16 being revised. Now, Appendix V concerns preventive
17 action, I believe. Why is that no longer in effect, if
18 you know?

19 A (WITNESS GERECKE) Appendix V to the Stone and
20 Webster Quality Assurance Manual was originally prepared
21 -- I am trying to think back now. I believe it was
22 originally prepared because LILCO quality assurance had
23 some concern that LILCO quality assurance wasn't
24 necessarily getting all the information on
25 non-conformances, corrective action, problems that might

1 be identified within the Stone and Webster
2 organization. The project and engineering personnel in
3 both organizations seemed to be getting it.

4 At the same time, we were concerned in getting
5 the information from Stone and Webster so that they
6 could essentially be used later to be sure that we did
7 not run into the same kinds of problems, so that we
8 could avoid the same types of problems during the design
9 and construction effort for Jamesport.

10 As a result of our concerns, Stone and Webster
11 incorporated Appendix V into their quality assurance
12 manual. After a couple of years, they made a number of
13 changes to their internal corrective action program,
14 corrective action system, and Jamesport was also
15 cancelled, so the two reasons that we had for requesting
16 that they put this section in the manual disappeared,
17 and we no longer needed to use Appendix V to the Stone
18 and Webster quality assurance manual for Shoreham. It
19 was an administrative error that it was not removed from
20 the manual.

21 Q So when we --

22 MR. ELLIS: I am not sure that they were
23 done.

24 WITNESS BALDWIN: Your previous statements to
25 me, I believe, that might have caused some confusion

1 here is, is this the present manual that was in effect,
2 and I said yes.

3 BY MR. LANPHER: (Resuming)

4 Q Believe me, I wasn't trying to trick you on
5 that a bit.

6 A (WITNESS BALDWIN) I was aware of the
7 revision. We have not published the revision as yet.
8 It is essentially all the way through its approval
9 circuit. It has not been sent to the people who need
10 it, who are on distribution for it.

11 Q But when my client or I consider the evidence
12 in this proceeding, this is no longer -- this appendix
13 is no longer part of this manual, correct?

14 A (WITNESS BALDWIN) That is correct. It has
15 not physically been taken out. We are waiting for that
16 revision to be distributed. That is correct.

17 Q But it is not being used, either?

18 A (WITNESS BALDWIN) That is correct.

19 A (WITNESS GERECKE) But the concerns that we
20 had were addressed in the revised Stone and Webster
21 procedures for their corrective action, problem
22 reporting system, and so forth.

23 Q Now, gentlemen, insofar as Stone and Webster
24 is concerned in their work in utilizing this manual on
25 the Shoreham project, is this manual applied to only

1 safety related structures, systems, and components?

2 A (WITNESS BALDWIN) The answer to that is no.
3 I am trying to find a direct reference that I can help
4 you with.

5 Q If I may be of assistance, maybe Section 2.

6 A (WITNESS BALDWIN) Yes, I think it is
7 specifically referenced under Section 1.3. Would you
8 like me to read that into the record?

9 Q No, but my question was, do you apply this
10 manual in the Stone and Webster program to structures,
11 systems, and components which are non-safety related?

12 A (WITNESS BALDWIN) Yes.

13 Q And your answer is based upon Part 1.3 of
14 Section 2. Is that correct?

15 (Whereupon, the witnesses conferred.)

16 A (WITNESS BALDWIN) Yes.

17 (Pause.)

18 Q Mr. Baldwin, I thought we had -- we alluded to
19 the fact earlier that Stone and Webster no longer
20 performs inspections of non-safety related structures,
21 systems, and components, Stone and Webster field quality
22 control. Is that correct?

23 (Whereupon, the witnesses conferred.)

24 A (WITNESS BALDWIN) No, that is not totally
25 correct. I think Mr. Arrington indicated that his

1 responsibilities for field quality control are in the
2 safety related area, and selected non-safety related
3 areas, and I think he gave you some examples of those.
4 You are addressing the question here specifically to
5 field quality control. You are also asking the question
6 of this manual which applies to several other areas.
7 For instance or for example, the other areas being
8 procurement quality assurance.

9 There is an extensive effort in the
10 procurement quality assurance area for non-safety
11 related equipment for the Shoreham project. Probably
12 there are, I would say, out of the total effort of our
13 PQA division over the years, and there are numbers in
14 the testimony, it is probably somewhere in the
15 neighborhood of one-half to one-third of all of their
16 effort has been allocated to non-safety related.

17 I can probably give you some examples, such as
18 the turbine generator or feedwater heaters are
19 non-safety related, where we have had in the
20 neighborhood of 40 test inspection and documentation
21 forms which are similar to safety related with anywhere
22 in the neighborhood of a dozen to 18 attributes for each
23 one of them, just for that purchase order alone.
24 Probably it ranges in the neighborhood of, again, 30 or
25 40 inspection reports or trips for that type of

1 equipment. Again, that is all commensurate with the
2 quality requirements as established by the engineers
3 through the engineering documents for that piece of
4 equipment. That is just one example.

5 Q Sticking with that example in the procurement
6 area which you are addressing generally there, are those
7 quality assurance activities which Stone and Webster
8 undertakes performed by quality assurance personnel?

9 A (WITNESS BALDWIN) Yes, sir.

10 Q And that is undertaken in accordance with the
11 manual and presumably implementing procedures of the
12 manual, correct?

13 A (WITNESS BALDWIN) Definitely, in accordance
14 with this program, the quality assurance standards and
15 directives which are part of this.

16 Q Does that finish your answer, Mr. Baldwin?

17 A (WITNESS BALDWIN) Yes.

18 Q Mr. Long, I would like to turn your attention
19 now to Attachment 17 of the prefiled testimony. For the
20 record, that is GE BWR Quality Assurance Manual. Do you
21 have that available, Mr. Long?

22 A (WITNESS LONG) Yes, I do.

23 Q And it is -- what has been marked as
24 Attachment 17 is Revision 13, dated October 16th, 1981.
25 Is that up to date, sir?

1 A (WITNESS LONG) What page are you looking at?

2 Q I am looking at the front cover page, the
3 upper righthand corner, sir.

4 A (WITNESS LONG) Yes, sir, that would be the
5 revision number for the cover page. However, certain
6 sections of the manual have different revision numbers
7 and different revision dates.

8 Q To the best of your knowledge, the manual
9 which has been presented in this testimony is up to date
10 as of today? There are no further revisions?

11 A (WITNESS LONG) I would like to direct your
12 attention, Mr. Lanpher, to Page 1-1 of that document,
13 and under Paragraph 1.1, the last sentence, which reads,
14 "This manual is reviewed annually by the implementing
15 organizations and updated as necessary by the Nuclear
16 Energy Product and Quality Assurance Operation (PEQAO)
17 to effect interim changes in the BWR QA program."

18 What I can state, sir, is that at the point in
19 time that Revision 13 was issued, all of the identified
20 documents in here were as identified. There may have
21 been some changes since October the 16th, 1981.

22 JUDGE BRENNER: Do we have to wait another
23 month to see what those changes are?

24 WITNESS LONG: I can only presume, sir, that
25 it is going to be revised by that date. That is the

1 commitment in the document, that it will be revised
2 annually and updated as necessary.

3 JUDGE BRENNER: Well, would you personally be
4 familiar with any important material changes which may
5 have been made in the interim, even though not published
6 for reasons of the paragraph you just referred to?

7 WITNESS LONG: I am not aware of any
8 significant changes, sir, like major changes in
9 documents systems or major documents being eliminated.
10 There may be some exceptions to that statement, but none
11 that I am aware of.

12 JUDGE BRENNER: All right. We will leave it
13 at that right now. If you are still here on October
14 16th -- On a serious note, we will have a break after
15 the next two weeks, and hopefully you could check on
16 that.

17 WITNESS LONG: Sir, if I become aware of any
18 changes, I will so notify you.

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1 JUDGE BRENNER: Okay. I am asking you
2 affirmatively to check on any important changes in that
3 time frame.

4 MR. ELLIS: We will undertake to do that.

5 JUDGE BRENNER: We are not talking about a
6 minor change, but something that is material to the
7 issues.

8 BY MR. LANPHER: (Resuming)

9 Q Mr. Long, this is not the complete manual, is
10 it?

11 A (WITNESS LONG) No, sir, it is not. If you
12 will refer to our testimony, we were identifying
13 activities in the design and design control and in the
14 procurement control areas. These are the portions of
15 the manual that are directed toward describing our
16 quality assurance program in those interest areas.

17 Q Well, the section, for instance, on fuel and
18 reactor equipment manufacturing, I believe that is not
19 included in this manual, is that correct, in what is in
20 the testimony?

21 A (WITNESS LONG) Would you please repeat the
22 question?

23 Q Turning your attention to the same page you
24 referred to before, Page 1-1, the second under
25 Organization, the third sentence talks about various

1 sections of the manual, engineering, project management,
2 et cetera. I believe the section entitled Fuel and
3 Reactor Equipment Manufacturing is not included in what
4 you provided.

5 A (WITNESS LONG) That is correct.

6 Q I don't mean to interrupt you, sir.

7 A (WITNESS LONG) No, go ahead.

8 Q My question is, why was that not included?

9 A (WITNESS LONG) Because the portion that
10 addresses fuel and reactor equipment manufacturing is
11 primarily addressing concerns that are related to the
12 manufacturing process.

13 Q Was it your judgment that that was not
14 relevant to the contentions here at issue?

15 A (WITNESS LONG) It was my judgment that within
16 the scope of what we were addressing in the written
17 testimony, that what I provided would support that
18 written testimony.

19 (Whereupon, counsel for Suffolk County
20 conferred.)

21 Q To the best of your knowledge, Mr. Long, is
22 General Electric going to be providing operating plant
23 services to Long Island Lighting Company in the future?

24 A (WITNESS LONG) Sir, we make those services
25 available and would hope that Long Island Lighting

1 Company would partake of our services, but I have no way
2 of guaranteeing that. Maybe Mr. Museler would like to
3 speak to that subject, or Mr. Youngling.

4 A (WITNESS YOUNGLING) I would say that General
5 Electric will be continuing to provide us services
6 during the life of this reactor.

7 Q Then why wasn't the operating plant services
8 section of this manual provided?

9 MR. ELLIS: Objection. The question has been
10 asked and answered, and I don't think it is within the
11 ambit of the contentions in any event.

12 MR. LANPHER: The question --

13 JUDGE BRENNER: I think you have proceeded as
14 far as you can with the witness. If you want to argue
15 later that there is a document that they should have
16 included or the testimony has less weight for its
17 absence, you are free to do it.

18 MR. LANPHER: I don't want to argue with you,
19 Judge, but my previous question went to the
20 manufacturing section. The question I just asked went
21 to the operating plant services section of the manual.

22 JUDGE BRENNER: All right. Maybe it was your
23 "then" that introduced the question that misled me.

24 MR. LANPHER: I think you are probably right
25 that my point is made, but I am not sure the witness had

1 a chance to answer my latest question.

2 JUDGE BRENNER: I thought you were asking
3 about the same section, and you are correct. I did make
4 that error.

5 Mr. Long, is your answer the same as to why
6 you chose not to include the operating plant services
7 section as the answer you gave with respect to why you
8 chose not to include the fuel and reactor equipment
9 manufacturing section?

10 WITNESS LONG: The answer would be, Your
11 Honor, that since the services activities were not
12 covered in the written testimony, that portion of the
13 manual was not provided as an attachment.

14 WITNESS MUSELER: Judge Brenner, I think I can
15 for purposes of what I think the objective of the
16 question was add something of interest. While we do
17 have a contract with General Electric to provide some
18 services beyond start-up, that contract only goes
19 towards or only goes to the provision of advisors to the
20 vice president and to the plant manager and assistants
21 in the control room, which is not the normal scope of
22 the GE operating services division.

23 While it is certainly well within the realm of
24 possibility that GE might be employed to provide those
25 services, they are not currently contracted to do so,

1 nor has a decision been made on how to proceed in that
2 area. I don't mean to say that we are dissatisfied with
3 General Electric, but I don't believe that there is
4 anything that we intend to do in the near-term future
5 that would require that particular portion of the manual
6 to be employed at Shoreham.

7 BY MR. LANPHER: (Resuming)

8 Q Mr. Long, is this the quality assurance manual
9 which is utilized by GE in controlling its activities
10 in accordance with Appendix B?

11 A (WITNESS LONG) No, sir, it is not. First of
12 all, this is a descriptive document as stated in the
13 purpose of the document. It is descriptive of how the
14 GE quality assurance program works. Our program is
15 very, very complex, and this document identifies in the
16 various sections of the document those detailed
17 requirements, documents that are directive and which
18 actually state the requirements that are to be
19 implemented in the program. So this document in itself,
20 Number One, is a descriptive document, and Number Two,
21 it is not the General Electric licensing topical report
22 in the quality assurance area. That is another separate
23 document.

24 (Pause.)

25 JUDGE BRENNER: Incidentally, Mr. Lanpher,

1 following along, you took credit for the rapid progress
2 to get to Page 10. If I follow the afternoon session
3 right, we are somewhere between Page 10 and Page 11
4 still. Is that correct?

5 MR. LANPHER: That's right.

6 JUDGE BRENNER: That illustrates the dangers
7 in statistical extrapolation.

8 MR. LANPHER: If I could just have a moment, I
9 want to see -- I am going to try to finish this area
10 today.

11 JUDGE BRENNER: Okay. That is the real reason
12 I broke in. I was going to ask your view as to whether
13 you could do that in the next 15 minutes.

14 MR. LANPHER: I am confident that I can, if I
15 could just have a moment.

16 JUDGE BRENNER: Sure.

17 (Pause.)

18 MR. LANPHER: Judge Brenner, I think I just
19 have one other line of questioning on this.

20 BY MR. LANPHER: (Resuming)

21 Q Mr. Muller, if I could turn your attention
22 back to the LILCO OQA manual, Attachment 4 to the
23 testimony, Section 2, Page 1, at Part 2.1.4 on that
24 page, it states, "FSAR Table 3.2.1-1, equipment
25 classification, identifies safety related structures,

1 systems, and components as QA Category 1. These and
2 associated consumables such as welding materials,
3 nuclear fuel, diesel fuel, et cetera, are subject to the
4 requirements of the QA program."

5 Is that FSAR table which I would note is in
6 evidence as part of the county's 7-B testimony, is that
7 the only list of safety related equipment for the QA
8 program?

9 (Whereupon, the witnesses conferred.)

10 A (WITNESS MULLER) The FSAR table that you
11 reference is only a summary table. In order to identify
12 safety related components, we refer to design documents
13 and specifications.

14 Q Well, how do you refer to design documents and
15 specifications to make that determination?

16 (Whereupon, the witnesses conferred.)

17 A (WITNESS MULLER) The specifications, the
18 drawings and the design basis documents identify the
19 safety related components.

20 Q So if a person on the QA staff needs to
21 determine the classification of an item, they would
22 first go to the FSAR table. Is that correct? And then
23 if that didn't provide an answer as to classification,
24 they would have to go to design documents and
25 specifications?

1 A (WITNESS MULLER) No. The individual would
2 not go to the FSAR table first. He would go to the
3 design basis documents or the specification.

4 Q Is that direction specified in this manual?
5 (Whereupon, the witnesses conferred.)

6 A (WITNESS MULLER) A good example would be
7 station procedure providing for design modification
8 packages, or even the procurement control procedure that
9 has been left in evidence would direct the individual to
10 go to the specification.

11 Q Excuse me. I am sorry. You said something
12 was left in evidence?

13 A (WITNESS MULLER) I am sorry. What I meant
14 was, you have the station procedure for, I think it is
15 SP 1201901. It is procurement of material for the
16 plant.

17 Q Is that one of the attachments?

18 A (WITNESS MULLER) Yes, it is.

19 Q Is that Attachment 46, sir, just so the record
20 is clear?

21 A (WITNESS MULLER) Yes.

22 Q The manual doesn't provide that direction,
23 correct?

24 A (WITNESS MULLER) That is correct. But the
25 individual that was following, that would be following

1 the procedure would go to the specification or design
2 basis document to determine if in fact the component he
3 was reviewing was safety related or non-safety related.

4 A (WITNESS KELLY) I would also like to add that
5 as far as the QA department is concerned, all the
6 individuals in the QA department when they first come in
7 are indoctrinated into the necessity of all their
8 activities, whether they be auditing, surveillance, or
9 any reviews, to use the design basis documents.

10 Q Well, then, why not change the quality
11 assurance manual in the section that I quoted earlier to
12 state that?

13 A (WITNESS MUSELER) Mr. Lanpher, just as in
14 some of the other overall QA manuals, the intent of the
15 overall manual is to describe the program and provide
16 summary information as to how the program is supposed to
17 work, as opposed to providing the detailed procedures
18 which flow from the program, and together with the
19 manual form the overall QA program.

20 To implement the Table 3.2.1, I think, is a
21 table that does provide some information in terms of
22 what components are safety related, and in fact I am
23 sure you are aware that table is not strictly a list of
24 safety related components. It lists major systems and
25 components throughout the plant and identifies some as

1 safety related and some as non-safety related.

2 So, while, you know, the manual certainly
3 could say without any contradiction that the QA Category
4 1 items are identified in the specific design documents,
5 this refers to something that at least to somebody who
6 is only utilizing the manual would have an idea of what
7 it applies to. There is no reason why it couldn't say
8 what you suggest, but the implementing procedures are
9 really the place to include the detail on what is really
10 used to identify from an operative standpoint what has
11 to receive the particular requirements of these
12 procedures.

13 MR. LANPHER: Judge Brenner, I think this
14 completes this line of questioning. There may be a
15 cleanup question or two that comes to me overnight, but
16 as of now I have no further questions. I can turn to
17 another line, but if we are going to stop at 5 --

18 JUDGE BRENNER: No, we might as well stop.
19 Incidentally, we are going to proceed by allowing cross
20 examination. We were not planning to break subjects, so
21 that the staff could -- so that LILCO could ask for
22 redirect and the staff could ask questions. However, if
23 the parties among themselves believe there will be a one
24 or two discrete breaks, I don't know, possibly between
25 engineering and construction as opposed to operations,

1 you could consider that and suggest such a procedure to
2 the board. Otherwise, you are going to be waiting with
3 all of your questions, and it is up to you.

4 I noticed Mr. Muller today did have to jump in
5 and answer some questions even though not directed to
6 him. And the cross examiner is not cognizant
7 necessarily of every place where Mr. Muller's input
8 would have been useful in LILCO's view, and even if he
9 was, it is hard to restrict it. I think the way to
10 solve that problem is, as we have done on one or two
11 other occasions, to expect that Mr. Muller will read the
12 transcript after and if LILCO sees anything that Mr.
13 Muller believes he can usefully clarify and would have
14 had he been here at the time, he can let you know, Mr.
15 Ellis, and you can apprise the other parties so they are
16 not surprised, and we will be very liberal about backing
17 up if something important comes up like that. So, that
18 ought to solve that problem.

19 MR. ELLIS: Yes. Thank you, Judge Brenner. I
20 have one item I did want to mention at the very end, if
21 this is the very end.

22 JUDGE BRENNER: Of today.

23 MR. ELLIS: There is one thing that I think --

24 JUDGE BRENNER: Do you want to let the
25 witnesses go?

1 MR. ELLIS: They can't go anywhere without me,
2 anyway.

3 There was one point, Judge Brenner, that I
4 don't intend and do not want to reargue anything, and I
5 understand the board's ruling, but I really failed to
6 make clear my point, and that is a distinction between a
7 regulatory requirement and good practice, and what one
8 does as a result of engineering.

9 My point was that the reason I put it in the
10 syllogism was that our position was that as a regulatory
11 requirement, Appendix B stands as a regulatory
12 requirement in our view only to safety related, and to
13 the extent that there is testimony going beyond that,
14 that was our view, that that was good practice. I don't
15 think I made that very clear.

16 JUDGE BRENNER: I don't want to belabor it
17 either. I understand your point now. I understood it
18 at the time of the phone call. And I may not have fully
19 understood it at the time I read your written motion.
20 However, even if I had, you would have gotten the same
21 ruling, for the reasons discussed this morning and
22 reiterated here.

23 I would have been less surprised at the
24 statement you made in your written testimony that no
25 party could disagree as to Appendix B. I will note that

1 it is not as simple as the distinction between a
2 regulatory requirement and good practice, because it is
3 dangerous to state, but I think everybody also has the
4 view that GDC 1 plugs in somewhere also, and to the
5 extent that you look to Appendix B for some sort of
6 guidance, even when you are applying GDC 1 to what LILCO
7 would call non-safety related, and to what the staff
8 would call important to safety.

9 You have quite a job to straighten this all
10 out, and maybe it is a good time now to note that the
11 staff likes to say, well, it is just a semantic
12 problem. Well, the whole game is semantics, as it turns
13 out, in applying these regulatory requirements. And I
14 need only cite the dialogue between staff counsel and
15 LILCO's 7-B witnesses as to whether they would make the
16 so-called commitment.

17 There is a lot to put together, and I also
18 hope that counsel involved in the 7-B testimony is going
19 to become familiar with this testimony to the extent
20 that it pertains and vice versa.

21 I want to emphasize, this is going to be an
22 important area in everybody's findings, and everybody
23 has a particular point of view. The staff was worried
24 about the regulatory program, and if they have concern
25 that our decision might be inconsistent with their view,

1 we had better see good findings on it, and the same for
2 everyone else. We thought about it a lot, and we could
3 use a lot of help on it. That is what findings are
4 for.

5 I guess we will adjourn until 9:00 o'clock
6 tomorrow morning. Mr. Alexander and Mr. Muller won't be
7 with us tomorrow.

8 (Whereupon, at 5:00 p.m., the board was
9 recessed, to reconvene at 9:00 a.m. of the following
10 day.)

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the

ATOMIC SAFETY AND LICENSING BOARD

in the matter of: LONG ISLAND LIGHTING COMPANY (Shoreham Nuclear Power
Station)

Date of Proceeding: September 14, 1982

Docket Number: 50-322-OL

Place of Proceeding: Hauppauge, New York

were held as herein appears, and that this is the original transcript
thereof for the file of the Commission.

Susan A. Harris

Official Reporter (Typed)

Susan A. Harris

(SIGNATURE OF REPORTER)