

ORIGINAL

OFFICIAL TRANSCRIPT PROCEEDINGS BEFORE

NUCLEAR REGULATORY COMMISSION
BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

DKT/CASE NO. 50-322-OL

TITLE LONG ISLAND LIGHTING COMPANY
(Shoreham Nuclear Power Station)

PLACE Bethesda, Maryland

DATE December 16, 1982

PAGES 16,635 thru 16,821

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

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

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4350 East-West Highway
Bethesda, Maryland
Thursday, December 16, 1982

The hearing in the above-entitled matter
convened, pursuant to notice, at 9:30 a.m.

BEFORE:

LAWRENCE BRENNER, Chairman
Administrative Judge

JAMES CARPENTER, Member
Administrative Judge

PETER A. MORRIS, Member
Administrative Judge

1 APPEARANCES:

2

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C O N T E N T S

WITNESSES:

DIRECT CROSS REDIRECT RECROSS BOARD

Robert Gallo, James Higgins and Lewis Narrow (Resumed)				
By Judge Carpenter				16,639
By Judge Brenner				16,647
By Mr. Lanpher		16,647		

(Afternoon Session..16,720)

Robert Gallo, James Higgins and Lewis Narrow (Resumed)	
By Mr. Lanpher	16,720

E X H I B I T S

<u>NUMBER</u>	<u>IDENTIFIED</u>	<u>RECEIVED</u>
Suffolk County 103	16,692	16,815
Suffolk County 104	16,696	
Suffolk County 105	16,712	16,815
Suffolk County 106	16,750	16,815

RECESSES:

Morning - 16,674

Noon - 16,719

Afternoon - 16,769
16,795

P R O C E E D I N G S

1
2 • JUDGE BRENNER: We are ready to go on the
3 record.

4 The parties off the record informed us that we
5 would hear the emergency planning preliminary procedural
6 discussion on Tuesday morning, and we will do that
7 starting at 9:00 o'clock on Tuesday. The County is
8 going to inform counsel for SOC and the North Shore
9 Committee that they are invited to attend and we would
10 welcome them. We should note that their attendance is
11 not mandatory. We expect this to be preliminary and we
12 will undoubtedly have further discussions on it in
13 January.

14 Are there any preliminary matters before we
15 resume the examination?

16 (No response.)

17 • JUDGE BRENNER: Okay, Mr. Lanpher.
18 Whereupon,

19 ROBERT GALLO

20 JAMES HIGGINS

21 LEWIS NARROW,

22 the witnesses on the stand at the time of recess,
23 resumed the stand and, having previously been duly sworn
24 by the Chairman, were examined and testified as
25 follows:

1 JUDGE CARPENTER: Mr. Lanpher, if I may, I had
2 a couple of questions yesterday at the end that I did
3 not get a chance to ask.

4 MR. LANPHER: Fine.

5 BOARD EXAMINATION

6 BY JUDGE CARPENTER:

7 Q I would like to ask the panel to look at
8 Suffolk County Exhibit 102, please. That is inspection
9 report 82-10.

10 A (WITNESS GALLO) Yes, we have that, Judge.

11 Q Appendix A of this inspection report is a
12 notice of violation with respect to calibration of flow
13 measuring and test equipment, test equipment panel.
14 First of all, I would like to ask, can you tell me a
15 little bit about what this equipment does, what most
16 people would call a rotometer?

17 A (WITNESS HIGGINS) Yes, it is a flow meter or
18 a rotometer, which is used for measuring flow rates of
19 air or nitrogen in the type C containment isolation
20 valve leak rate test program. The containment isolation
21 valves are required to be tested by Appendix J to Part
22 50 to determine their leak tightness, and the way that
23 is done is a test volume generally on the containment
24 side of the valve is pressurized to the accident
25 pressure, typically about 44 psig.

1 And then the way the test is run is, actually
2 you pressurize through a test rig and the flow is
3 directed through a flow meter, and the flow is directed
4 through a flow meter. When you reach accident pressure
5 and conditions stabilize, if the valve has zero leakage
6 then the flow meter with air continuing to go into the
7 test volume, the flow meter would read zero. If in fact
8 the valve seat is leaking by some amount, then that
9 amount would continue to go into the test volume and it
10 would pass through the flow meter and that would be the
11 leak rate through the valve.

12 Q Thank you for the clarification. What
13 concerns me is the third paragraph from the bottom,
14 which states, "It was further determined that all other
15 flow measuring and test equipment panels used for tests
16 performed prior to April 28, 1982, were not properly
17 calibrated."

18 What were the consequences of that?

19 A (WITNESS HIGGINS) Let me just review one
20 other piece of paper, Judge.

21 (Pause.)

22 A (WITNESS HIGGINS) Judge, it is true that the
23 rotometers had not been calibrated to the rigorous
24 standards that we would have liked to have seen. What
25 LILCO is doing in this case -- and I think I discussed

1 this a little bit yesterday -- if you look at items 1
2 and 2 in the violation, in order to meet the strict
3 requirements of Appendix B they were required to either
4 have records from an offsite calibration facility that
5 demonstrated the calibrations were traceable to the
6 National Bureau of Standards for these rotometers or
7 they were required to have an onsite calibration
8 performed of these rotometers, again traceable to
9 National Bureau of Standards.

10 Utilities can and do for various types of
11 instrumentation either send them offsite for calibration
12 or do it with their own laboratory calibration
13 facilities onsite. What they were doing in this
14 instance is, they were calibrating it onsite, using
15 their own facilities.

16 And the problem that we had with that was that
17 we had not established an onsite approved calibration
18 procedure. They did have a procedure which they called
19 an accuracy check, and basically what it consisted of
20 was, they had more accurate flow measuring devices that
21 were traceable to National Bureau of Standards, that
22 they were basically hooking up the flow meters that were
23 being used for the tests in series with these and doing
24 an accuracy or a calibration check of the instruments to
25 see that they read the same as the other instruments.

1 One of the problems that we had with that --
2 well, one of them was that the procedure had not been
3 reviewed and approved in accordance with their program.
4 The second problem that we had is discussed in part C,
5 in that they hadn't taken into account the calibration
6 temperatures, which does have an effect, albeit a small
7 effect, on the accuracy of the instrument.

8 The Licensee made an evaluation to determine
9 that what they had affected the accuracy to a certain
10 extent, but they made conservative corrections for the
11 errors that could have been introduced by the
12 calibration temperatures not being accurately recorded
13 during the lab calibration.

14 Q Do you think that LILCO would have proceeded
15 in that way in the absence of your doing the
16 inspection?

17 A (WITNESS HIGGINS) For these particular flow
18 instruments, they felt that what they were doing was
19 adequate. We disagreed with them and when we wrote up
20 the violation and discussed it with them they initially
21 did not agree with our finding, and they said that they
22 felt what they were doing was adequate, and in fact in
23 their response letter they said that.

24 We took a second look at the violation, as we
25 will do when a utility challenges our judgment on a

1 violation, and after further review by management we
2 determined that the violation was a legitimate
3 violation. And in our letter back to them we told them
4 that the violation stood as issued and that we felt that
5 they had to take the actions that were specified.

6 I might add that in their response letter,
7 although they took issue with the violation, they did
8 agree to take the corrective actions that we thought
9 they should have taken, namely issuing, finalizing and
10 approving the procedure as it should be done and
11 completing all calibrations in accordance with Appendix
12 B.

13 We did make the evaluation along with the
14 Licensee, as I said, to determine that the tests that
15 had been done with the rotometers did not have to be
16 redone because of the conservative corrections that were
17 made to account for the differences in calibration
18 temperature.

19 Q You see, Mr. Higgins, what I'm trying to
20 understand is whether -- we have heard some considerable
21 testimony about the quality assurance/quality control
22 program, and then we see this inspection, which shows
23 that the program was not 100 percent effective. And I'm
24 trying to understand a little bit better as to whether
25 this is an isolated incident or whether it is perhaps

1 symptomatic of some programmatic problems, which the
2 report does not help me with.

3 (Panel of witnesses conferring.)

4 A (WITNESS HIGGINS) Did you have another
5 question for me, Judge Carpenter?

6 Q Well, we've heard considerable testimony about
7 the LILCO policies and procedures and attitude with
8 respect to calibrations, and this inspection report is
9 at variance with that previous testimony. And I'm just
10 trying to get a feel for whether you felt this was --
11 whether you chose to go ahead and look a little further
12 to see whether there was a laxity that needed to be --
13 with respect to other tests which were being carried
14 out.

15 A (WITNESS HIGGINS) I guess in general when I
16 look at a pre-op test and when our regional inspectors
17 look at pre-op tests, we do quite frequently look at
18 instrument calibrations associated with those tests. In
19 general, in the pre-op test program I have not had a
20 problem in the instrument calibration area. In general,
21 I have found that the instruments used for the
22 pre-operational test are properly calibrated and
23 traceable to National Bureau of Standards, and records
24 are maintained to show that.

25 This was a case where LILCO management had

1 made the decision that they felt this instrumentation,
2 as they said in their response, was not QA category 1
3 and did not need to be calibrated traceable to National
4 Bureau of Standards. I guess I feel that their QA
5 department could have identified that and made an issue
6 of that and gotten it corrected. Apparently they did
7 not.

8 It was an area where LILCO, LILCO management
9 in the form of the startup management and the management
10 associated with the instrumentation and calibration
11 facility, had made a judgment that we viewed as the
12 wrong judgment. It was a conscious judgment. It wasn't
13 an oversight. They told us that they had consciously
14 considered it and felt that it was not necessary in this
15 case, and it was not identified by quality assurance as
16 something that should be changed.

17 But it is to some extent somewhat of a
18 judgmental thing, where you look at it and have to make
19 a judgment that, well, are these types of calibrations
20 required in this instance, since the instrumentation
21 involved is not instrumentation directly used in the
22 plant? We felt that the judgment was that, yes, it must
23 be calibrated traceable to National Bureau of Standards
24 in accordance with Appendix B.

25 Q One of the problems I have with the LILCO

1 quality assurance manual, it doesn't provide a listing
2 of those items tested and of the test and measuring
3 equipment that they consider to be specifically covered
4 under the manual.

5 Back to your point, they felt it wasn't on the
6 list. But how do you feel about not having the stated
7 list in terms of their program?

8 A (WITNESS HIGGINS) I think a list needs to
9 exist. I don't think that it needs to exist in the
10 quality assurance manual. The quality assurance manual
11 should from a generic or general standpoint define what
12 types of instrumentation should go under the program, but
13 it should not be an itemized listing in the quality
14 assurance manual.

15 There needs to be an itemized listing
16 available on site, yes.

17 Q Wouldn't it be convenient to find it as an
18 appendix to the manual?

19 A (WITNESS HIGGINS) I think it would be too
20 extensive and make the manual itself too unwieldy. The
21 manual I believe should be a philosophy and a scoping
22 type document that outlines the types of things that
23 should be covered, and I think that that would be --
24 those types of statements in the manual would be
25 adequate.

1 JUDGE CARPENTER: Thank you for helping me
2 understand this a little better.

3 BY JUDGE BRENNER:

4 Q I guess I would like to ask one. Mr. Higgins,
5 when you were using the term "the manual," did you have
6 in mind the startup manual or the OQA manual, or either
7 or neither?

8 A (WITNESS HIGGINS) In my last statement to
9 Judge Carpenter, I was referring to the quality
10 assurance manual.

11 Q Operational quality assurance or just the
12 overall one?

13 A (WITNESS HIGGINS) They in their latest
14 reorganizational change, it is now just called the
15 quality assurance manual. But it applies to operational
16 quality assurance.

17 CONTINUED CROSS-EXAMINATION

18 BY MR. LANPHER:

19 Q Mr. Higgins, in responding to Judge Carpenter
20 you stated that LILCO management had decided that these
21 rotometers or these instruments did not need to have the
22 calibration that you subsequently decided that it did.
23 And you identified the management and startup and the
24 instrument and calibration groups, correct?

25 A (WITNESS HIGGINS) Yes.

1 Q Had the OQA section concurred in that?

2 A (WITNESS HIGGINS) I don't recall at this time
3 whether or not -- exactly what type of concurrence or
4 input the quality assurance group had. This was one
5 violation that I didn't personally write.

6 Q Would you agree that such a judgment decision
7 which can impact on compliance with an Appendix B
8 criterion should be reviewed by the quality assurance
9 personnel?

10 (Board conferring.)

11 A (WITNESS HIGGINS) They should be involved to
12 some extent. Exactly what that extent should be, I'm
13 really not sure at this time, but there should be some
14 involvement in the quality assurance group, yes.

15 Q You don't know in this instance whether they
16 were?

17 A (WITNESS HIGGINS) That is correct.

18 Q Mr. Higgins, Judge Carpenter also asked you
19 whether this violation was symptomatic of some sort of
20 programmatic problems, and would you agree -- and I
21 don't want to go back over things that we covered in
22 detail yesterday. But if we look again at I&E Report
23 82-15, which is Suffolk County Exhibit 101, at page 18
24 -- do you have that?

25 A (WITNESS HIGGINS) Yes. That was the one

1 referring to the structural acceptance test strain
2 gauges and crack width gauges.

3 Q That was an example, was it not, where LILCO
4 had, perhaps on a judgment call, decided that the
5 initial calibration was not required?

6 A (WITNESS HIGGINS) It appears that way.

7 Q So that is similar to the kind of judgment
8 that was made in I&E report 82-10, correct?

9 A (WITNESS HIGGINS) Yes.

10 Q Do you know whether LILCO quality assurance
11 personnel were involved in the decision in 82-15, the
12 decision that initial calibration apparently was not
13 required?

14 A (WITNESS HIGGINS) That test and that decision
15 was -- that test was run as a construction test, and the
16 specification that was involved with getting the
17 contractor and the instrumentation was a specification
18 that had been written by Stone & Webster and approved
19 by, reviewed and approved by LILCO. The quality
20 assurance organizations associated with that were
21 primarily the field quality control organization, which
22 is the construction quality control organization as
23 opposed to operational quality assurance, which is the
24 one involved with the preoperational test program.

25 The field quality control organization did

1 have the opportunity to have input or review the
2 situation with the strain gauges and crack width gauges,
3 yes.

4 Q During what time frame did they have that
5 opportunity?

6 A (WITNESS HIGGINS) Before my comment was
7 written in the inspection report.

8 Q But about the same time that you had made the
9 observation in the course of your actual inspection?

10 A (WITNESS HIGGINS) They had the opportunity to
11 look at that before I made my finding.

12 Q Did they in fact look at it?

13 A (WITNESS HIGGINS) Did they look at what?

14 Q Well, had field quality, LILCO field quality
15 control, in fact been involved in the decision not to
16 require initial calibration on the strain gauges or
17 crack width gauges?

18 A (WITNESS HIGGINS) The decision was made by
19 the personnel involved with the specification and the
20 test. The decisions of that sort are not made by
21 quality control. Quality control is more of an
22 oversight and a review group, and they did have the
23 opportunity to provide oversight and review to it, yes.

24 Q Well, you used the word "opportunity." I'm
25 sure QA can review everything in the plant if they want

1 to.

2 A (WITNESS HIGGINS) That's right.

3 Q Do you know whether in fact they did review
4 and approve it?

5 A (WITNESS HIGGINS) They don't in cases like
6 this have a formal approval for every change, et cetera,
7 that is made. They did look at the specification. They
8 looked at the specification changes involved. They
9 looked at instrument calibration. They looked at the
10 instruments involved. And they, I feel, should have
11 been, and I feel confident that they probably were,
12 aware that those instruments were there without the
13 calibration records, as the calibration records for the
14 other things were. And they didn't raise it as a
15 question or a problem, and that is what I mean by, have
16 the opportunity to make the same finding that I made and
17 didn't.

18 Q So you know of personal knowledge that they
19 had in fact taken a look at this situation, maybe
20 "review" is the wrong word, but they were aware of the
21 facts which you found prior to the time you found them?

22 A (WITNESS HIGGINS) I don't know exactly which
23 facts they were aware of. The facts were there. They
24 had the opportunity to look at them and review them.
25 That is about all I can really say.

1 Q Mr. Higgins, back to 82-10 just for one other
2 matter. Judge Carpenter's initial questions focused on
3 the last sentence of that notice of violation, the
4 sentence: "It was further determined that all other
5 flow measuring and test equipment panels used for LILCO
6 leak rate tests performed prior to April 28, 1982, were
7 not properly calibrated."

8 You used the words "all other panels." Are we
9 talking about one or two, or are there a number?

10 A (WITNESS HIGGINS) Three or four.

11 Q And did the LILCO corrective actions
12 specifically address those other panels that were not
13 calibrated?

14 A (WITNESS HIGGINS) Yes, all were properly
15 calibrated. That is the corrective action, and in
16 subsequent inspections of the containment leak rate test
17 program which were performed after that, calibration of
18 the instrumentation was reviewed and tests were
19 witnessed and no further problems were found in the
20 specific area.

21 Q Mr. Higgins, were you referring in your
22 previous answers to the LILCO response letter SNRC-724,
23 dated July 1, 1982?

24 A (WITNESS HIGGINS) Yes.

25 MR. LANPHER: I'm sorry, members of the

1 Board. I didn't know I was going to get into this. I
2 don't have copies for the Board.

3 BY MR. LANPHER: (Resuming)

4 Q Mr. Higgins, could you just direct my
5 attention to where in that letter they indicate that all
6 other equipment were properly or was properly
7 calibrated?

8 (Pause.)

9 A (WITNESS HIGGINS) On page 3, the second
10 paragraph, they state their intention to ensure
11 calibration via their own calibration program, using
12 standards and methods traceable to the National Bureau
13 of Standards or the use of an offsite calibration
14 facility. And they state: "Currently, LILCO
15 rotometers" -- plural -- "are being calibrated by an
16 offsite calibration facility with standards traceable to
17 the National Bureau of Standards."

18 I also know that in the follow-up inspection
19 by our regional inspector that the calibration records
20 for all the rotometers were reviewed and turned out to
21 be acceptable.

22 Q You said for all of the rotometers?

23 A (WITNESS HIGGINS) Yes.

24 MR. LANPHER: I have no further questions on
25 that line. Members of the Board, I'm going to go to

1 Roman VI on page 13 of the cross plan.

2 BY MR. LANPHER: (Resuming)

3 Q Gentlemen, looking at the top of page 6 of
4 your prefiled testimony for a moment, you comment on the
5 appendix to Suffolk County contention 12. Do you see
6 that portion of your testimony at the top of page 6? I
7 guess you start at the bottom of page 5.

8 Now, am I correct that it is your position
9 that it is improper to list as separate violations the
10 same facts against more than one criteria of Appendix
11 B?

12 (Panel of witnesses conferring.)

13 A (WITNESS GALLO) In general, we do not do
14 that. As we pointed out the other day, there are
15 instances where the NRC has used two different criteria
16 of the Appendix B to write a citation, and I believe
17 that I said that I had been involved in one and I did
18 not think it was this facility. And I believe now that
19 in one of the inspection reports we have looked at since
20 then there was one where there were two specific
21 criteria cited, and I was involved in that one. I have
22 been involved in others at other sites.

23 I guess our point here was that when we, NRC,
24 cited something against the particular criterion that we
25 did not double-count that as a violation of two or more

1 criteria.

2 A (WITNESS NARROW) May I add to that? In our
3 program when we cite against the criteria -- and as you
4 know, the criteria are broad enough that in many cases
5 you can cite the same violation against four or five, or
6 in one case I believe we cited it against seven,
7 criteria. And this could -- you could probably support
8 a citation against any one of those criteria.

9 However, in our program we are interested in
10 looking at the record to determine, is there a problem
11 or is there not a problem, and if there is in what area
12 do we find that problem. And therefore we attempt to
13 cite against the criterion which would determine that
14 problem to the best way we can.

15 Now, complicating that somewhat, for some
16 period of time we had instructions that wherever
17 possible we were to cite against criterion 5 because,
18 for some legal reason with which I am not familiar, it
19 would be easier to defend the citation if the Licensee
20 objected to that. Therefore you will find a large
21 number of citations against criterion 5.

22 I don't know if I have helped to explain this
23 or whether I have complicated it more.

24 Q Mr. Narrow, I'm curious. What time period was
25 it that you were under some sort of direction to

1 concentrate your citations on criterion 5?

2 (Panel of witnesses conferring.)

3 A (WITNESS NARROW) I don't know. I couldn't
4 give you an exact time, but it was somewhere in the late
5 seventies. It was, I believe, prior to 1980 and
6 possibly for a period of several years.

7 Q And you don't know why this was done?

8 A (WITNESS NARROW) As I said, some legal reason
9 which I'm not too familiar with.

10 A (WITNESS GALLO) There was a memo form that
11 came from our headquarters at the time, and I don't
12 recall the exact date, either. But the memo as I
13 recall, there was attached to it or incorporated somehow
14 a legal opinion that to write a citation against an
15 approved QA program that generally the citation should
16 be written against criterion 5, regarding instructions,
17 procedures or drawings, and that was because the wording
18 of generally the other 18 criteria used the words
19 "measures shall be established" and it was felt -- I
20 guess the legal opinion was, as I recall, that the
21 measures had been established and there had been an
22 approved QA program in an FSAR or PSAR, and that they
23 were the measures.

24 As I remember, that was the basis for the
25 memo.

1 Q And then the violation presumably was for
2 failure to comply with those measures?

3 A (WITNESS GALLO) The violation, when you were
4 writing against the procedure, that was written to
5 ensure that those measures were established.

6 Q Gentlemen, I think you have made this point,
7 but let me just clarify it. You do agree, then, that
8 the same facts might constitute a noncompliance with
9 more than one Appendix B criterion?

10 A (WITNESS GALLO) I would agree that, again as
11 Mr. Narrow said, that there may be more than one
12 criteria that could apply to that specific violation and
13 that could be written against, more than one, as we have
14 said we have done. And that is a very rare instance,
15 and again I must point out that we are trying to get in
16 each one of these inspection reports, and each violation
17 is really a separate entity. And the inspector with his
18 supervisor, and the branch chief usually is the one that
19 signs the cover letter, have to agree, basically agree
20 in their review that that is the most correct way to
21 cite the violation.

22 A (WITNESS HIGGINS) I would like to add just a
23 little bit to that. If you look at Appendix B and you
24 have a particular instance that occurs, let's say we
25 have one occurrence or one discrepancy that is

1 identified at a site. It is possible when you look at
2 it that you could look at it in different ways, and
3 perhaps it could apply to perhaps one or more of the
4 criteria.

5 There is usually, however, one criteria to
6 which it is most applicable and which it is most proper
7 to cite against, okay. So when we do it from a legal
8 standpoint, we do choose the one to which it is most
9 applicable. And what we are most interested in is
10 assuring that the corrective actions that really caused
11 that particular instance -- to make sure that those
12 address that particular instance, and to address the
13 underlying causes.

14 A (WITNESS NARROW) Excuse me. May I add some
15 more to that? In addition to that -- and I personally
16 think this is quite important. I consider it important
17 as a project inspector that the records show in what
18 direction the Licensee was going. If he had a large
19 number of violations and if they were against a certain
20 criteria within a short period of time, we would take a
21 closer look at it.

22 Now, if we were to cite against the criterion
23 that was not applicable or if we cite against a large
24 number of criteria, you blur that picture to the extent
25 that the record really gives you nothing. You have to

1 go through every report there and determine just exactly
2 what the problem was.

3 In citing against the most applicable
4 criterion, it does give us something we can look at and
5 determine what sort of a history does the Licensee have
6 in this particular area, and should we apply more effort
7 to that particular area.

8 Q Mr. Narrow, to paraphrase what you just said,
9 that if there were a large number of violations in, you
10 said, a relatively short period of time, all concerning
11 the same criteria, that is something that ought to be
12 looked at more closely; is that a fair paraphrase?

13 A (WITNESS NARROW) I'm trying to recall exactly
14 what I said.

15 Q Well, do you agree with that statement?

16 A (WITNESS NARROW) No. I think I said that if
17 we, looking at the record, and if we have cited against
18 the proper criterion, when we look at the record and we
19 see a certain number of criteria in a certain area, this
20 would be an indication and the project inspector would
21 look at that a little more closely and determine from
22 the actual citation, just exactly what does that
23 indicate.

24 I didn't mean by that that this gives you an
25 area that is a problem area. It merely is an indication

1 to the project inspector that he should look at the
2 record and determine what those citations were for, what
3 was actually involved, who was involved in the work, and
4 what QA and QC organization was involved in the actual
5 inspection. And from this he can direct the inspection
6 efforts at that site.

7 Q Mr. Narrow, do you know of any I&E violations
8 that have been cited for the Shoreham facility that you
9 believe, with hindsight perhaps, are cited against the
10 wrong criterion?

11 (Panel of witnesses conferring.)

12 A (WITNESS NARROW) I haven't looked at it. I
13 don't know of any at the time the citations were made.
14 The ones I was concerned with, I just thought that they
15 were against the correct criteria. I have not looked
16 back to determine whether they were correct or not.

17 Q Well, you indicate in your testimony that
18 there were 36 Criterion 5 violations cited during this
19 1973 period through June of 1982, correct?

20 A (WITNESS NARROW) Could you direct us to that
21 part of the testimony?

22 Q I think I gave you the wrong page number.
23 Page 14, Mr. Narrow.

24 (Pause.)

25 Q Do you see that testimony, sir?

1 A (WITNESS NARROW) I have it.

2 Q Mr. Narrow, that means that just under 50
3 percent of the total number of violations which were
4 written on the Shoreham project during that time period
5 were against a single Appendix B criterion, correct?

6 A (WITNESS NARROW) Yes, they were. And as I
7 explained, this was Criterion 5 and during the portion
8 of this period of time at least we had instructions that
9 we were to cite against Criterion 5 if it fit into that
10 criterion at all.

11 Q And you believe that these citations did fit
12 within that criterion, correct?

13 A (WITNESS NARROW) I believe that they fit
14 within Criterion 5. Criterion 5 is very broad. I think
15 you could probably fit 90 percent of our citations into
16 that criterion if you intended to.

17 Q Well, would you agree that Criterion 5 is sort
18 of an overriding Appendix B requirement, in the sense
19 that it has specific direction to ensure that
20 instructions, et cetera, relating to activities
21 affecting quality are in fact implemented?

22 A (WITNESS NARROW) I do not believe it is an
23 overriding criteria. Excuse me.

24 (Panel of witnesses conferring.)

25 A (WITNESS NARROW) I do not believe it is an

1 overriding criteria. I believe it is one of the broader
2 criteria in Appendix B.

3 Q Well, you would agree that it mandates that
4 rules be established for carrying out activities
5 affecting quality, correct?

6 (Panel of witnesses conferring.)

7 A (WITNESS NARROW) It does not say "rules." It
8 says "instructions, procedures or drawings."

9 Q Then you agree that Criterion 5 requires that
10 instructions and procedures be established to define how
11 activities affecting quality will be carried out,
12 correct?

13 A (WITNESS NARROW) Correct.

14 Q The criterion also requires that these
15 procedures and instructions be implemented?

16 A (WITNESS NARROW) That is correct.

17 Q Is it your testimony that you did not find it
18 alarming or of any concern that half of the violations
19 or just barely under half of the violations which have
20 been cited for Shorham are cited against this single
21 criterion?

22 (Panel of witnesses conferring.)

23 A (WITNESS NARROW) Mr. Lanpher, I do not
24 consider this alarming. I consider that it is a broad
25 criterion. I consider it preferable to cite against the

1 particular type of work or organization or criterion
2 which is more directly applicable to the area for which
3 the citation is made, in addition to -- well, in
4 addition to our instructions, this is a very broad
5 criteria.

6 I explained earlier the reason that I felt
7 that it is not desirable to cite against this.
8 Nevertheless, we did. However, considering that the
9 citations were made against Criterion 5, we did look at
10 that and in our testimony, in the first paragraph or the
11 bottom of the first paragraph on page 14 -- and I assume
12 you do not wish me to repeat that -- we did look into
13 that and we did find that there were a number of
14 organizations, a number of separate groups within those
15 organizations which were involved in these violations,
16 and in addition that they occurred over a large period
17 of time. Therefore, we did not consider that this was
18 at all alarming.

19 A (WITNESS HIGGINS) Mr. Lanpher, I would like
20 to add a little bit to that. I guess I feel that in
21 general we do that not only with the Criterion 5
22 violations, but also if you have violations against
23 another particular criteria.

24 Q You do that, you said. Could you just define
25 what "that" is?

1 A (WITNESS HIGGINS) I am -- we didn't feel that
2 just looking at the criteria that was cited against was
3 sufficient to be able to say, yes, obviously there is a
4 problem there that needs additional attention. You need
5 to go into more detail and look at who was involved with
6 the particular instance on the site, which groups, which
7 organizations, what the particular thing was happening
8 involved. And therefore, it is not something that you
9 can just do blindly by saying, I have so many under
10 Criterion 3, so many under Criterion 5, and clearly that
11 means that the problem is X, Y or Z. It is not that
12 simple.

13 It takes more review, more getting into the
14 details, to tell. So just by saying you have X number
15 against criterion whatever, I do not think you can draw
16 conclusions from that.

17 Q Mr. Higgins or Mr. Narrow, what are the five
18 organizations from which these 36 violations were
19 drawn?

20 A (WITNESS NARROW) Excuse me.

21 (Pause.)

22 A (WITNESS NARROW) The organizations were LILCO
23 and the group within the organization -- did you want
24 the organizations or the groups also?

25 Q Well, you have got them both. Why do you not

1 go ahead and give them both.

2 A (WITNESS NARROW) LILCO, and within that
3 organization it was the startup group, project
4 engineering and quality assurance; Stone & Webster, and
5 within that organization there were the instrument
6 calibration laboratory, engineering, field QC,
7 receiving, equipment storage, and document control.
8 There were Courter & Company. There was site QC and
9 construction. There was Reactor Controls Incorporated,
10 only one group and that was field QC. And Dravo, and
11 that was shop QC.

12 JUDGE BRENNER: What kind of QC?

13 WITNESS NARROW: Shop. This was a purchased
14 item and it was a shop organization that was responsible
15 for having allowed the nonconforming condition to be
16 shipped.

17 BY MR. LANPHER: (Resuming)

18 Q Mr. Narrow, all of these organizations as you
19 use the term -- LILCO, Stone & Webster, Courter, Reactor
20 Controls, Inc., and Dravo -- they were obligated to
21 operate under the umbrella of LILCO's overall QA program
22 for Appendix B, correct?

23 A (WITNESS NARROW) For Appendix B, the entire
24 site; LILCO is responsible for the entire site, for
25 everything there.

1 Q Now, one of the separate groups in each of the
2 organizations was a quality assurance group or a quality
3 control group, correct?

4 A (WITNESS NARROW) That is correct.

5 Q You do not find it alarming or surprising or
6 worthy of further investigation in that the quality
7 assurance organizations or the quality assurance groups
8 within these organizations in each case had Criterion 5
9 violations?

10 (Panel of witnesses conferring.)

11 A (WITNESS NARROW) I do not find it alarming --
12 I'm sorry, would you repeat that, because I've forgotten
13 the second part of your question.

14 Q Well, it was multiple, and I don't mean to
15 confuse you. I said alarming, surprising, or worthy of
16 further investigation, the fact that in each of the
17 organizations one of the groups was the quality
18 assurance group or quality control group that had
19 Criterion 5 problems. I really was soliciting any sort
20 of comment you might have on that.

21 A (WITNESS NARROW) No, I did not find it
22 alarming or surprising. And we did, both during the
23 progress of the work and in preparation for this
24 testimony, we did take it into consideration in an
25 attempt to determine whether there was something there

1 which we had perhaps overlooked during the progress of
2 the construction.

3 A (WITNESS GALLO) In addition, I would add that
4 we do things, as Mr. Narrow has indicated, we do look at
5 that type of concern during our SALP appraisal period.
6 And what we're looking at there is to look to see if
7 there are concerns across the board, and one of the
8 things, of course, we're looking at there, and I think
9 it is very important in the consideration, is the
10 timeliness and the time span over which the violations
11 occur.

12 And overall, from my previous experience, I do
13 not find the number of violations against Criterion 5 to
14 be unusual, surprising, certainly not alarming. And you
15 still must take into account that during that
16 construction period some time when we said, the late
17 1970's, that there was a bias given to the inspectors to
18 write citations against Criterion 5, and I think that
19 has to be considered also, plus the fact that -- I can't
20 recall exactly what period of time these 36 violations
21 were spread, but you must take into account the
22 timeliness or the time involved in the number of
23 violations, how many do we identify per unit time where
24 we don't go back.

25 We would not consider it a programmatic

1 problem if we had two violations in 1973 and a few more
2 of the same type of violation, Criterion 5 violations,
3 in 1978; that it would be very difficult to link those,
4 to consider that a programmatic problem.

5 A (WITNESS HIGGINS) Mr. Lanpher, just to add a
6 little bit more on the review we did in preparation for
7 this testimony, we did go back and look at all the
8 violations over the time frame from when construction
9 permit was issued until June, when we did this. Those
10 of us sponsoring the testimony did it. We also went
11 over those with regional management, and regional
12 management has been involved, as some of us have, with
13 other facilities over this time frame, and both
14 construction and operation.

15 And it was management's view that the number
16 and the type of violations here were not out of the
17 ordinary, did not indicate that there were problems in
18 particular areas or overall problems, and it was the
19 type of thing that we expected to see. Although we're
20 not happy to see any violation, it was certainly not
21 particularly out of the ordinary and we found that in
22 the individual cases proper corrective actions were in
23 general taken and that the overall picture was one that
24 didn't give us a problem or cause for concern, alarm, or
25 additional investigation, as you indicated.

1 Q Mr. Higgins, you referenced a number of
2 violations sort of as an absolute number. Does I&E have
3 any criterion or yardstick on what an acceptable number
4 of violations is?

5 A (WITNESS HIGGINS) Well, I mentioned the
6 number of violations, but I didn't really mean it as an
7 absolute number. We don't -- we like to stay away from
8 what we call informally "bean-counting" in the NFC, and
9 we prefer to look at the type of the items, the severity
10 of it, and the particular instance involved, as opposed
11 to just counting numbers.

12 Q Well, I think in your testimony yesterday you
13 referred to an August 25 meeting this year and that one
14 of the subjects discussed at that meeting -- I don't
15 have the transcript reference; correct me if I'm wrong
16 -- was I&E's concern over the number of violations; is
17 that right?

18 A (WITNESS HIGGINS) Yes. There were more
19 violations being issued in 1982 than previously, and we
20 thought that was indicative perhaps of an upward trend
21 and that gave us concern.

22 Q Do you know how many violations have been
23 written in 1982 thus far?

24 A (WITNESS HIGGINS) 16.

25 Q That is considerably above the average number

1 of violations that have been written for LILCO over the
2 course of its construction permit, isn't it?

3 A (WITNESS HIGGINS) It is more.

4 Q Are you familiar with Suffolk County Exhibit
5 72 for identification, which is entitled "NFC
6 Nonconformances," and I believe it was prepared by Mr.
7 Gerecke? And let me provide you with a copy.

8 A (WITNESS HIGGINS) No, we are not familiar
9 with that.

10 Q You have never seen this before?

11 A (WITNESS HIGGINS) Let me take a look at it.

12 (Counsel hands document to the witnesses.)

13 A (WITNESS HIGGINS) None of us have seen that.

14 Q Mr. Higgins or any member of the panel, for
15 the time period 1975 through 1981 this exhibit states
16 that the average number of violations at Shoreham during
17 that time period, '75 through '81, was 7.3 per year.
18 Does that sound approximately correct?

19 A (WITNESS HIGGINS) I have no reason to doubt
20 that number.

21 A (WITNESS GALLO) That was at Shoreham?

22 Q That was at Shoreham, yes, Mr. Gallo.

23 And then, if that is an accurate number,
24 according to this exhibit the number of violations
25 written up thus far in 1982 is more than double that

1 average, correct?

2 A (WITNESS HIGGINS) Yes. There might be a
3 number of factors that would cause the number of
4 violations to increase. One would be the amount of
5 activity on the site; the number of different activities
6 available for a mistake being made; also the fact that
7 there were more NRC inspections, which would give us
8 more opportunity to find a mistake; and also perhaps the
9 type of activities being conducted.

10 All could have an effect on it, and whatever
11 was causing it, it gave us concern and that is why we
12 held the meeting.

13 Q Well, Mr. Higgins, wouldn't you expect over
14 the course of time that the number of violations would
15 decrease as the Licensee learns what I&E is looking for
16 in terms of control of activities affecting quality?

17 (Panel of witnesses conferring.)

18 A (WITNESS GALLO) Generically speaking, in my
19 experience in fact the opposite happens. About one year
20 to two years before operating license there are a number
21 of new activities that start to occur. Preoperational
22 testing is the major one, obviously. There are also
23 additional inspections that occur at the site, and it is
24 my experience that the number of violations in that last
25 year goes up fairly substantially at a reactor site.

1 And I must point out again that we have tried
2 in various ways and means to put numbers on and make an
3 agreement between numbers and problems at sites, and the
4 number of violations per man-hour, violations per
5 inspection, violations in various other ways, and we
6 have found them all to be virtually meaningless.

7 Q Well, Mr. Higgins, you indicated that you had
8 this concern around August 25. Have you determined what
9 the cause is or causes were or have been for the
10 increased number of violations written up this year?

11 A (WITNESS HIGGINS) We did not determine a
12 specific cause. We did feel that, whatever the cause,
13 that additional management and quality assurance
14 attention to the issues and to the problems could
15 certainly help the situation. And apparently that has
16 been the case since August.

17 JUDGE CARPENTER: Mr. Higgins, in reviewing
18 these violations in preparing your testimony, did you
19 look at the number of violations per inspection? A few
20 minutes ago you indicated that perhaps there were more
21 inspections this year, and I was curious to look at it
22 from a different point of view, of violations per
23 inspection.

24 WITNESS HIGGINS: Specifically for our
25 testimony, I don't believe we did. As Mr. Gallo

1 mentioned, there have been efforts on again, off again,
2 within the region and within the NRC to try to do that
3 type of thing, to correlate violations per inspection or
4 inspection man-hours and this type of thing. And we
5 have always found that it is not productive and does not
6 help you in anything you're trying to do.

7 JUDGE CARPENTER: Thank you.

8 WITNESS GALLO: Judge Carpenter, I was going
9 to add that in 1981 -- we have the file here. The last
10 report numbered in 1981 was number 23, and inspection
11 reports issued so far in '82 is up to 29. And I believe
12 I checked the docket file in Region I the other day and
13 there are inspection report numbers already issued
14 through number 36.

15 So there are apparently seven more inspection
16 reports in process right now.

17 JUDGE CARPENTER: Mr. Gallo, the numbers went
18 by me pretty fast. Would you compare '81 with '82 again
19 for me, please?

20 WITNESS GALLO: Yes, sir. In '81 there were
21 23 inspection reports issued for that calendar year. In
22 1982, the last report that was issued is 82-29 and, as I
23 said, in the docket file we issue numbers when the
24 inspectors are ready to do the inspection, and that the
25 last number that has been taken is number 36.

1 JUDGE CARPENTER: Thank you.

2 WITNESS GALLO: So there will be at least 36
3 this year.

4 BY MR. LANPHER: (Resuming)

5 Q Those 36 will include items like the OQA
6 review which is going on at this time; is that correct?

7 A (WITNESS GALLO) Yes, that is correct.

8 Q That included the emergency preparedness
9 appraisal, correct?

10 A (WITNESS GALLO) Yes. I believe that is a
11 1982 inspection report.

12 JUDGE BRENNER: Mr. Lanpher, we can break at
13 this time if it is acceptable.

14 MR. LANPHER: That will be all right. I'm not
15 going to finish this section in five minutes, probably.
16 But if you want to go about ten minutes, I can probably
17 finish up to section 7.

18 JUDGE BRENNER: Let's break now, because we're
19 going to stop at noon. So we might as well even it out
20 a little bit. So we will come back at 10:45.

21 (Whereupon, at 10:35 a.m., the hearing in the
22 above-entitled matter was recessed, to reconvene at
23 10:45 a.m. the same day.)

24

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1 JUDGE BRENNER: All right. We are prepared to
2 continue and pick a convenient point, not later than
3 12:00 noon, to stop.

4 MR. LANPHER: Members of the Board, you'll
5 probably note that I jumped back to page 4, item C, and
6 at the top of page 5, and I think I've covered that
7 sufficiently for my purposes. And before continuing
8 where I started this morning on page 13 --

9 JUDGE BRENNER: I guess, to answer Mr.
10 Bordenick's question of the other day, when you said
11 "skipped" as to that item, you did not mean forever?

12 MR. LANPHER: As to that item, I guess. I
13 don't know, is it helpful for me to try to orient you?

14 JUDGE BRENNER: Yes, it is, very much.

15 MR. LANPHER: Well, I don't mean to be taking
16 the time needlessly. I think I have covered on page 16,
17 item C, which I sort of jumped ahead to, given the
18 answers. And before going back to page 13 I'm going to
19 go to page 32 and pick up item 12 there.

20 BY MR. LANPHER: (Resuming)

21 Q Gentlemen, will you turn to I&E report 82-15
22 again, Suffolk County Exhibit 101, page 8, please. And
23 it is the last paragraph on that page, which states:
24 "The inspector discussed the area of incomplete circular
25 actions with the Licensee management personnel. The

1 Licensee stated that an improved effort would be made to
2 ensure the concerns identified in bulletins and
3 circulars were fully addressed."

4 Now, Mr. Higgins or any member of the panel,
5 was there a problem concerning the Licensee response to
6 bulletins and circulars?

7 MR. ELLIS: Judge Brenner, it may be a
8 momentary lapse, but somehow or another I don't think
9 this is relevant to their prefiled testimony. I think
10 it is outside the scope of cross. I have not heard the
11 subject of circulars, responses to bulletins or
12 circulars.

13 JUDGE BRENNER: Give me a second to orient
14 myself to the paragraph on page 8.

15 (Pause.)

16 JUDGE BRENNER: Well, I think I see the
17 point. Mr. Lanpher, why don't you tell us why you think
18 it is relevant.

19 MR. LANPHER: Well, Judge Brenner, the
20 bulletins and circulars raise or often raise safety
21 issues which need to be addressed and need to be
22 addressed in a prompt manner. And if there was a
23 problem in the way safety matters were being addressed
24 by the Licensee, I think that is pertinent to their
25 overall quality assurance program.

1 And this statement on page 8 of this, as well
2 as statements in I&E report 82-25, which we may get into
3 -- that I&E report is specifically referenced in the
4 supplemental testimony by these witnesses -- I think
5 pulls this clearly into the scope of this proceeding.

6 JUDGE BRENNER: I think it is pertinent and
7 not collateral now, certainly at this preliminary
8 point. It, like any other line of questioning, could
9 become too collateral, and it is in this difficult area
10 of QA/QC. That is, we want to hear as to how the
11 process is working or not working in the context of the
12 contentions.

13 We don't want to get too collateral in these
14 contentions into the direct safety items involved, for
15 example in this case the pump impellers. But the
16 responsiveness to the circulars could well be
17 pertinent. I'm not prepared to preclude it at this
18 point, so we will allow it.

19 MR. ELLIS: I wasn't sure whether -- you said,
20 unless you hear more -- whether that was unless you
21 heard more from me. Was that what you meant?

22 JUDGE BRENNER: No, I'm sorry, and I was
23 ambiguous. I meant from the witnesses. That is, there
24 could be a ready explanation as to why everyone did it,
25 and this is very hypothetical. There could be a ready

1 explanation as to why everyone or a lot of utilities did
2 it the way LILCO did because of a particular way the
3 circular was written, and maybe I&E meant something but
4 didn't quite say it that clearly, and that type of
5 thing.

6 Once you determine that, there is no point in
7 pursuing it very far because it's not going to hold any
8 great insights to LILCO's QA program. But on the other
9 hand, if there was a clear indication or any reasonable
10 utility should have seen the connection and be
11 stimulated to do certain things that weren't done, then
12 it does become pertinent.

13 MR. ELLIS: Yes, sir, I understand. But the
14 reason I raised it is the circulars that were mentioned
15 there were not circulars that had anything to do with
16 any subject we had talked about, and I considered it my
17 duty to try to maintain it within some bounds.

18 JUDGE BRENNER: Well, let's see where it
19 goes. That could become a problem, but let's see where
20 it goes.

21 BY MR. LANPHER: (Resuming)

22 Q Mr. Higgins or any member of the panel, what
23 was meant by this statement on page 8 of I&E report
24 82-15?

25 A (WITNESS GALLO) Before Mr. Higgins answers

1 specifically, let me make a generic comment that, for
2 the Board's and everybody else's benefit, that bulletins
3 are normally sent out with requests for response from
4 the recipients of the bulletin. In some cases that is
5 limited to just a particular class of recipients.
6 Boiling water reactors may have to respond; pressurized
7 water reactors may not have to respond.

8 Circulars have been written by Inspection &
9 Enforcement, and to the best of my knowledge have never
10 required a response. And the circular is a document
11 that goes to the utility, and we do inspect circulars
12 and do close out bulletins and circulars, any that apply
13 to that facility.

14 A (WITNESS HIGGINS) The specific paragraph in
15 the inspection report, I was referring to the review
16 that I performed on circulars at the facility to
17 determine independently whether or not all of the
18 actions and all of the concerns expressed in the
19 circular were adequately addressed by the Licensee.

20 The way the Licensee internally responds to
21 circulars is that they have various review processes on
22 site that the circulars go through. They determine
23 whether it applies to the facility first. If it
24 doesn't, they document why it doesn't. If it does
25 apply, they make a determination as to what actions have

1 to be taken at the facility to address the concern of
2 the circular.

3 As Mr. Gallo mentioned, these circulars are
4 not regulatory requirements. A circular -- the utility
5 is also not required to respond in writing to the NRC on
6 a circular, but they are areas where problems have come
7 up at other plants and the NRC feels that it is
8 worthwhile to send the information to other facilities
9 so that they can look at that and make a determination
10 if that information applies.

11 The Licensee therefore has established systems
12 on site to review the circulars to make that
13 determination. When the Licensee completes his review
14 on the circular, then the Region I personnel take a look
15 at the circular and see if the Licensee has adequately
16 addressed it.

17 And in every cases we found that, for one
18 reason or another -- and there really is not a common
19 thread running through here that I have found as to why
20 they were not completely resolved to my satisfaction or
21 to the region's satisfaction. It was a number of
22 instances.

23 In some cases the information eventually
24 turned up to be there, but on the initial review wasn't
25 readily available. In other cases, there was an

1 engineering judgment made that we questioned. We felt
2 their review should have gone further. In other cases
3 there were procedures that should have been revised, but
4 at the time of the bulletin and circular review they
5 weren't revised yet. The Licensee stated in these cases
6 that it was slated for a review and revision later.

7 A number of things. In any event, the net
8 result was that it has been very difficult for us, the
9 region personnel, to do what we call close out the
10 circular, namely document in our inspection report that
11 the Licensee's review was completed and was adequate.
12 And therefore we did discuss it with the management
13 personnel and asked them to ensure that the circulars
14 were being completely closed out and all documentation
15 was available at the time that they inform us that it is
16 ready for closure.

17 And by that I mean, I have established sort of
18 informally on site a mechanism where the Licensee, for
19 inspection items that are open -- violations, bulletins
20 and circulars, this type of thing -- where the Licensee,
21 when they feel they have taken all the actions that they
22 need to take, they come to me and tell me, we feel we
23 have addressed this item and it is ready to take a look
24 at it and close it out. And that saves me from just
25 picking items at random and looking and seeing where

1 they are before they're really ready.

2 And what we asked them to do is to take
3 greater efforts to ensure that the circular was in fact
4 completely closed out and all actions were taken and all
5 procedures revised as necessary when the circular was
6 presented, so to speak, to the Region I personnel for
7 review and closure.

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1 Q Mr. Higgins, then it would be fair to state
2 that the concern you were expressing was that the
3 licensee was representing that a circular or bulletin
4 was ready for I&E closeout. And when you repeated you
5 found, in fact, in your judgment that it was not ready?

6 (Panel of witnesses conferring.)

7 A (WITNESS HIGGINS) Basically, I felt that when
8 it was presented to me, as I stated, this was basically
9 in a formal mechanism that had been set up between the
10 utility and myself that I asked them to let me know
11 that. And part of the problem here was some
12 coordination problems on the site in determining all of
13 the groups that were responsible, that each group had
14 completed its actions on the circular.

15 A circular tends to cut across organizational
16 boundaries on the site in that engineering may have some
17 responsibility, there may be responsibilities for
18 start-up testing and there may be responsibilities for
19 the plant operating staff to revise procedures, and
20 there may be responsibility for quality assurance to
21 revise procedures or take actions for inspection. This
22 type of thing.

23 As I said, there was not a common thread
24 really running through the circulars that I was unable
25 to close. It was a lot of things that were contributing

1 to the problem, some of which actions were not being
2 done, some of which actions were scheduled to be done
3 but really had not been done yet. And the personnel
4 that were letting me know that the circulars were ready
5 weren't aware that there were still actions scheduled to
6 be done.

7 Q What role does the LILCO Quality Assurance
8 Program, either field quality assurance or the operating
9 QA program, play in the review and closeout of circulars
10 and bulletins?

11 A (WITNESS HIGGINS) To my knowledge, it is an
12 audit role.

13 Q And were there any instances in your review,
14 or have there been any instances in your review where
15 that QA audit role has not been performed?

16 A (WITNESS HIGGINS) I have not run into problems
17 in that area. As I said, I would expect that QA would
18 be performing an audit role over this area, as they
19 would in any other area. I have -- there are not
20 particular -- I guess that's all I have on that.

21 Q Well, Mr. Higgins, if QA is performing an
22 audit role, wouldn't you expect that they would insure
23 that the closeouts were, in fact, complete when they are
24 presented to you for review?

25 (Panel of witnesses conferring.)

1 A (WITNESS HIGGINS) I did expect that the
2 bulletins and circulars would be complete when presented
3 to me, and that is why I discussed it with management
4 and wrote the paragraph in the inspection report.

5 Q Well, my question was a little different than
6 that, Mr. Higgins. It was whether you would have
7 expected the LILCO quality assurance organization, in
8 performing its audit function, to insure that the
9 packages -- and I use packages generally -- were
10 complete when presented to you.

11 (Panel of witnesses conferring.)

12 A (WITNESS HIGGINS) In general, I again would
13 state that I expected them to be complete; I expected
14 management to insure that they were complete. I would
15 expect for QA to insure that they were complete; whoever
16 was involved with it when they said they are complete I
17 would expect that they would be complete.

18 Now, there are a number of people that are
19 responsible for insuring that the person who does the
20 actual work, the management that reviews it, the quality
21 assurance that provides the overview audit function,
22 whatever, I would expect that they would be complete.
23 In fact, I found that some of them weren't. Not all of
24 them. Some of them were complete on the first shot and
25 I was able to close out. Some were not, and we

1 expressed a concern that they should receive a better
2 review.

3 In some cases, it was not really a case that
4 the review was inadequate; it was a case of not all of
5 the documentation being available for my review. But as
6 I said, there were all kinds and it is difficult to pin
7 it down and say this is the reason, because it was quite
8 a few, more than one reason.

9 MR. LANPHER: Judge Brenner, I'm going to go
10 back to page 13 on my cross plan, unless the Board has
11 anything on this.

12 JUDGE MORRIS: Mr. Lanpher, just let me follow
13 up on that. Mr. Higgins, do you know whether or not OQA
14 reviews each circular and the action on each circular in
15 its audit role?

16 WITNESS HIGGINS: I would have to check that,
17 Judge. They have a form that is used for routing and
18 assignment of responsibility, and I don't recall whether
19 or not OQA is on that form. There are a number of
20 people that have to review and sign the form, and I
21 don't recall at this moment whether or not OQA is on
22 that form.

23 JUDGE MORRIS: Do you know whether or not OQA
24 has made a special study of LILCO's treatment of
25 circulars and bulletins?

1 WITNESS HIGGINS: I don't recall personally a
2 special study of OQA. I would have to go back to their
3 audit records to see whether or not and what time they
4 would have done audits on it. I would call an audit a
5 special study and I am not sure exactly when and if
6 those were done. I do know that Field Quality Assurance
7 has been involved them, to a large extent because it has
8 been primarily through the Field Quality Assurance group
9 that these bulletins and circulars have been funneled,
10 so to speak, to me.

11 JUDGE MORRIS: Does FQA review each one? Are
12 they on the concurrence chain or distribution list?

13 WITNESS HIGGINS: FQA is not officially on the
14 concurrence chain, or on the sign-off sheet for them.
15 They have been involved with each one because they have
16 been the ones that have been getting the packages to me.

17 JUDGE MORRIS: Have they made any findings
18 about the LILCO performance observations or whatever?

19 WITNESS HIGGINS: I haven't seen any, but I
20 know that in the process of getting the packages
21 together, that they have bounced a lot back for
22 additional information.

23 JUDGE MORRIS: Thank you.

24 JUDGE CARPENTER: Mr. Higgins, did I
25 understand you to just say that Field QA or Field QC

1 funneled some of the circulars to you?

2 WITNESS HIGGINS: Field Quality Assurance,
3 Judge. The informal mechanism that I discussed that had
4 been set up onsite to get this information to me when it
5 was ready for closure is done by Field Quality Assurance.

6 JUDGE CARPENTER: I would like to ask, do you
7 get all circulars and all bulletins routinely?

8 WITNESS HIGGINS: The resident inspector's
9 office at each site in the country gets copies of all
10 bulletins and circulars, yes.

11 JUDGE CARPENTER: That is what was confusing
12 me. I was questioning the importance of your getting
13 it, if you already had it.

14 WITNESS HIGGINS: What they were funneling was
15 the LILCO response to that circular.

16 BY MR. LANPHER (Resuming):

17 Q Gentlemen, I would like to go back to the
18 general area that we were talking about first thing this
19 morning, the question of citing a particular set of
20 facts against more than one Appendix B criterion. Would
21 it be fair to state that it is the staff's position that
22 under some circumstances it is proper to cite the same
23 facts against more than one Appendix B criterion, but
24 that, even if you are citing against more than one
25 criterion, it counts as a single violation?

1 MR. ELLIS: Objection. Asked and answered.

2 MR. BORDENICK: I would join with that. Mr.
3 Ellis beat me to the punch. Unless I missed something,
4 it sounds like what we went over earliee.

5 JUDGE BRENNER: He asked it a little
6 differently. Let me hear the question again. I believe
7 it is a different question, but I think one could infer
8 the answer from previous questions and answers, but that
9 is different than having the answer directly there.
10 Could I have it read back, please?

11 MR. LANPHER: I can repeat it.

12 WITNESS HIGGINS: Before the question is asked
13 again, as asked it really was not clear. If we could
14 get a little more definition as to what he was looking
15 for.

16 JUDGE BRENNER: Let him ask it as close as he
17 can again so we can deal with the objection, and then if
18 you still don't understand it, you can tell him that,
19 too.

20 BY MR. LANPHER (Resuming):

21 Q Gentlemen, is it fair to state that the staff
22 position is under some circumstances it is proper to
23 cite the same facts against more than one Appendix B
24 criterion, but that when you do that you count it as a
25 single violation?

1 JUDGE BRENNER: That, incidentally, confirms
2 my memory that it is a different question, so the
3 objection is overruled.

4 WITNESS HIGGINS: If I could get a
5 clarification on the question. Are you asking is it
6 possible, given the same facts, to cite it one case
7 against one criterion, or against another criterion, and
8 that there is a choice and it could be cited against two
9 criteria but we would only pick one. Or are you saying
10 write two criteria and then the facts get cited against
11 both criteria?

12 JUDGE BRENNER: Let me try, Mr. Higgins,
13 because the way you postulated it, it indeed has been
14 asked and answered at least twice.

15 Mr. Lanpher is asking you to assume the
16 situation where, in fact, you made the choice to cite
17 the same occurrence against two criteria. His question
18 is do you count that as two separate violations or as
19 one violation.

20 (Panel of witnesses conferring.)

21 WITNESS HIGGINS: I believe that we have
22 stated that you might have violations or citations where
23 you have more than one criteria cited. It is a very
24 rare instance, and the only instance for Shoreham that
25 we were able to come upon in our brief review, since

1 this was brought up yesterday, that was an instance
2 where we had four instances underneath one violation.
3 And that was the reason that there were more than two
4 criteria cited.

5 BY MR. LANPHER (Resuming):

6 Q Is that I&E Report 81-22, Mr. Higgins?

7 A (WITNESS HIGGINS) Yes, it was. And in fact,
8 that one, one of the sub-items we felt went against one
9 of the criteria, and some of the other sub-items went
10 against the other criteria, and that was the reason that
11 we put the two criteria at the top on that one. We felt
12 that they were all very closely-related items, and that
13 was why we did group them in one violation. We didn't
14 feel in this instance that it merited two violations,
15 and we would not count it as two violations, but that is
16 why we wrote it up that way.

17 A (WITNESS GALLO) Mr. Lanpher, I would add for
18 SALP purposes we counted it as one violation against
19 criterion 5 in 81-22.

20 Q Mr. Gallo, the one in 81-22, that was the one
21 you were personally involved in that I think you
22 referenced very early this morning?

23 A (WITNESS GALLO) That is correct.

24 Q Gentlemen, do you have before you I&E Report
25 74-02? I believe I passed this out to everyone earlier

1 this morning. I have not marked it yet for
2 identification. If it could be marked, please, as
3 Suffolk County Exhibit 103 for identification. That is
4 I&E Report 74-02, and I apologize, the date of the cover
5 letter is not clear on my copy, but it refers to an
6 inspection during the period February 26 through March
7 1, 1974.

8 MR. BORDENICK: Judge Brenner, perhaps the
9 panel can supply the date for it.

10 JUDGE BRENNER: We can make out that it is
11 March something, 1974.

12 WITNESS GALLO: The date is unclear on ours.

13 JUDGE BRENNER: But it is some date in March
14 1974?

15 WITNESS GALLO: That is the way it appears on
16 ours, yes.

17 (The document referred to
18 was marked Suffolk County
19 Exhibit No. 103 for
20 identification.)

21 BY MR. LANPHER (Resuming):

22 Q If you could look at Enclosure 1, which is
23 entitled, "Description of Violations," and Violation 1,
24 am I correct that the first violation that was cited was
25 an instance where there were no records of in-process

1 inspections to verify that cadweld operators were
2 adhering to procedural requirements?

3 A (WITNESS NARROW) That is correct.

4 Q And this was cited against criterion 5 and
5 criterion 17, correct?

6 A (WITNESS NARROW) Yes, that is correct.

7 Q But it is counted for I&E purposes in terms of
8 how many violations occurred as a single violation?

9 A (WITNESS NARROW) This is counted as a single
10 violation, yes.

11 Q If you look at the bottom of that page, would
12 you confirm that in violation 3 on that page, the facts
13 involved that records were not being kept for
14 non-conformance and disposition reports which had
15 visually identified non-conforming cadwelds?

16 A (WITNESS NARROW) That is correct.

17 Q And this was cited as contrary to criterion 15
18 and 16; is that correct?

19 A (WITNESS NARROW) That is correct.

20 Q And again, a single violation?

21 A (WITNESS NARROW) That is correct, I believe --

22 MR. ELLIS: Judge Brenner, the copy that I
23 have is illegible at the bottom.

24 JUDGE BRENNER: I have the same problem.

25 MR. LANPHER: The bottom of the first page of

1 Enclosure 1?

2 JUDGE BRENNER: Yes. I think I can get it all
3 except the last paragraph.

4 MR. LANPHER: Let me read the last paragraph
5 and I will attempt later to get legible copies. I
6 apologize. The entire last paragraph states as follows,
7 "Contrary to the above, visually rejected B series
8 cadweld splices are not being documented in
9 non-conformance and disposition reports to identify the
10 cause of the deficiencies, the corrective action taken
11 or to report those defects to the appropriate level of
12 management." And for the record, I believe details
13 concerning this violation are on page 8 of the report.

14 BY MR. LANPHER (Resuming):

15 Q Mr. Narrow, did you earlier complete your
16 answer, sir?

17 A (WITNESS NARROW) I don't believe I did. I
18 said I thought that it was, but it is cited as one
19 violation.

20 Q When you say it is cited, the facts under
21 paragraph 3?

22 A (WITNESS NARROW) That is correct.

23 Q Now, in this I&E report, Mr. Narrow, or any
24 member of the panel, three violations are cited, each of
25 which relates to cadwelding activities; correct?

1 A (WITNESS NARROW) That is correct.

2 Q Now, why did you cite three violations as
3 opposed to a single violation, since cadwelding was the
4 subject matter of all of your violation notices?

5 (Panel of witnesses conferring.)

6 A (WITNESS NARROW) The reason it was cited as
7 three violations -- I believe this was long before I was
8 involved in this. There were several problems which the
9 inspector had with the cadwelding program. In the first
10 case, they had no records of inspection, in process
11 inspection, of cadwelding. One of them was a failure to
12 protect a type B cadweld. And the third one was that
13 they did not record or report visually rejected cadwelds
14 in their non-conformance and disposition reports.

15 In the inspector's opinion -- and I am
16 presuming here -- he felt that these were separate and
17 distinct violations of the requirements of having an
18 adequate QA and QC cadwelding program. And that, I
19 presume, was the reason he cited it as three
20 violations. If they had been associated -- in fact, I
21 think in some cases he cited several areas where he
22 found a problem with it, and nevertheless, he included
23 that as a single violation.

24 Q Well, Mr. Narrow, I'm trying to get a feel for
25 this area. Is it fair to state that where the

1 activities are related but you see a distinct problem,
2 that you will exercise judgment and may cite them as
3 separate violations?

4 A (WITNESS NARROW) Would you repeat that, please?

5 MR. LANPHER: Why don't we also mark for
6 identification I&E Report 81-22, as Suffolk County
7 Exhibit 104, and the cover letter is dated January 14,
8 1982, and it refers to an inspection between November 23
9 and December 31, 1981.

10 (The document referred to
11 was marked Suffolk County
12 Exhibit No. 104 for
13 identification.)

14 JUDGE BRENNER: Why don't you ask your
15 question again, though, because depending upon the
16 answer, you might be able to cut through a lot of these
17 details on this page and the next page or so of your
18 cross plan. If you get the answers you expect, you
19 won't need all of the examples, I presume. Is that fair
20 to say?

21 MR. LANPHER: You may be right.

22 MR. ELLIS: Judge, I think that I have an
23 objection with respect to the relevancy substantively of
24 cadweld items. If the purpose of it is for something
25 else, then that ought to be clear so that we aren't

1 importing a new subject of cadwelds into the proceeding.

2 JUDGE BRENNER: No. You see, they don't like
3 the way Mr. Hubbard counts beans, and the probing is to
4 try to understand what I&E does in terms of the way they
5 cite and, in turn, classify violations. And in turn,
6 what conclusions, if any, are drawn from the items and
7 how they look at items that may be related or unrelated
8 in their view. And it is pertinent to that framework.

9 I do think a lot of the detailed questions
10 were necessary to help the record, even though these may
11 be second nature to the witnesses. They are not to the
12 record, and in fact, and they are not to some of us
13 here. But now that we have got a feel for it, you might
14 be able to cut more directly to some of the questions
15 that you're going to try to get to.

16 WITNESS NARROW: Excuse me, may I get my copy
17 or our copy of the inspection report, which is clearer
18 than this? My eyes are not that good.

19 MR. LANPHER: I'm sorry, Mr. Narrow.

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

21 (Discussion off the record.)

22 JUDGE BRENNER: Okay, we can go back on the
23 record. You had a pending question. My suggestion was,
24 Mr. Lanpher, that you ask that question or others like
25 it that are more ultimate type questions. And if the

1 answers vary, you can back up into the details.

2 BY MR. LANPHER (Resuming):

3 Q Mr. Narrow, let me try to be more specific
4 about my earlier question, and that is: Is it fair to
5 state that where the same activity may be involved in an
6 inspection; for instance, in 74-02 it was cadwelding,
7 but distinct problems are identified by I&E, -- distinct
8 or different problems -- that those different or
9 distinct problems will be written up as separate
10 violations?

11 A (WITNESS NARROW) No, I wouldn't really agree
12 with that. It would be depending on the judgment of the
13 inspector as to what he thought he had seen and what was
14 affected by it.

15 Now, if he thought it affected a different
16 area of the program -- and I presume this is what the
17 inspector thought at this place -- he would, even though
18 it all applied to cadwelding -- in one case here it
19 affected the fact that they were not keeping records of
20 in-process inspection -- the second citation was against
21 the fact that a certain type of cadweld was not
22 protected against the weather. And in the third case,
23 they were not documenting the same type of cadweld.

24 But in this case, the splice of this cadweld,
25 if it had been rejected by the QC inspector, they were

1 not documenting this on an NED report, and there was no
2 requirement apparently that they do so. And he felt
3 this was three different areas of their overall QA and
4 QC program with respect to cadwelding. And he found
5 deficiencies in various areas.

6 Now, if he would have found that the
7 deficiencies were all in the way they kept records with
8 regard to cadwelds or something else which was
9 associated, -- and again, as I said earlier, this would
10 be a matter of the inspector's individual judgment and
11 would be reviewed with the inspector's supervisor to
12 establish that he was making a correct citation. So I
13 can't give you a hard and fast rule on whether you would
14 cite separately.

15 The only point I can really make is that even
16 though it applies to the same area of work, it need not
17 necessarily be cited as a single violation.

18 Q There is an element of judgment involved?

19 A (WITNESS NARROW) Yes, there is.

20 Q So reasonable people could differ in drawing
21 those judgments.

22 A (WITNESS NARROW) Well, I am sure reasonable
23 people can differ on a number of things; however, I
24 think to make a judgment in a case like that you should
25 be intimately familiar with the subject so that I

1 couldn't really make a judgment on this because I don't
2 know all of the details, even though I have read the
3 inspection reports.

4 The inspector who made that judgment initially
5 undoubtedly had a great deal of additional information
6 available to him which he probably reviewed in making the
7 judgment and which he probably discussed with his
8 supervisor before they made that judgment because of the
9 fact that they cited this three times in our letter to
10 the licensee. They were requested, in addition to the
11 normal requirements, that they provide a written
12 statement indicating the corrective steps they had taken
13 and the corrective steps they had taken to avoid further
14 violations, and also the date.

15 In addition to that, the letter requests that
16 they describe the actions taken or planned to be taken
17 to improve the effectiveness of the quality assurance
18 program. And therefore, I'm reasonably sure that before
19 this was established, these three separate violations,
20 it was thoroughly discussed with supervision and with
21 the office management.

22 JUDGE CARPENTER: Mr. Lanpher, if I may ask
23 one follow-up question. Earlier, Mr. Higgins testified
24 that he felt one of the main considerations was whether
25 or not a single remedial action was necessary. As I

1 read this example, it appears to me that one single
2 remedial action would have not been adequate, and in
3 fact, there were three separate actions needed to
4 resolve this situation.

5 WITNESS NARROW: That is correct, sir.

6 JUDGE CARPENTER: So I am seeing that clearly;
7 that that probably is one of the primary consideration?

8 WITNESS NARROW: Yes, I would assume that it
9 was one of the primary considerations in citing it three
10 separate times, and probably one of the considerations
11 in writing the licensee to request the additional facts
12 to improve the program.

13 JUDGE CARPENTER: Thank you.

14 BY MR. LANPHER (Resuming):

15 Q Mr. Narrow, do you think Judge Carpenter's
16 question was in the context, of course, of this I&E
17 report, or do you think it is generally a kind of
18 yardstick that can be used in looking at factual
19 situations? That is, if a single remedial action will
20 suffice to correct the problem, then it is a single
21 violation? Whereas, if multiple actions are required,
22 it may be more than one violation?

23 A (WITNESS NARROW) I think in each case it would
24 require individual evaluation. Obviously, the single
25 remedial action would be one of the items taken into

1 consideration in preparing the citation, but there would
2 be a number of other things which would be taken into
3 consideration in writing it.

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1 Q Gentlemen, let's turn to Attachment 2A of your
2 prefiled testimony, please.

3 I think this time you were right, Judge
4 Brenner.

5 JUDGE BRENNER: That is the first time, I
6 guess, in your view.

7 [Laughter.]

8 MR. LANPHER: I give credit where it's due.

9 [Laughter.]

10 BY MR. LANPHER: (Resuming)

11 Q Page 2 of that -- and for there record, this
12 is an excerpt from I&E Inspection 79-16, page 2 of
13 Attachment 2A -- are the summary descriptions of facts
14 supporting the violation. Do you have that, gentlemen?

15 A (WITNESS HIGGINS) Yes, we have that.

16 Q Now, am I correct in this instance that I&E
17 cited LILCO for a single violation?

18 A (WITNESS HIGGINS) Yes.

19 Q Now, looking at page 2 of Attachment 2A, the
20 first concern cited by LILCO was that periodic
21 inspections by personnel qualified in accordance with
22 ANSI N-45.2.6 would not be performed in order to ensure
23 control of items in storage; correct?

24 A (WITNESS GALLO) You said cited by LILCO or
25 cited by the NRC?

1 Q Cited by the NRC, I meant to say.

2 A (WITNESS GALLO) I thought you were referring
3 to a LILCO document.

4 Q Let me repeat the question so it is clear. Am
5 I correct that the first concern expressed or cited by
6 I&E was that as of October 31, 1979, periodic
7 inspections by qualified personnel, personnel qualified
8 in accordance with ANSI N-45.2.6, were not being
9 performed?

10 A (WITNESS HIGGINS) That is correct

11 Q So is it fair to say that the remedial action
12 which was necessary in this instance was to ensure that
13 the inspectors were qualified in accordance with that
14 ANSI standard?

15 A (WITNESS HIGGINS) This particular item in the
16 corrective action tool was a bit involved. It is not
17 quite that simple.

18 Q Well, was that one of the aspects?

19 A (WITNESS HIGGINS) What had actually happened
20 was that they were doing inspections by personnel
21 qualified to the ANSI standard. They were also doing
22 inspections by other personnel on a well-defined
23 periodic basis. Those who were doing the well-defined
24 periodic inspections were construction personnel and
25 were not QC inspectors and were not qualified per the

1 ANSI standard. The ANSI-standard-qualified people were
2 doing inspections but they were not done with a regular
3 periodicity.

4 So the concern here, and it was written up
5 that what they were not doing was the personnel that
6 were qualified were not doing the periodic inspections.
7 So it was a fine point, but the corrective action was to
8 establish the periodic inspections by those personnel
9 which were qualified and which had been doing
10 inspections before but not on a regular periodicity.

11 Q Mr. Higgins, you were the inspector in this
12 instance; correct?

13 A (WITNESS HIGGINS) Yes.

14 Q Now, I know this may be difficult, but in
15 asking these questions -- well, in providing that
16 answer, were you relying on information that you
17 obtained subsequent to writing up the notice of
18 violation: for instance, in LILCO's response to the
19 notice of violation? And that response, I think, is
20 Attachment 2C to the testimony.

21 [Panel of witnesses conferring.]

22 A (WITNESS HIGGINS) No, I had most of that
23 information prior to writing the violation itself.

24 Q Okay. Well, to the extent that it is possible
25 -- I know that this will be difficult -- I am trying to

1 inquire as to what the process was for citing only a
2 single violation here in this report and what
3 information you had at the time you wrote the report.
4 Okay?

5 A (WITNESS HIGGINS) Certainly. Most of the
6 information that I needed I had at the time I wrote the
7 report. The decision that was made in this instance to
8 cite it as a single violation was because all items
9 related to their storage program, their storage
10 maintenance program under ANSI N-45.2.2. They were all
11 very closely related. There were certainly within that
12 program different actions that had to be taken to
13 corrected the identified discrepancies.

14 It is certainly true that some violations are
15 more significant than others and more actions are going
16 to be required to correct some violations than others,
17 and this is a case where this is a violation which had a
18 little more involved with it. There were more actions
19 that had to be done. It involved more than just
20 individual discrepancies but it was still written as a
21 single violation because we felt that all of the
22 activities were closely related in the storage area.

23 Q Well, how is the question of the
24 qualifications of personnel performing inspections
25 closely related to whether -- which is Item 1 on page 2

1 of Attachment 2A -- how is that closely related to
2 whether the licensee had properly replaced caps, covers
3 and plugs which had been removed from Category 1
4 components?

5 A (WITNESS HIGGINS) Well, the caps, covers and
6 plugs is one aspect of storage, and that is one thing
7 that is inspected for during the storage inspections,
8 and the personnel that were doing the inspections for
9 that are certainly in my mind related to the things that
10 they are inspecting. Maybe the confusion is on Item 1
11 we are not talking about inspectors in general, we are
12 talking about inspectors of storage conditions only.

13 Q Well, I understand that, Mr. Higgins, but Item
14 1 goes to the qualifications of those inspectors;
15 correct?

16 A (WITNESS HIGGINS) As I explained in the more
17 detailed answer, it went hand in hand with qualification
18 and the periodicity because they did have qualified
19 inspectors and they did have other inspectors that were
20 doing the periodic inspections, but the problem that we
21 found with it was that they didn't have both. The
22 qualified inspectors were not doing the inspections on
23 some well-defined periodic basis.

24 Q Well, you would agree that multiple remedial
25 actions were required in order to resolve this notice of

1 violation?

2 A (WITNESS HIGGINS) Multiple remedial actions
3 all in the storage area were required, yes.

4 A (WITNESS GALLO) One of the important things
5 in this inspection, in this inspection period and on all
6 inspections, I guess, is generically speaking that the
7 level of the citation also can be adjusted up or down
8 based upon number of problems found in any particular
9 area, as in this case you will see on the first page of
10 Attachment 2A to the testimony, the notice of violation,
11 in the second paragraph it says this item is an
12 infraction. Under our enforcement policy at that time
13 we had three categories of noncompliances, and the first
14 category, the highest, was violation, the second
15 category was infraction, and the lower category was
16 deficiency. So this item was considered an infraction.
17 If any one of those things were cited, it may have been
18 a deficiency.

19 I would agree that you have to, as Mr. Narrow
20 has already said, that every inspection report, every
21 inspector and every supervisor have their own way of
22 doing business and there is no requirement or there is
23 nothing in the IE manual that prevents us from writing
24 an inspection report, and if a notice of violation has
25 separate violations or tells you you must write it as a

1 single violation with multiple instances, in every one
2 of the inspection reports that has ever probably been
3 written, it depends upon a combination of the inspector
4 and the supervisor, if the supervisor does not agree
5 that this was one violation with five instances of it,
6 and the inspector would rewrite it.

7 Q Mr. Gallo, would you agree that in this
8 instance it would not have been incorrect to have
9 written up more than one violation, that it was really a
10 matter of judgment?

11 A (WITNESS GALLO) Yes, in my judgment I would
12 write this up as a storage item.

13 Q A single violatoion?

14 A (WITNESS GALLO) Yes. If I was writing, if
15 there weren't all of those multiple parts, it could have
16 even been a deficiency, a lower category, or there might
17 have been one or two deficiencies.

18 Q But if any one of --

19 A (WITNESS GALLO) I'm speaking generically,
20 really. I'm not trying to speak to this because I
21 really don't have any background knowledge about this
22 item. I'm saying I could take it and write it many
23 different ways and every supervisor would approve it.
24 Maybe two different supervisors would approve it two
25 different ways.

1 Q So it is a matter of judgment here whether
2 this would be one violation or more than one?

3 A (WITNESS GALLO) Yes, and I agree with the
4 inspection report as written. That appears to be areas,
5 this specific case appears to be all related to storage
6 problems.

7 Q Would it also then be fair to state, Mr.
8 Gallo, one of the reasons that you have concern in what
9 you call bean counting, counting violations, is that a
10 single violation may have multiple parts?

11 A (WITNESS GALLO) As I said before, we have
12 tried that many different ways, and counting beans,
13 counting violations is extremely difficult and we found
14 it to be essentially meaningless.

15 MR. LANPHER: One moment, please.

16 [Pause.]

17 MR. LANPHER: Judge Brenner, that completes
18 the questions I intend to ask on pages 13 through the
19 middle of page 16.

20 BY MR. LANPHER: (Resuming)

21 Q Gentlemen, I would like to go back to one item
22 from yesterday. I think I can do it before lunch, and
23 this might be an efficient way to handle it.

24 Yesterday in connection with discussion of the
25 CAT inspection, I think we focused for some period of

1 time on page 11 of that inspection. I understood you to
2 state -- well, why don't you get that portion. I
3 understood you to state that one reason that no
4 violation was written up was that while there may have
5 been some nonconforming installations, no final QA/QC
6 inspections had taken place. Is that correct?

7 A (WITNESS HIGGINS) No.

8 Q That is not correct?

9 [Pause.]

10 Q In what way was that incorrect?

11 A (WITNESS HIGGINS) The way I heard it, I
12 didn't remember saying that.

13 Q I asked you -- and maybe Mr. Bordenick could
14 provide you a copy of yesterday's transcript, page
15 16,578, and I can read it into the record. Starting at
16 line 16 I asked this question, Mr. Higgins: "Would you
17 agree that if LILCO had not identified these deviations,
18 and I use that just generally, or these discrepancies
19 from the separation criteria, that the installation
20 contrary to those criteria violates Appendix B?"

21 And your answer was, "No, I don't because in
22 this case in general if the licensee makes an
23 installation and then at the completion of the
24 installation has a quality assurance, quality control
25 inspection scheduled and quality control inspection has

1 not yet taken place, and we go out and we take a look at
2 the installation and there is something wrong with it,
3 we will not write up that -- or we will not write that
4 up as a violation because the licensee's program has not
5 been completed yet. If the licensee is going to do a
6 quality control inspection on something, we don't hold
7 them basically responsible for it until it has been
8 accepted."

9 Do you stand by that testimony?

10 A (WITNESS HIGGINS) Yes.

11 Q You understood my question to be asking
12 something different?

13 A (WITNESS HIGGINS) Why don't you try to ask it
14 again?

15 Q Well, you stand by that testimony?

16 A (WITNESS HIGGINS) Yes, I do.

17 MR. LANPHER: Judge Brenner, I would like to
18 have marked for identification I&E Report 77-05.

19 JUDGE BRENNER: All right, why don't you
20 continue to identify it?

21 MR. LANPHER: The cover letter is dated April
22 7, 1977. It refers to an inspection conducted February
23 28 through March 3 1977.

24 (The document referred to
25 was marked Suffolk County

1 Exhibit No. 105 for
2 identification.)

3 BY MR. LANPHER: (Resuming)

4 Q I would like to direct your attention to the
5 notice of violation. Gentlemen, are you familiar with
6 this particular violation?

7 A (WITNESS HIGGINS) I would like a minute to
8 read it, please.

9 Q Sure.

10 [Pause.]

11 Gentlemen, am I correct that this was an
12 instance where field-routed safety-related cable did not
13 meet separation criteria SH1-159?

14 A (WITNESS NARROW) That is correct.

15 Q And this had previously been identified by
16 Stone & Webster in a deficiency correction order;
17 correct?

18 A (WITNESS NARROW) That is correct.

19 A (WITNESS HIGGINS) Mr. Lanpher, I'm not done
20 reading. Could I have another minute?

21 MR. LANPHER: For the Board and other persons'
22 information, I believe this is also discussed at page 8
23 of the details of this report.

24 [Pause.]

25 BY MR. LANPHER: (Resuming)

1 Q Am I correct that part of the basis for this
2 citation -- I believe, Mr. Narrow, you were the
3 inspector in this instance.

4 A (WITNESS NARROW) I was one of the inspectors.
5 I was not specifically the inspector who performed in
6 the electrical inspection.

7 Q Is it accurate that one of the concerns of I&E
8 was that the corrective actions instituted by the
9 licensee did not preclude repetition of installation of
10 cables which violated the separation criteria?

11 A (WITNESS NARROW) That is correct.

12 Q And during the course of the inspection, I&E
13 identified safety-related cable installations or
14 additional installations that did not meet that criteria?

15 A (WITNESS HIGGINS) That is correct.q(-WEST-)

16 Q Gentlemen, are you familiar with how this
17 violation or notice of violation was subsequently
18 resolved?

19 A (WITNESS HIGGINS) Mr. Lanpher, I am somewhat
20 familiar but not familiar with the details. I know that
21 this was an area where there was a tremendous amount of
22 technical discussion and resolution between our Office
23 of Nuclear Reactor Regulation and Region 1 and the
24 utility, and the utility in a number of cases associated
25 with this took exception to our findings in this area

1 and they felt that what they were doing was adequate,
2 that it was being handled from an engineering standpoint
3 and that there were perhaps some differences between the
4 way the region expected it to be handled and the way
5 they were handling it.

6 There were a number of extensive reviews that
7 the utility undertook to define what had to be done.
8 There were submittals made to our Office of Nuclear
9 Reactor Regulation. There were letters back and forth
10 between Region 1 and the utility, and we are not up on
11 all of that and we are really not prepared to answer
12 questions on it.

13 Q Well, Mr. Higgins, do you know whether LILCO
14 in response to this notice of violation argued or
15 suggested that this was really just a construction
16 deficiency and that the installation in question had not
17 been completed nor inspected by field quality control
18 and thus it shouldn't be cited as a violation?

19 A (WITNESS HIGGINS) We would like to check to
20 see if we have the response.

21 MR. LANPHER: Judge Brenner, I have got the
22 response and some additional documents, and maybe we
23 should break just a bit early for lunch. I didn't know
24 I was going to use this until I reviewed the transcript
25 this morning, and I do have two documents that I had not

1 previously identified for these individuals. They are
2 not long, but it will probably take them five minutes,
3 anyway, to look at them, and I don't mind having them
4 look at it over the lunch.

5 JUDGE BRENNER: Okay.

6 WITNESS HIGGINS: Judge Brenner, I would just
7 like to add that we do have some documents here, but
8 even if we have a chance to look at it over lunch, I
9 don't feel that we have sufficient documents to
10 understand the situation. There are many more documents
11 involved, both onsite and in the region and with NRR,
12 and I just don't feel that we are the proper people to
13 be answering these questions on electrical separation.

14 JUDGE BRENNER: That is an appropriate comment
15 because I was going to add, even had it not been
16 stimulated by your comment now, that the witnesses, in
17 an attempt, I think, to be as accommodating as they
18 could be, went farther with some of your questions
19 yesterday when we discussed the electrical cable
20 separation matters starting on page 11 of the CAT
21 inspection.

22 I understood why you asked the follow-up questions
23 and I am not assigning fault. It wasn't clear until
24 they went further that their lack of knowledge would
25 affect what you needed to know in the QA context. And

1 as of this moment, I don't know how that turned out, but
2 the witnesses, we would appreciate it if you would take
3 a look at what you have and see where it goes, but don't
4 be afraid to say "I don't know" as to a particular
5 question. There might be some questions that you can't
6 answer in connection or lack thereof to the situation
7 discussed in the CAT inspection, for example, even if
8 you don't know all of the details of what that
9 connection or lack thereof is.

10 WITNESS HIGGINS: We will take a look at what
11 we have.

12 JUDGE BRENNER: But don't be afraid to say you
13 don't know.

14 What, Mr. Lanpher?

15 MR. LANPHER: Well, never mind. Well, let me
16 say I think I have tried to carefully limit my
17 questions, even electrical separation, to the QA
18 aspects. That is what I am trying to probe.

19 JUDGE BRENNER: I know, but I think, as the
20 witnesses explained quite well yesterday, you hit an
21 area where the technical aspects and the QA aspects, in
22 their mind, were significantly intertwined, sufficiently
23 intertwined such that they had a difficulty even
24 explaining the QA aspects or the significance or lack
25 thereof without knowing the other matters.

1 So, as I said, I wasn't assigning fault. We
2 will see where it goes.

3 MR. LANPHER: I will pass out some documents
4 now and identify them after lunch.

5 JUDGE BRENNER: The problem, on the other
6 hand, Mr. Higgins, and why we are willing to let him
7 probe a little further is if we say, okay, we are going
8 to stop, then we have to decide whether the state of the
9 record is such that we need somebody else with less
10 information than we might like to have in order to make
11 that decision. And pursuing that a little further, even
12 if you get to the next step, sometimes you get the
13 somebody else in and they say, oh, you should have asked
14 Higgins that question but I will pick up from here.

15 WITNESS HIGGINS: We will take a look at what
16 is available and try to make some phone calls at lunch
17 also to see if we can get some things together.

18 JUDGE BRENNER: Well, don't go crazy over it.
19 Don't go beyond your expertise and knowledge as
20 refreshed by the documents.

21 JUDGE CARPENTER: Mr. Lanpher, were you
22 pursuing this specifically in the context, following the
23 train of logic that led up to this, where this was an
24 example where there had been QC or had not been final QC
25 and yet a violation was cited, or not?

1 MR. LANPHER: That is one of the contexts, yes.

2 JUDGE CARPENTER: I am trying to provide them
3 some insight when they look at these things.

4 MR. LANPHER: Do you want me to ask all of my
5 questions and then let them consider them over lunch?

6 JUDGE CARPENTER: Well, I just thought maybe a
7 little bit of guidance. They are obviously
8 uncomfortable with this.

9 JUDGE BRENNER: Why don't you give them a
10 little thumbnail over the break as to what you are
11 interested in if that is acceptable to you, and you
12 don't have to.

13 MR. LANPHER: All right.

14 JUDGE BRENNER: Okay, let's break until 1:30.

15 [Whereupon, at 12:00 p.m. the hearing was
16 recessed, to reconvene at 1:30 p.m. the same day.]

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1 AFTERNOON SESSION

2 (1:35 p.m.)

3 JUDGE BRENNER: All right. We are prepared to
4 continue the questioning at this time.

5 MR. LANPHER: Judge Brenner, I put up on your
6 shelf the documents which I provided to the parties
7 during the lunch break. I'm not sure that they're going
8 to need to be identified as exhibits, so let's wait on
9 that.

10 Whereupon,

11 ROBERT G. GALLO

12 JAMES HIGGINS

13 AND

14 LEWIS NARROW

15 resumed the stand and were further examined and
16 testified as follows:

17 CROSS EXAMINATION -- Continued

18 BY MR. LANPHER:

19 Q Mr. Higgins or Mr. Narrow, before lunch we
20 were talking about I&E report 77-05 in which a cable
21 separation violation was identified, and the violation
22 was against Criterion 16, I believe, for failure to take
23 adequate corrective action.

24 Now, am I correct, gentlemen, that LILCO
25 disputed calling this item an infraction and that one

1 basis for that dispute by LILCO was the fact that the
2 installation was not fully complete and had not been
3 inspected by field quality control?

4 A (WITNESS NARROW) That is correct.

5 Q And did I&E accept that explanation?

6 A (WITNESS NARROW) No. I&E did not accept that
7 explanation. The fact is in this case field quality
8 control performs in process inspection on a hundred
9 percent of cable pulling, and therefore, although they
10 had not perhaps completed their inspection, they had
11 inspected the cable pulling and should therefore have
12 prevented the nonconformance from occurring.

13 And I think I might add that this is another
14 case where it is very difficult to judge from the
15 writing that it is necessary to know a good deal of the
16 background in the case of a violation.

17 Q Well, Mr. Narrow, in a June 7, 1977 letter
18 relating to this violation from Region I to LILCO the
19 following statement is made: "Had adequate corretive
20 actions been taken following identification of the first
21 nonconformance, they have have provided for conforming
22 to all established separation criteria, and doing so
23 during construction rather than depending upon
24 identification of nonconforming conditions by field
25 quality control following completion of construction."

1 Do you agree with that statement?

2 A (WITNESS NARROW) Well, in the first place,
3 the citation was for the failure to take adequate
4 corrective action. Now, the statement as you read it is
5 in the letter. However, the statements they should have
6 provided for conforming with established separation
7 criteria and doing so during construction is based on
8 the fact that during construction, QC should have
9 inspected the cable pulling. And therefore, in this
10 case QC had had an opportunity to view the work being
11 done and should have redone it.

12 Q That is not what this sentence says, is it?
13 Is this an interpretation you're placing on it?

14 (Panel of witnesses conferring.)

15 A (WITNESS NARROW) We seem to have a problem.

16 A (WITNESS HIGGINS) Could you repeat the
17 question, please?

18 Q I heard your explanation, Mr. Narrow. When I
19 read this statement, I understood this to be a statement
20 by I&E to the effect that you should do the construction
21 right in the first place, comply with the separation
22 criteria and not depend on field quality control to find
23 nonconforming conditions.

24 A (WITNESS NARROW) In this case, sir, we agree
25 with that statement, and the reason we agree with that

1 statement is that during construction for cable pulling
2 LILCO requires that they have fulltime QC personnel
3 observing the cable pulling.

4 A (WITNESS HIGGINS) I would like to add to that
5 just a little bit. In this violation here we did not
6 cite them for having -- specifically for having
7 inadequate separation for those particular cables. What
8 we were more interested in was the failure to take
9 adequate corrective action to prevent that from
10 happening again, and we expected them to do whatever
11 they had to do in terms of changing construction
12 practices, adding QA/QC, whatever, to make sure that
13 their installation didn't install it that way.

14 So, yes, we felt -- we stick by the statement,
15 and we feel that it should have corrected it.

16 One other aspect of this is that sometimes in
17 terms of deciding when we would cite something before it
18 had been fully expected by QA or QC is, as Mr. Narrow
19 stated, the fact that when there is in process QC, then
20 we don't feel as restricted as we do in general from
21 citing something before the final QC inspection takes
22 place.

23 Q Well, concerning the problem identified by I&E
24 on page 11 of the CAT at the bottom of the page, the
25 separation of cables that did not meet the separation

1 criteria, was their in process QC involved, if you know?

2 A (WITNESS HIGGINS) I see we are back to the
3 CAT inspection again, and in reference to the discussion
4 we had just before the lunch break, I did go back and
5 try to read through the '77 inspection reports and
6 responses to the '79 inspection reports and the CAT
7 inspection and the associated documentation. And I did
8 make a call to our electrical inspector who is involved
9 with this. I was not able to get all of the information
10 that I would like to have gotten. I am not familiar
11 exactly as to whether or not there was in process QC.

12 In that case I was able to get a little more
13 information, Judge, in terms of the situation, and I
14 guess I could provide that now to clarify, if you like.

15 JUDGE BRENNER: I will leave it up to Mr.
16 Lanpher in the first instance because I am starting to
17 get worried as to losing the QA/QC focus.

18 MR. LANPHER: I don't for my purposes. I
19 don't want to cut him off, but I don't need the
20 additional technical information, I believe.

21 WITNESS HIGGINS: Well, this is to put it in
22 the QA focus.

23 MR. LANPHER: Well, Mr. Higgins, if you
24 believe that it does clarify the QA issues, please
25 provide it then.

1 JUDGE MORRIS: I thought you got an answer to
2 your question, did you not?

3 MR. LANPHER: I thought I got an answer to my
4 question that he doesn't know whether there was in
5 process QC with respect to the separation problems
6 identified at the bottom of 11 and the top of 12.

7 JUDGE BRENNER: Let's leave it for you to
8 discuss with Mr. Bordenick, and then he could come back
9 on redirect given the purpose of the issue here, Mr.
10 Higgins.

11 BY MR. LANPHER: (Resuming)

12 Q Gentlemen, one final question in this area.
13 Would you agree that as a general proposition the
14 installation of cable or really the installation of any
15 item should be designed to conform to the specification
16 of the instruction and should not rely upon the quality
17 control personnel to identify deficiencies?

18 A (WITNESS GALLO) In general, Appendix B refers
19 to doers and verifiers, and yes, we do expect the doers
20 or the installers to be able to follow the instructions
21 and construction specifications, and quality control or
22 quality assurance is there as a verification means.

23 MR. LANPHER: Judge Brenner, I am going to go
24 to page 16 on the cross plan, Roman numeral VII. And
25 for the witnesses' benefit, I want to discuss the

1 nonrecurrent violation example which I believe --

2 JUDGE BRENNER: Let's go off the record for a
3 minute.

4 (Discussion off the record.)

5 BY MR. LANPHER: (Resuming)

6 Q I believe this starts at page 10 of your
7 testimony.

8 Now, gentlemen, am I correct that this
9 violation was cited because LILCO had failed to keep its
10 engineering quality assurance procedures up to date?

11 A (WITNESS HIGGINS) That is correct.

12 Q And you state at page 11 just above question
13 14 that as of June 1, 1982 there had been no recurrence
14 of this type of violation. Would it be fair -- do you
15 see that statement? It is on page 11 just above
16 question 14.

17 A (WITNESS HIGGINS) Yes.

18 Q Gentlemen, would it be fair to state that by
19 "type of violation" what you refer to is there was no
20 recurrence of a failure to keep control documents up to
21 date?

22 (Panel of witnesses conferring.)

23 A (WITNESS HIGGINS) This is a manual. The
24 EQAPs are a manual of procedures which are owned or
25 controlled by the field quality assurance group. And

1 what we meant by that was that there had been no
2 recurrence of a failure to update a procedure or manual
3 by the field quality assurance group. We didn't mean to
4 say that there had been none on the total site as a
5 whole.

6 Q Well, would you agree that if -- strike that.

7 You stated you didn't mean that there had been
8 none for the total site as a whole. By "none" do you
9 mean a failure to update control documents or keep them
10 up to date?

11 A (WITNESS HIGGINS) That's correct.

12 Q Well, wouldn't you agree that if there were
13 other controlled manuals, for instance, that were not
14 maintained up to date on the site that this would be the
15 same type of violation or problem?

16 A (WITNESS HIGGINS) Not necessarily, no,
17 because there are different control processes used for
18 different manuals and different review mechanisms and
19 different QC over them. And certainly the control of
20 this manual by these people is different than the
21 control of the startup manual which is a completely
22 different kind of change and revision process and
23 control process.

24 Q Mr. Higgins, by this testimony I got the
25 impression not only that you stated that there had been

1 no recurrence of this type of violation, but there had
2 been no previous violation of this kind. Is that the
3 thrust of your testimony?

4 A (WITNESS HIGGINS) What we meant was that
5 since this happened in 1979 and since from that time
6 forward there had been no recurrence --

7 Q Well, had there been instances of this kind of
8 problem prior to that?

9 A (WITNESS HIGGINS) We are certainly aware that
10 there were identified instances by LILCO, by their own
11 QA people where they have identified problems with
12 manuals. And I am not sure right now without going back
13 through all of the violations back to 1973 whether we
14 have ever previously cited for another manual being not
15 up to date.

16 Q Would you agree, Mr. Higgins, that if LILCO
17 had identified problems with manuals at the time that
18 we're talking about, procedures manuals, that that would
19 constitute a similar problem to the one that I&E
20 identified?

21 A (WITNESS HIGGINS) Well, if we identify a
22 problem with a manual and they identify a problem with a
23 similar manual, it would be a similar problem, yes.

24 Q So just because you -- and I don't mean you
25 personally -- but just because I&E has only identified

1 one instance of this type of violation, using "type"
2 according to your definition, it doesn't mean that that
3 is the only instance of a problem with maintaining
4 procedures manuals up to date, does it?

5 (Panel of witnesses conferring.)

6 A (WITNESS HIGGINS) Could you repeat that once
7 again, please?

8 Q Let me do it by example. Do you have Suffolk
9 County Exhibit 51 up there? That is the volume of Stone
10 and Webster engineering assurance audits.

11 A (WITNESS GALLO) Yes. Yes, we do have it.

12 Q Gentlemen, I would like you to turn to
13 Engineering Assurance Audit 19, item II.B.1 -- iI.B.2,
14 excuse me. And I know you haven't been through these as
15 much as we have. That is on the third page of that
16 audit at the top of the page.

17 Do you have that, Mr. Higgins?

18 A (WITNESS HIGGINS) We have item II.B.2, but it
19 appears to be on page 2, not page 3.

20 Q Okay. Well, it is the numbered page 2.
21 Fine. This indicates that three of the five engineering
22 assurance procedure manuals that were audited did not
23 contain all of the current procedures, correct?

24 A (WITNESS HIGGINS) That is correct.

25 Q Do you agree that this is the same kind of

1 problem as identified in I&E report 79-05?

2 A (WITNESS HIGGINS) No.

3 Q Why not?

4 A (WITNESS HIGGINS) The difference here is that
5 this is an instance where -- this is an instance where
6 LILCO has identified the problem as opposed to the NRC
7 identifying the problem. We consider that to be a
8 significant difference.

9 When LILCO identifies a problem with the
10 quality assurance audit or with their own personnel,
11 then we feel that their program for auditing and
12 identifying problems is working, and that is what we
13 prefer to see, and we like to see that they identify the
14 problems, identify the corrective actions, and get the
15 items corrected. It is only when their program for
16 auditing, et cetera, does not work and does not correct
17 things and we find them that then we would cite it as a
18 violation of Appendix B.

19 Our enforcement policy which we have discussed
20 before discusses situations where if an item is
21 identified by the licensee under his own program, then
22 provided he meets certain stipulations as to levels of
23 verity and forth, then we do not cite it as a violation.

24 Q Well, whether you cite it or not as a
25 violation, Mr. Higgins, if the licensee were to identify

1 recurrent problems of the same kind through its audit
2 process, would that not raise a concern for I&E whether
3 the licensee had taken adequate corrective actions?

4 (Panel of witnesses conferring.)

5 A (WITNESS HIGGINS) As long as the licensee is
6 identifying the items and taking adequate corrective
7 action, then we feel that his program is working, and
8 that is what we are looking for. Certainly people can
9 differ as to what or how many instances of a particular
10 thing being found constitutes recurrence or constitutes
11 a problem, and then you are getting into some judgment
12 situations where if you look at the licensee audits over
13 a period of time and you say here is one instance where
14 we have manuals not being kept up to date and here's
15 another instance X number of months ; X number of years
16 later, then there is some judgment involved as to
17 whether or not that is a continuing problem or the same
18 problem or whether or not more strenuous corrective
19 measures need to be taken.

20 As long as the licensee is taking measures
21 that we could look at and we feel reasonably address the
22 problem, then we would not cite it as a violation.

23 Q But you would agree that it is relevant for
24 I&E to know the kinds of findings which the licensee is
25 making in its audit program, correct?

1 A (WITNESS HIGGINS) Our inspection program
2 includes review of the licensee's audits, and I guess
3 that is an indirect answer to your question. Yes, I
4 would, and we do feel that it is important, and that is
5 the reason we have included it in our inspection program.

6 Q Mr. Higgins, could you turn to Engineering
7 Assurance Audit 23, Audit Finding 037? Do you have that
8 available, sir? This was an instance where the auditor,
9 Stone and Webster auditor, determined that 40 percent of
10 the engineering assurance manuals which were audited did
11 not contain up-to-date material or that out-of-date
12 material had not been removed, correct?

13 A (WITNESS GALLO) That is in the description of
14 the observation, on observation 037?

15 Q The Region I program would not have routinely
16 looked at these reports, correct -- the engineering
17 assurance reports?

18 A (WITNESS GALLO) Yes, that is correct. And,
19 again, where we did talk about on Tuesday that we had
20 gone back again and looked at the audits, and we have
21 determined that the field QA audits, field QC audits and
22 OQA audits have been reviewed as part of the Region I
23 inspection program. The engineering assurance audits --
24 I'm sorry. That was on a sampling basis.

25 The engineering assurance audits, I think Mr.

1 Higgins remembers looking at one engineering assurance
2 audit other than that. The engineering assurance audits
3 were not part of our routine review program, and we had
4 not seen these audits prior to the start of this week, I
5 believe, except for that one Mr. Higgins has seen.

6 As we had discussed before, Region IV does do
7 inspections of the Stone and Webster Boston office, and
8 I think Mr. Narrow had provided a brief summary of how
9 many audits he had found that Region IV had looked at.

10 Q Mr. Narrow, I'm afraid I forget that brief
11 summary.

12 A (WITNESS NARROW) I will try and find it in
13 this mass of papers.

14 (Pause.)

15 A (WITNESS NARROW) The number of inspections on
16 this list, I believe I said that during 1975 through
17 1979 Region IV performed four inspections each year of
18 the Stone and Webster Boston office. In 1980 they
19 performed six inspections. In 1981 they performed three
20 inspections. And to date in 1982 they have performed
21 two inspections.

22 I believe I also said that I didn't have the
23 number of inspections during which they had reviewed
24 engineering assurance audits except that I was informed
25 that they were reviewed periodically and perhaps between

1 one and a half and three years. However, I don't think
2 I said this before, but I would like to add that I am
3 sure during their inspection if they had a question they
4 would also have looked at an audit to find some support
5 or some further information in the same manner as we do,
6 although they probably would not consider that a
7 complete inspection of engineering assurance audits.

8 (Discussion off the record.)

9 JUDGE BRENNER: Let's go back on the record.

10 BY MR. LANPHER: (Resuming)

11 Q Mr. Narrow, regarding those Region IV
12 inspections that you've just listed for 1975 through
13 1982, do you know how much of that inspection time was
14 devoted specifically to looking at Stone and Webster
15 activities relating to the Shoreham project?

16 A (WITNESS NARROW) I do not know how much of it
17 was related specifically to the Shoreham project,
18 although much of their engineering relates to a number
19 of projects. However, I couldn't answer your question.

20 Q Gentlemen, do you have a copy of Suffolk
21 County Exhibit 56 up there? That is the field quality
22 control audit exhibit.

23 (Discussion off the record.)

24 BY MR. LANPHER: (Resuming)

25 Q Do you have field quality control audit 14?

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

2 (Discussion off the record.)

3 BY MR. LANPHER: (Resuming)

4 Q Mr. Narrow, my understanding is the FQC audits
5 are a class of documents which you would review on a
6 more or less regular basis, is that correct?

7 A (WITNESS NARROW) Mr. Lanpher, the field
8 audits done by the Boston office, I said that I had
9 looked at several of them. I did not review them on a
10 regular basis.

11 Q Have you had an opportunity to look at field
12 quality control audit 14, finding A.1?

13 A (WITNESS NARROW) Just a minute.

14 (Pause.)

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

16 (Discussion off the record.)

17 JUDGE BRENNER: All right. Let's go.

18 MR. LANPHER: I'm trying.

19 BY MR. LANPHER: (Resuming)

20 Q Mr. Narrow, am I correct this was an instance
21 where the Stone and Webster FQC auditors identified that
22 two FQC manuals were not being maintained in current
23 status?

24 MR. ELLIS: I have an objection about asking
25 whether a witness who did not participate in this audit,

1 did not review the audit answering questions about
2 whether it is an instance. All he can do is repeat it,
3 that that is what the words say.

4 JUDGE BRENNER: I share that concern a little
5 bit.

6 MR. LANPHER: Let me rephrase the question.

7 BY MR. LANPHER: (Resuming)

8 Q That is what the words say here, correct, Mr.
9 Narrow?

10 A (WITNESS NARROW) That is correct.

11 Q Mr. Narrow, I could take you through a number
12 of FQC audits, and I could take the panel through a
13 number of engineering assurance audits. Is it fair to
14 state that if I do that and go through a large number of
15 those audits with you that in each instance you would
16 have to state that you have no personal knowledge about
17 the incident?

18 A (WITNESS NARROW) I would say that in most
19 cases that is correct. I wouldn't say in all cases that
20 it would be correct.

21 Q Well, I provided a listing to your counsel,
22 which I'm sure you have been provided with, of FQC and
23 engineering assurance audits that I might use in cross
24 examination. Have you had an opportunity to review all
25 of those?

1 A (WITNESS NARROW) We have looked at those.

2 Q Well, were there any that you were familiar
3 with prior to your review in preparation for this
4 examination?

5 A (WITNESS NARROW) No, sir. There were none.

6 Q And is it fair to state that in your testimony
7 the opinions you were giving are not influenced one way
8 or the other by the results of either the FQC or
9 engineering assurance audits?

10 A (WITNESS NARROW) I would not agree with that
11 statement. I would say that to the extent that we --
12 and by "we" I mean either Mr. Higgins or myself or
13 anyone else in our organization who inspected the
14 Shoreham plant -- may have had occasion to review
15 certain of those audits, and if so, that would have been
16 reflected in our testimony.

17 A (WITNESS HIGGINS) I would like to add to
18 that. I did review the audit reports that you provided
19 to our counsel, and one comment that I have on it is
20 these were just audit findings, so we really did lack a
21 significant amount of information because we didn't get
22 the audit response, we didn't get to see the proposed
23 corrective action, and we didn't get to see the followup
24 action that was actually taken.

25 That leaves us at a real loss in order to

1 determine what the actual situation was. When we review
2 audits on site, we don't review just the audit findings;
3 we reviewed the audit followup actions, the responses to
4 see what corrective actions were taken. And when we do
5 our periodic reviews of audits, that is the way that it
6 is done. So that is sort of a preliminary comment.

7 The second comment is you can get some feel --
8 although you would like to have everything to have a
9 full picture, you can get some feel from the audit
10 findings, because in general there is a fair amount of
11 information available when the audit is done. And in
12 reviewing the ones that you have provided and discussing
13 it with the panel that is here now last night, we felt
14 that overall the audit findings didn't cause us to
15 change our conclusions, and that it was not something
16 that was unexpected that we would see in a quality
17 assurance department finding.

18 Q Going back to FQC Audit 14, Finding A.1 that
19 we were talking about, I want you to assume that that
20 finding is accurate for a moment, that FQC manuals were
21 not maintained in the current status. That would be the
22 same kind of finding, would it not, as that described in
23 79-05, which is described in your testimony?

24 A (WITNESS HIGGINS) No.

25 Q Well, I thought you had said earlier, Mr.

1 Higgins, that the type of violation described in 79-05
2 was an instance where a manual of the QA organization
3 was not kept up to date.

4 A (WITNESS HIGGINS) I believe when we were
5 discussing just recently the engineering assurance audit
6 that found a manual not up to date, we stated that we
7 felt there was a significant difference and that this
8 was an instance identified by the licensee where his
9 program appeared to be working on identifying problems
10 as opposed to in 79-05 his program did not work to find
11 that, and therefore we cited it as a violation of
12 Appendix B and considered it to be more serious.

13 Q Except for the difference about who found the
14 problem, would you agree that it is similar?

15 A (WITNESS HIGGINS) Yes.

16 A (WITNESS NARROW) May I add that I think there
17 is another difference in that if I understand this
18 finding correctly, this was a finding of some Stone and
19 Webster audits in LILCO's possession.

20 Is that what you're asking us to assume when
21 you said you assumed this is a valid --

22 (Panel of witnesses conferring.)

23 A (WITNESS NARROW) Whereas the previous finding
24 was on a LILCO manual held by LILCO.

25 Q Well, all of the organizations performing work

1 on Shoreham, the Shoreham project, are subject to the
2 overall LILCO quality assurance program, correct?

3 A (WITNESS HIGGINS) Yes.

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1 JUDGE BRENNER: Mr. Narrow, was your question
2 as to who was holding the manuals?

3 WITNESS NARROW: I was pointing out the
4 difference, which perhaps is not a major difference.
5 But the question related to whether there was any other
6 difference, and that was that in one case we had a LILCO
7 manual which had not been updated, and this would have
8 been updated according to their procedure, whereas in
9 this case it is a Stone & Webster manual which would
10 have been required to be updated in accordance with
11 Stone & Webster procedures.

12 JUDGE BRENNER: But in the instance of this
13 last one we're looking at, although they are Stone &
14 Webster manuals, apparently they're held by LILCO
15 employees.

16 WITNESS NARROW: That is correct. But LILCO
17 would have no way -- well, they should have a way of
18 knowing whether they were updated or not.

19 JUDGE BRENNER: Okay, I understand your point
20 now.

21 BY MR. LANPHER: (Resuming)

22 Q Gentlemen, would it be fair to state that you
23 have no reason to disagree with any of the findings that
24 may be made in the engineering assurance or FQC audits?

25 MR. ELLIS: Again, I object to that, because I

1 think the fair way to put it is, agree or disagree.

2 JUDGE BRENNER: I didn't hear the last part of
3 your statement, Mr. Ellis.

4 MR. ELLIS: Judge Brenner, I think the
5 testimony established that, except for one EA, these
6 gentlemen had not reviewed the EA audits, and therefore
7 the question was whether they could disagree with it.
8 They can't agree or disagree with it. It is already on
9 the record.

10 JUDGE BRENNER: I agree, Mr. Lanpher. In my
11 own mind when you asked that question I was thinking,
12 what good is the answer, and therefore what good is the
13 question.

14 MR. LANPHER: I'm trying to shortcircuit a lot
15 of this.

16 JUDGE BRENNER: I know, but they would say, we
17 disagree. And also, they would have no reason to know
18 enough to be in a position to intelligently agree or
19 disagree. Now, you may find some of these that are
20 quite clear to them as to what it probably involved,
21 because they may be familiar with the general situation
22 even though not the particular finding. Or you may be
23 able to use some of these that we all know a lot about,
24 and you could ask them to make certain assumptions that
25 are already supported by the record.

1 But I don't think you're going to be able to
2 get a trend analysis that is very meaningful from them
3 using things that they have stated they have not taken
4 into account in their trend analysis, that may be worth
5 something to you. But that is where it stands.

6 MR. LANPHER: Let me just see if I can
7 establish that once and for all and then move on.

8 BY MR. LANPHER: (Resuming)

9 Q Gentlemen, in preparation of this testimony
10 you did not review any specific engineering assurance
11 audits, correct?

12 A (WITNESS HIGGINS) That is correct.

13 Q You didn't review any FQC audits, is that
14 correct?

15 A (WITNESS HIGGINS) We did not review FQC
16 audits specifically for the preparation of our
17 testimony.

18 Q Isn't it a fact the only review of FQC audits
19 subsequent to the review are those which were noted by
20 your counsel?

21 A (WITNESS GALLO) That is correct.

22 MR. BORDENICK: Judge Brenner, I'm not making
23 an objection, but I'm afraid there may be some confusion
24 on this record, not intentional on either Mr. Lanpher's
25 or the witness' part. When he says "this testimony," is

1 he referring to the prefiled written testimony or is he
2 referring to their verbal testimony that commenced on
3 Tuesday?

4 MR. ELLIS: Also, I have an objection to the
5 question on the ground that it doesn't take into account
6 their testimony already that part of their program was
7 to review some of these.

8 JUDGE BRENNER: Well, let me tell you, that
9 general statement isn't worth very much, given the focus
10 that we have before us. They may have people in IE who
11 know this, but we need -- if there's going to be any
12 reliance on that kind of fact, we're going to need the
13 tangible results, either testimony before us or
14 somehow. And what we've got before us is apparently not
15 -- it does apparently not utilize that. That is the
16 testimony either filed by them or given by them orally.

17 I understand the ambiguity that you pointed
18 out, Mr. Bordenick, and I don't think it's going to
19 matter. But we could clear that up now one way or the
20 other.

21 Do you want to focus on that?

22 MR. LANPHER: I didn't perceive the
23 ambiguity.

24 JUDGE BRENNER: I think the answer is going to
25 be close to the same.

1 Gentlemen, in preparing your testimony, both
2 your written testimony and in giving us your views here,
3 are you relying on any knowledge of the engineering
4 assurance audits or the field quality control audits or
5 any audits by LILCO or its agents?

6 WITNESS HIGGINS: The audits, to the extent
7 that we reviewed them within our routine inspection
8 program and as we've testified, to the extent that we
9 look at those we have taken them into consideration.
10 Further, from the reviews that we have done over the
11 last couple of days in reviewing the audits that have
12 been provided to us, we don't find anything in there
13 that would cause us concern, to change the conclusions
14 of our testimony.

15 JUDGE BRENNER: My problem with the last part
16 of your statement, let me tell you what it is so you can
17 respond, so I don't carry this problem with me in the
18 post-hearing stage if it can be cleared up now. To the
19 extent that you -- well, let's stay with the last part.

20 You make the general conclusion that nothing
21 in there causes you to change your conclusions, nothing
22 in the audits you reviewed in the last few days. But it
23 is also true, is it not, that you have no knowledge of
24 what these matters represent other than the cold words
25 in the audit?

1 WITNESS HIGGINS: That is certainly true,
2 Judge. But I believe maybe an example would help clear
3 it up a little bit. You mentioned earlier in the week,
4 how would we possibly use audits in our inspection
5 program, and one of the ways that I have used it and
6 other inspectors do is, you go through the audit results
7 or findings and read through there and see what types of
8 findings they have, and things that appear significant,
9 that you would not expect to be happening, even though
10 they were found by the audit program and appear to be
11 significant problems, then those are the type of things
12 that perhaps we single out for closer follow-up, to see
13 what the causes were and what corrective actions were
14 taken and to see if it was effective.

15 And in our review of the audit findings
16 themselves, the cold words, we didn't run into any
17 situation that would give us that type of concern and
18 even a cause for further follow-up. It appeared to be
19 the type of routine audit findings that we would expect
20 to see at any site.

21 JUDGE BRENNER: Is it fair to infer from what
22 you just said that, even though you may not know all the
23 details of particular findings in these audits that you
24 reviewed in the last few days, you feel your general
25 knowledge and experience, including knowledge and

1 experience in your work involving the Shoreham plant,
2 would allow you to give us some information as to
3 whether your interest would be stimulated further by any
4 of these findings in terms of a possible contradiction
5 of your previous conclusions?

6 You can tell us why you don't think it is a
7 problem, given your other findings, or why we shouldn't
8 consider it as part of a trend to worry about? You see,
9 the problem is, you make the general statement you made,
10 and I'm going to allow Mr. Lanpher to question you about
11 the details of the audit, notwithstanding the previous
12 objection, which I sustained, because it sounds to me
13 that in your judgment you think you know enough about it
14 to reach that conclusion.

15 Now, those questions will be different than
16 whether or not you know all the details about it, but I
17 can't draw the line. You will have to draw it as part
18 of your answers.

19 WITNESS HIGGINS: Well, I guess it is
20 different in terms of how much. There certainly is a
21 difference in being able to testify with some certainty
22 and being -- doing an inspection and making a judgment,
23 based upon what you see, whether or not to do a
24 follow-up inspection.

25 And I guess all I'm really saying is that,

1 given what we reviewed, if we had reviewed that during
2 an inspection we probably wouldn't consider it worth the
3 time and effort to do follow-up inspection. Given our
4 judgment in having followed up on these things in other
5 instances in the past, it appeared that things were
6 being adequately addressed and that there were other
7 areas that would be more profitable to look into and
8 better spend our time.

9 But as far as the details and being able to
10 give creditable testimony, I guess I'm a little hesitant
11 to say that we could do that.

12 JUDGE BRENNER: Well, I think your statement
13 is consistent with what I said, and probably in better
14 words.

15 Give me a moment.

16 (Board conferring.)

17 JUDGE BRENNER: Well, we've got the answer,
18 Mr. Lanpher. As a cross-examiner you're entitled to
19 probe the reasonableness of the basis for any answer,
20 including that one.

21 MR. LANPHER: Well, Judge Brenner, I
22 appreciate your efforts, and I'm going to try to
23 shortcut it somewhat, because I don't think it is worth
24 --

25 JUDGE BRENNER: I don't, either.

1 MR. LANPHER: -- too much. But let me go
2 through one example.

3 JUDGE BRENNER: I felt obligated to make my
4 statement in light of the objection I previously
5 sustained before the subsequent answers.

6 MR. LANPHER: Judge Brenner, I'm going to go
7 to page 30 of the cross plan, to see if I can do some of
8 this differently.

9 MR. ELLIS: Judge Brenner, I'm sorry. I may
10 have misunderstood something you said. Did you say --
11 do I infer from what you said, that when you said it
12 wasn't worth it --

13 MR. LANPHER: Those were my words, I think.

14 JUDGE BRENNER: Well, I did agree with Mr.
15 Lanpher, yes. Do you want to know why I said that? I
16 will tell you.

17 MR. ELLIS: No. I'm not sure how to interpret
18 that, but if there is something that you want us to know
19 --

20 JUDGE BRENNER: I don't think I need a lot
21 from these witnesses to add to the record on what is
22 involved in the many weeks we have gone through all of
23 these reports. That is what I had in mind. However, I
24 think some examples to get a feel for their approach
25 might be helpful. And Mr. Higgins' explanation was also

1 very helpful just before, and I think we can pull it all
2 together that way.

3 MR. ELLIS: Thank you, sir.

4 BY MR. LANPHER: (Resuming)

5 Q Gentlemen, do you have I&E inspection report
6 76-06? That is cited at page 24 of your testimony, and
7 I would like to have it marked as Suffolk County Exhibit
8 106 for identification. This is dated -- the cover
9 letter is dated June 22, 1976, and it refers to an
10 inspection conducted May 24 through 27, 1976.

11 (The document referred to
12 was marked Suffolk County
13 Exhibit No. 106 for
14 identification.)

15 BY MR. LANPHER: (Resuming)

16 Q Specifically, I would like to direct your
17 attention to the notice of violation, page 2, item 3 at
18 the top.

19 A (WITNESS GALLO) We have it.

20 Q Now, gentlemen, you stated in response to
21 Judge Brenner, I believe, that none of the audits were
22 both -- well, none of the materials which were
23 designated for review in the last few days or maybe in
24 an earlier period, but certainly subsequent to the
25 prefiling of your testimony, caused you to change any of

1 your opinions, correct?

2 A (WITNESS HIGGINS) Mr. Gallo hasn't read it
3 yet, and we only have one copy.

4 (Pause.)

5 Q Gentlemen, are you ready to respond? I mean,
6 if you need to --

7 A (WITNESS HIGGINS) We would like to discuss
8 this, please.

9 Q Well, let me ask a question, and if you need
10 time then, that's fine. Gentlemen, I believe in
11 response to Judge Brenner you stated that in your review
12 of the materials designated by Suffolk County for
13 potential use in cross-examination you did not find any
14 that you found out of the ordinary. In essence, it is
15 the kind of thing you would have expected in the course
16 of construction of a nuclear plant; is that correct?

17 A (WITNESS NARROW) No, sir, I do not agree with
18 your statement, in that I believe Mr. Higgins was
19 talking of the quality assurance of engineering and
20 quality assurance audits and the Stone & Webster audits
21 of the site. In this case this was a field audit, which
22 we do review periodically and we do review them on a
23 programmatic basis. And we also look at them in
24 connection with our other inspections.

25 And yes, we do look at these with the intent

1 of determining whether there is anything there which we
2 should follow up in greater detail.

3 Q Well, my understanding of your earlier answer,
4 however, was that none of the materials designated for
5 use by Suffolk County, which included a large number of
6 field audits, a number of field audits, at least, struck
7 you as anything out of the ordinary.

8 A (WITNESS NARROW) Apparently we have a
9 misunderstanding as to what Mr. Higgins had in mind.
10 Certainly, I had not -- in our discussion I did not
11 intend to include the field audits with that general
12 statement.

13 Q Well, let's clarify it.

14 JUDGE BRENNER: Let me see if this helps. I
15 don't know whether they said that in passing or not, as
16 you phrased it. I don't remember, but I think the main
17 emphasis in my question, at least, and I believe was
18 included in the answer, was whether it would change any
19 of their conclusions in the testimony. And that is a
20 little different.

21 That is, if they found something a little
22 deficient or out of the ordinary in their testimony and
23 also found the same thing in the audits, then they would
24 say nothing changed that, which is different than saying
25 everything is as usual.

1 MR. LANPHER: Well, maybe I misheard their
2 testimony in response to your question, Judge Brenner.
3 But I thought you asked engineering assurance audits,
4 field quality control audits or any other audits.

5 JUDGE BRENNER: Yes, I included all the
6 audits, that's for sure.

7 MR. LANPHER: And whether -- I thought their
8 response was that they thought that what they saw, what
9 they reviewed, was not out of the ordinary, it was
10 nothing different than what they would expect.

11 JUDGE BRENNER: I'm not disputing the
12 possibility that you're right. What I focused on at the
13 time was their statement that I knew they made in
14 response to the question, that it wouldn't cause them to
15 change the discussion or conclusions in their
16 testimony. But go ahead.

17 BY MR. LANPHER: (Resuming)

18 Q Mr. Narrow, you disagreed with my statement,
19 you would not include field audits in that, in the view
20 that -- well, let me start over, then.

21 You believe there are some field audits that
22 described instances or events that were not to be
23 expected during the construction of a nuclear plant?

24 (Panel of witnesses conferring.)

25 A (WITNESS NARROW) It is, as I said before, we

1 reviewed the field audit. That is, a normal program, it
2 includes that. The particular inspection to which you
3 referred was one which was required in that as a part of
4 our program at one time. It is not in our present
5 program, but it required that we perform what was
6 referred to as a midterm QA audit, which included all
7 aspects of the Licensee's QA program on-site, and that
8 it be performed at some time around the 50 percent
9 construction mark, which of course is a rather vague
10 term, or at such time as there might be a major change
11 in the QA program.

12 And so I would agree with Mr. Higgins'
13 response to Judge Brenner's question. It did not in any
14 way affect our testimony when it was prepared in the
15 written form or our testimony today. However, the
16 difference is that these field audits were a specific
17 portion of our inspection program. They were looked
18 at. The other audits to which you referred to
19 previously were looked at very scantily. Very few of
20 them were looked at, and so they are in a different
21 class.

22 Q Thank you for that clarification, Mr. Narrow.
23 So that if there are field audits which the County
24 believes are relevant, that is a class of documents
25 which you are generally familiar with, then?

1 A (WITNESS NARROW) Yes.

2 Q Now, in Suffolk County Exhibit 106 for
3 identification, am I correct that I&E cited LILCO for
4 Criterion 16 violation because adequate corrective
5 action relating to the filing of E&DCR's had not been
6 taken?

7 A (WITNESS HIGGINS) What is 106?

8 Q I'm sorry, 106 is 76-06, the last document we
9 marked.

10 A (WITNESS NARROW) Yes, we have that.

11 Q The question is, I&E cited LILCO for Criterion
12 16 violation, did it not, because LILCO had not taken
13 adequate corrective action relating to the filing of
14 E&DCR's with applicable specifications and procedures?

15 A (WITNESS NARROW) That is correct.

16 Q Now, Mr. Narrow, this was subsequently, this
17 violation was subsequently closed out, correct?

18 A (WITNESS NARROW) That is correct.

19 Q Do you know when it was closed out?

20 A (WITNESS HIGGINS) We can get that information
21 fairly quickly.

22 Q Mr. Narrow, was it closed out in 76-12?

23 A (WITNESS NARROW) I believe I have that
24 information written down somewhere.

25 (Pause.)

1 MR. LANPHER: Judge Brenner, I have provided
2 the witnesses a copy of 76-12. I don't have extra
3 copies. I'm just trying to establish that it was closed
4 out then.

5 (Panel of witnesses conferring.)

6 WITNESS NARROW: Mr. Lanpher, that item was
7 closed out in 76-12.

8 BY MR. LANPHER: (Resuming)

9 Q Now, Mr. Narrow, are you aware of any E&DCR
10 problems which appeared at the LILCO site during 1977?

11 (Panel of witnesses conferring.)

12 A (WITNESS NARROW) I haven't reviewed
13 specifically each of the inspection findings. I know
14 that E&DCR's were a problem at various times, and that
15 they are referenced in some of our inspection reports.
16 I could not tell you specifically that we identified
17 those as a problem in 1977.

18 Q Isn't it a fact that in 1977 I&E noted no
19 violations concerning the control of E&DCR's?

20 A (WITNESS NARROW) I would have to look at the
21 record to answer that question.

22 Q You don't recall any such violation, correct?

23 A (WITNESS NARROW) I wouldn't recall any
24 violations that were identified in 1977 without going
25 back to look at it.

1 Q Well, are you familiar with LILCO field audit
2 602? Did you review that in preparation for this
3 testimony? That is Suffolk County Exhibit 55.

4 A (WITNESS NARROW) No, I don't believe we have
5 reviewed that in preparation for this.

6 Q Well, have you reviewed Suffolk County Exhibit
7 57, which is field audit 654, in preparation for this
8 testimony?

9 A (WITNESS GALLO) Mr. Lanpher, 654 is not on
10 the index of field audits that we were given. I don't
11 believe it was one of the ones that we were given at
12 all. If it was reviewed, it was reviewed during the
13 routine inspection program and not this week.

14 Q Well, gentlemen, do you recall ever reviewing
15 field audit 602 or 654?

16 A (WITNESS HIGGINS) No, we don't. Apparently,
17 in the list of documents that we were provided each day
18 before the testimony, the night before, that wasn't on
19 the list, and so we didn't review it in that context.
20 We also didn't review any field audits prior to coming
21 down here this week other than were done in the routine
22 inspection program.

23 Q Have you reviewed field audit 718, Suffolk
24 County Exhibit 58 for identification, to the best of
25 your knowledge?

1 A (WITNESS HIGGINS) No.

2 Q So if I were to ask you whether these
3 documents described E&DCR-related problems during the
4 1977 and early 1978 time frame, you would have no
5 personal knowledge about that, correct?

6 A (WITNESS HIGGINS) If you asked us anything
7 about those, we wouldn't have any knowledge, since we
8 haven't reviewed them.

9 Q Do you know whether, Mr. Narrow, whether when
10 you were project inspector on the LILCO project during
11 that -- you were the project inspector during 1977, is
12 that correct? And there was a hiatus in there, I
13 realize. Well, you were the project inspector until
14 October '77, correct?

15 A (WITNESS NARROW) That is correct.

16 Q Do you recall whether field audit 602, which
17 is dated July 5, 1977, was one of the field audits that
18 you reviewed during that time period?

19 A (WITNESS NARROW) I would not be able to
20 recall a specific audit by number.

21 JUDGE BRENNER: Mr. Narrow, if you can't
22 answer this one, of course, say so. Do you recall in
23 general reading audits performed by LILCO or LILCO's
24 agents in a time frame after 1976 that had adverse
25 findings with respect to E&DCR's or raised concerns with

1 respect to E&DCR's?

2 WITNESS NARROW: I recall adverse findings
3 concerning E&DCR's in LILCO audits, I believe, and also
4 in our own inspections during that period. But it would
5 be very difficult for me to identify particularly when
6 those occurred and whether they were specifically our
7 findings or their findings.

8 I might add just for information that E&DCR's
9 have been items that created potential problems, that
10 is, the control of the E&DCR's. And in our inspections
11 when we looked at E&DCR's we were more interested in
12 whether they were being a proper document and handled as
13 a proper change in the program than we were in the
14 specific control of the E&DCR, because the E&DCR as a
15 design change was distributed to so many organizations
16 that it would have taken a great deal of time to inspect
17 all of those areas and determine that they were
18 adequately controlled.

19 In addition to which, with a distribution that
20 went to several groups of organizations doing,
21 performing the work, and to QC and to QA, the fact of
22 any one or even two of those organizations not having
23 the correct copy of the E&DCR was not really a major
24 problem. There were enough groups there who had them
25 that the information would be picked up, even though

1 technically it would have been a violation if they did
2 not have the proper control.

3 And to be very frank, we didn't feel that the
4 time spent to check on control of E&DCR's was
5 warranted. We felt there were much more important
6 things that we could be spending our time on.

7 Notwithstanding that, we didn't look at them;
8 we looked at E&DCR's.

9 JUDGE BRENNER: Did the knowledge that you had
10 from the audits done by LILCO or its agents and from
11 your own inspection findings with respect to the E&DCR
12 situation over that period of time, that is in
13 approximately 1977 or any other period of time that you
14 want to indicate in your answer -- how did that affect
15 your decisions as to what to look at in your
16 inspections, given your previous answer to me as to what
17 your concern was?

18 Did you alter your program or adapt your
19 program or look at certain things differently? How did
20 it affect your own decisions as to how to allocate your
21 time most productively?

22 WITNESS NARROW: Excuse me a minute.

23 (Panel of witnesses conferring.)

24 WITNESS NARROW: Judge, I think that the
25 E&DCR's were looked at more in connection with the

1 problem which we had found otherwise, rather than the
2 reverse as you suggested, where we would look at the
3 E&DCR's and go to see if we had a problem.

4 Now, if we in some cases -- and I recall one
5 inspection that I looked at just recently in preparation
6 for this testimony. We found some E&DCR's which we did
7 have a problem with. In a case like that, we would
8 question the effect that that E&DCR may have had on the
9 work. And I'm speaking now of what we would have done.
10 I don't know to that extent what we actually did in this
11 specific case.

12 But we would have questioned the effect of an
13 E&DCR which may have been improperly approved or not
14 approved by the proper people and determine whether that
15 had any effect on the work. And normally, we would
16 require that engineering support the E&DCR disposition
17 in some fashion which we would consider acceptable, and
18 if the work had already been performed and if the E&DCR
19 was not proper, then it would have been a noncompliance
20 and a violation.

21 Does that answer your question, sir?

22 JUDGE BRENNER: Yes. And I'm going to go back
23 to Mr. Lanpher now. I was trying to establish your
24 general level of knowledge, knowing that I certainly
25 couldn't remember any particular things that I did on

1 April 13th, 1977, or dates like that.

2 But I think the general level of knowledge,
3 Mr. Lanpher, in the answers we have just received is
4 such that you can ask about E-5 in conjunction with E-1
5 on page 30 of your plan. You see, I didn't want to stay
6 with the particular audits and that lack of knowledge,
7 which I find understandable, as opposed to the overall
8 situation.

9 BY MR. LANPHER: (Resuming)

10 Q Well, gentlemen, in your prefiled testimony
11 you do not identify control of E&DCR's as a repetitive
12 or recurrent, I guess is the word you use, recurrent
13 problem, correct?

14 A (WITNESS NARROW) That is correct.

15 Q Is it your testimony, then, that the control
16 of E&DCR's was not a recurrent problem at the Shoreham
17 facility during its construction, or is that just
18 something that you did not address one way or the other
19 in your testimony?

20 (Panel of witnesses conferring.)

21 A (WITNESS HIGGINS) From an IE standpoint,
22 there were not recurrent violations in the E&DCR area.
23 LILCO themselves may have had more than one finding in
24 internal LILCO audits in the E&DCR area, but we are of
25 the opinion that their program was addressing that and

1 therefore we did not find additional violations of a
2 recurrent nature that they didn't find, and therefore we
3 didn't consider it to be a recurrent area from an IE
4 violations standpoint.

5 Q Well, do you believe the corrective action
6 taken by LILCO concerning the control of E&DCR's has
7 been adequately prompt?

8 A (WITNESS HIGGINS) I can't make a judgment on
9 that. We don't have sufficient information to do that.
10 And Mr. Narrow would like to add something.

11 A (WITNESS NARROW) Well, I think that, whether
12 it was prompt or not, it did not come out to us during
13 our inspection as being a particular problem. And as I
14 pointed out earlier, this was a problem even in review
15 of the testimony which is covered. In most cases it was
16 control of the E&DCR's, it was control of the
17 distribution, which we do not consider to be a
18 particularly significant problem.

19 Now, admittedly it is in violation of the
20 regulations, and if we were to take the time to have
21 searched these out we possibly would have cited them for
22 it. But the overall effect we didn't consider to be
23 that severe and again, as I say, during our inspection
24 program it did not come up to us as a recurrent
25 problem.

1 Q Well, in the CAT inspection, one of the
2 weaknesses which was identified -- I think it is item 1
3 in Appendix C to the CAT inspection -- was the failure
4 to have in place a program for the timely incorporation
5 of E&DCR material into the underlying drawing or
6 document. Do you recall that portion of the CAT?

7 A (WITNESS HIGGINS) Yes, we do.

8 Q Is it fair to state that I&E believed that by
9 that point in time, February 1982, there should have
10 been in place a better control program for E&DCRs in
11 terms of an incorporation of those into the documents?

12 A (WITNESS HIGGINS) We had looked at E&DCRs a
13 number of times over the years at the Shoreham site, and
14 we were generally aware, as Mr. Narrow testified, that
15 there were problems identified in FQA audits and by the
16 licensee in various areas in E&DCR control. It is an
17 area that we had had some concern about.

18 And when we did our planning for the CAT
19 inspection we specifically decided that we were going to
20 take a very careful look at the E&DCRs for that reason.
21 We had discussed prior in the planning for the CAT
22 inspection that part of that inspection, which was to
23 review from a construction standpoint a completed
24 system, and part of our review for that system was going
25 to include all of the -- essentially all of the E&DCRs

1 that directly pertain to that system. We wanted to
2 review to see that as E&DCRs were issued, that the
3 E&DCRs had been properly incorporated into the drawings
4 and properly incorporated into the plant.

5 So therefore, we did review the E&DCR system,
6 particularly as it pertained to the RHR system, not in
7 general. And our general conclusion was that we felt
8 that the hardware, as specified on the design changes,
9 on the E&DCRs, was incorporated as required. We felt
10 that in general, the control of the E&DCRs was also as
11 required, and although it was a very cumbersome system
12 to use, that the licensee over the years through many
13 efforts and many, probably a lot of blood, sweat and
14 tears, had managed to make the system essentially work.

15 We did fall out of that, however, with a
16 concern that there was a tremendous number of E&DCRs
17 which still had not been physically incorporated into
18 the individual drawings that they pertained to and that
19 they referenced. And therefore, we felt that the
20 licensee, while they had an ongoing program to
21 incorporate those E&DCRs into the drawings, that it was
22 not sufficiently well defined to get them all in on what
23 we consider to be a prompt basis.

24 And for that reason, we wrote the weakness and
25 we did get the additional commitments from the licensee

1 to incorporate the E&DCRs by fuel load into all drawings.

2 Q Gentlement, going back just briefly to the
3 1976-77 period, you testified that you closed out the
4 E&DCR problem I think in audit 79-12, correct? Or
5 76-12, excuse me.

6 A (WITNESS NARROW) That is correct.

7 Q Now you testified also in response to Judge
8 Brenner that you were generally familiar that that were
9 some LILCO findings during that time period, 1976-77,
10 relating to E&DCR problems. Do you recall that in the
11 July 1977 time period, LILCO reached the conclusion that
12 the preparation, issuance and control of E&DCRs
13 affecting specifications and procedures and drawings was
14 considered unsatisfactory?

15 A (WITNESS NARROW) I believe I read that in one
16 of the recent reports. I was not aware of it previously.

17 Q And were you aware that as of November 16,
18 1977, LILCO had concluded that the preparation, issuance
19 and control of E&DCRs affecting specifications,
20 procedures and drawings remains unsatisfactory? And it
21 is evident that a significant number of shortcomings in
22 the handling of E&DCRs still exist? Were you aware of
23 that in 1977?

24 A (WITNESS NARROW) What was the date of that?

25 Q November 1977. November 16.

1 MR. ELLIS: Judge, I think it would be fair to
2 refer the witness to the document he's reading from.

3 JUDGE BRENNER: No, I think it is okay as
4 asked.

5 WITNESS NARROW: I believe by November 1977 I
6 was no longer on the project.

7 BY MR. LANPHER (Resuming):

8 Q Do you know whether anyone at I&E that was
9 assigned either full time or part time to the Shoreham
10 project was aware of that at that time?

11 A (WITNESS NARROW) I can't give you the precise
12 date on this, but I do know that sometime during the
13 period that I was not on the project there was a great
14 furor concerning E&DCRs on the Shoreham project. And in
15 connection with that, there was a complete review by NRC
16 I&E of the E&DCR program, of their method and
17 foreclosure and control of E&DCRs and so forth.

18 Now, it was sometime during the period that I
19 was not on the site.

20 JUDGE BRENNER: And, Mr. Higgins, was it a
21 period before you were involved with Shoreham?

22 WITNESS HIGGINS: Yes, it was, Judge.

23 BY MR. LANPHER (Resuming):

24 Q Well, gentlemen, if you assume for the moment
25 that LILCO's findings in Audit 602 and 654 were correct

1 --

2 A (WITNESS HIGGINS) We don't know what those are.

3 Q Those are the findings I just quoted to you
4 that the preparation, issuance and control of E&DCRs
5 affecting specifications, procedures and drawings was
6 considered by LILCO to be unsatisfactory. Okay? I want
7 you to assume that they were accurate, all right?

8 A (WITNESS HIGGINS) If we are going to assume
9 that, could we see the document?

10 Q I'm sorry, my copy of Suffolk County Exhibit
11 57 is marked up with some yellow, but I'm referring to
12 the conclusion lines in each of those.

13 MR. ELLIS: I have an unmarked copy if you
14 care to keep yours. No, it is not unmarked, I'm sorry.

15 MR. LANPHER: I just am going to the
16 conclusion.

17 (Panel of witnesses conferring.)

18 JUDGE BRENNER: We can break around this time
19 if they want to read it. I know they don't need to for
20 your purpose, but maybe they will feel more comfortable.

21 MR. LANPHER: Well, if they need the time, of
22 course, Judge.

23 JUDGE BRENNER: Well, I was going to break
24 close to this point anyway.

25 MR. LANPHER: I leave it up to you, Judge

1 Brenner.

2 JUDGE BRENNER: Let's break at this point and
3 give them a chance and come back at 3:15.

4 (A short recess was taken.)

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1 JUDGE BRENNER: All right, whenever you are
2 ready, Mr. Lanpher.

3 BY MR. LANPHER (Resuming):

4 Q Gentlemen, during the break did you have an
5 opportunity to review Field Audits 602 and 654?

6 A (WITNESS HIGGINS) Yes, we did.

7 Q Did that refresh your recollection whether you
8 were previously familiar with these documents?

9 A (WITNESS HIGGINS) I was not.

10 A (WITNESS NARROW) I was not.

11 Q Would information -- I want you to assume, as
12 we were about to do before the break, the conclusions in
13 these two audits are accurate, all right?

14 A (WITNESS HIGGINS) We can do that.

15 Q Assuming that they are accurate, do you agree
16 that this is the sort of information which would be
17 relevant and important to I&E?

18 A (WITNESS HIGGINS) It is information that would
19 be important to I&E to know and relevant, yes.

20 Q And if I&E had been aware of this information,
21 would you have expected the violation which had been
22 previously cited in 76-06 and closed in 76-12 to be
23 reopened?

24 JUDGE BRENNER: Mr. Lanpher, just for our
25 information, the information or conclusion, as you

1 termed them, of these two field audits that you're
2 asking these questions about are of the two that you
3 read before the break; correct?

4 MR. LANPHER: Yes, sir. To be very specific,
5 it is paragraph 3.1 of each of those audits.

6 (Panel of witnesses conferring.)

7 WITNESS NARROW: I believe your question was
8 if we were aware of these, would we have reopened that
9 violation.

10 BY MR. LANPHER (Resuming):

11 Q Yes, sir.

12 A (WITNESS NARROW) And our answer is that no, we
13 would not have reopened the violation.

14 Q Why?

15 A (WITNESS NARROW) I think that with this
16 knowledge, we would have determined that LILCO was
17 effectively following this item for closeout, and we
18 would, in all probability, have done some further
19 inspection into the problem on our own. And if this
20 further inspection showed us that there was a violation,
21 we would then have opened the violation for it. But I
22 do not believe we would have reopened the other one on
23 the basis of these audits.

24 A (WITNESS HIGGINS) We are certainly talking in
25 hypothetical cases here and trying to see what we would

1 do, given a situation that we don't know exactly
2 exists. It would be a situation -- I agree with the
3 conclusions in these two audits that it was an
4 unsatisfactory situation, and that unsatisfactory
5 situation required management quality assurance
6 attention. And the region would have been very
7 interested in following the corrective actions that
8 LILCO was taking.

9 I believe it would have been discussed with
10 regional management and we would decide upon a course to
11 take. We would probably follow their action to see that
12 what they were doing solved the problem. I doubt that
13 we would write our own violations to strap their
14 violations here.

15 Q Well, Mr. Higgins, let's go back to 76-06, and
16 I understand that we are dealing with a hypothetical
17 situation there. First, it is just fair to state that
18 none of you gentlemen, now that you have had a chance --
19 well, strike that. You said that didn't refresh you.

20 Back to 76-06, page 2, the violation, in that
21 instance, you cited a violation because in the follow-up
22 field audit, Field Audit 399, which followed up on 322
23 the same problem was cited again. Correct?

24 A (WITNESS HIGGINS) Yes, there were some
25 circumstances that we seem to have been able to gather

1 from reading their response, that there were some
2 programmatic problems with their corrective action
3 program at that time because the closeout says part of
4 their corrective action was to change the form so that
5 preventive action was specifically addressed. And it
6 appears, although we don't have that information here,
7 that the program from a programmatic standpoint before
8 did not adequately address preventive actions.

9 What we have in the case here now in these
10 later audits is where they have taken corrective actions
11 and that is referred to, but the actions, as it turns
12 out, were not fully adequate to address the situation.
13 They are aware of the situation, they are addressing it
14 and we would be interested in following up to see that
15 they do reach an eventual solution on it.

16 And if, in looking at these specific issues,
17 we felt that they weren't giving it enough attention to
18 receive resolution, then we would perhaps get our
19 management and their management involved and tell them
20 that we feel it is an important problem and they are not
21 giving it adequate attention and they should escalate it
22 in order to achieve a more prompt and a more effective
23 resolution.

24 But it's a judgment call. Now I don't believe
25 that we would write a violation to track this.

1 Q That is, in fact, a hypothetical judgment
2 call, correct, since you don't recall these audits,
3 yourself?

4 A (WITNESS HIGGINS) That is what we said.

5 MR. LANPHER: Judge Brenner, I'm going to
6 leave this area.

7 (Pause.)

8 BY MR. LANPHER (Resuming):

9 Q Just briefly, gentlemen, back on page 11 of
10 your pre-filed testimony, we talked about the meaning
11 which you ascribed to your statement, "No recurrence of
12 this type of violation." Will you agree that if one
13 were to construe this type of violation as failure to
14 update controlled manuals, not just engineering
15 assurance procedures, that there had been recurrences of
16 this problem?

17 A (WITNESS HIGGINS) We don't define it that.

18 Q I'm asking you if one did define the problem,
19 this type of violation, to be failure to update
20 controlled manuals, there would be recurrences of this
21 problem.

22 A (WITNESS HIGGINS) We would admit that there
23 are other examples of failure to update controlled
24 manuals.

25 Q For instance, the Startup Manual problems

1 which you've referenced elsewhere in your testimony?

2 A (WITNESS HIGGINS) Yes.

3 MR. LANPHER: Judge Brenner, I am going to
4 VIII, just to show you that we could make it there today.

5 JUDGE BRENNER: Well, that was my first
6 concern, was getting there. And then you said not only
7 would you get there, but you might finish it, although
8 you were, of course, making no promises.

9 MR. LANPHER: Well, I did jump to page 30, or
10 whatever.

11 JUDGE BRENNER: This is true.

12 MR. LANPHER: Unless you have further
13 questions on the earlier section.

14 JUDGE BRENNER: No.

15 BY MR. LANPHER (Resuming):

16 Q Gentlemen, I want to direct your attention to
17 the area of your testimony beginning on page 14 and
18 going through page 19, I believe, the top of 19,
19 relating to the recurrent storage, equipment storage
20 conditions that you have cited.

21 Now first, on page 15 the first violation
22 which you summarize is from Inspection & Enforcement
23 Report 74-05, and you describe it as reactor pressure
24 vessel stored without enclosure and with inert gas
25 maintained below specified pressure. Would you agree

1 that this constitutes a failure, at least a portion of
2 this violation constitutes a failure to provide the
3 necessary controlled environment?

4 (Panel of witnesses conferring.)

5 A (WITNESS GALLO) I think we would like to take
6 a look at Inspection Report 74-05, and we do have a copy.

7 MR. LANPHER: Judge Brenner, by and large,
8 these I&E reports which are cited in the witnesses'
9 testimony, I didn't make copies of them for the Board.

10 JUDGE BRENNER: Well, we will see how it goes
11 as to whether that's a problem for us or not. So far,
12 it isn't.

13 MR. LANPHER: I have just been handing things
14 out. I am not holding back on you at this point.

15 WITNESS NARROW: Your question, I believe, was
16 does this constitute a violation of the controlled
17 environment?

18 BY MR. LANPHER (Resuming):

19 Q At least a portion of this. Doesn't this
20 indicate a problem in providing the necessary controlled
21 environment for the reactor pressure vessel?

22 A (WITNESS NARROW) This constituted a failure to
23 maintain the pressure on the inert gas environment of
24 the vessels in storage. As it turns out, it is my
25 recollection -- and I haven't gone through all of it --

1 but the requirement which was established for the vessel
2 in storage was the same as they had established for the
3 vessel during shipment by sea.

4 And as a result of this finding, General
5 Electric Company and Stone & Webster reviewed their
6 requirements and determined that that was too stringent
7 a requirement. And to put this in its proper
8 perspective, it was not a case that the environment was
9 not inert; it was a case that the pressure was lower
10 than what they had pre-determined.

11 Q Mr. Narrow, it is correct, is it not, that
12 whatever that precise environment was, that the
13 environment which was observed by the I&E inspector
14 deviated from that which had been specified?

15 A (WITNESS NARROW) That is correct, and that is
16 why it was written as a violation. However, the
17 requirements which have been established, they
18 established a minimum pressure of .04 psig, and they
19 also established a maximum leak rate, and they found
20 that in storage it was not possible to maintain both of
21 those conditions at the same time. If their pressure
22 was maintained at the .04 psig, then their leak rate
23 would go up above the 200 standard.

24 Q So subsequently, they changed the
25 requirements; correct?

1 A (WITNESS NARROW) Correct.

2 Q But at the time you wrote the violation, it
3 was at least in part for failure to maintain the
4 necessary environmental conditions?

5 A (WITNESS NARROW) That is correct. And that is
6 why the violation was written.

7 Q Mr. Narrow, if you look --

8 A (WITNESS NARROW) Excuse me, may I add
9 something? Mr. Higgins points out that I may not have
10 pointed out carefully that the environment that was
11 maintained in the vessel was still an inert gas
12 environment. There was no question of it having the
13 wrong environment; it was merely that they could not
14 maintain the established pressure.

15 Q Right. Thank you. Now looking at item 2 on
16 page 15 of your pre-filed testimony, it states that
17 records of dew point and outside temperature were not
18 maintained, and this relates to I&E Report 75-05.

19 First, Mr. Narrow, this relates again to the
20 reactor pressure vessel, correct?

21 A (WITNESS NARROW) I will look it up. I believe
22 that is correct.

23 (Panel of witnesses conferring.)

24 MR. LANPHER: Judge Brenner, for the benefit
25 of the Board, this happens to be a very short notice of

1 violation. It is five lines. Why don't I just read it?

2 JUDGE BRENNER: You can if you want to, but we
3 have it here. You don't have to if he answers your
4 question directly and that satisfies you.

5 MR. LANPHER: All right.

6 JUDGE BRENNER: Did you say you had it?

7 WITNESS NARROW: I have the notice of
8 violation. I was looking for the details to get more
9 information concerning what the actual violation was.

10 JUDGE BRENNER: So far, can you answer his
11 question so far?

12 WITNESS NARROW: Would you repeat your
13 question, please?

14 BY MR. LANPHER (Resuming):

15 Q My question, Mr. Narrow, was am I correct that
16 this, again, involves the reactor pressure vessel?

17 A (WITNESS NARROW) Yes, it does.

18 Q Am I correct that the nature of the problem
19 was that the dew point of the nitrogen blanket within
20 the reactor pressure vessel was not maintained within
21 the limit specified by the storage procedure?

22 A (WITNESS NARROW) That is correct.

23 Q Further, that the record showing dew point
24 versus outside temperatures were not maintained, as
25 required by the storage procedures?

1 A (WITNESS NARROW) That is what the violation
2 states.

3 Q So that is it fair to state that failing to
4 maintain the dew point of the nitrogen blanket and the
5 adequate temperatures for the pressure vessel were not
6 maintained?

7 A (WITNESS NARROW) Excuse me a minute. I have
8 the details now and I would like to see them.

9 (Pause.)

10 Q Do you recall my question or would you like me
11 to repeat it, Mr. Narrow?

12 A (WITNESS NARROW) Please repeat it.

13 Q I think it was a little bit confusing. The
14 dew point is maintained by controlling temperature;
15 correct?

16 (Panel of witnesses conferring.)

17 A (WITNESS HIGGINS) That is one way of
18 controlling it.

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1 Q Is that the way it was controlled in this
2 instance; do you know?

3 A (WITNESS HIGGINS) I don't know.

4 Q Would you agree, Mr. Narrow?

5 A (WITNESS NARROW) I believe it was.

6 Q You believe that this was a problem of
7 temperature control, then?

8 A (WITNESS NARROW) I believe so.

9 Q Well, do you agree, Mr. Narrow, that this is
10 an instance where the proper environmental conditions
11 were not maintained for the pressure vessel?

12 A (WITNESS NARROW) Well, the details say that a
13 spot check of dew point and outside air temperatures had
14 identified one case, one point where they were outside
15 the specified requirements. The remaining points,
16 obviously, were within the specified requirements.

17 I believe from reading this that the violation
18 was primarily a matter of records. That is, records
19 were not available, so that I do not think that it was
20 primarily a matter of environmental conditions, I think
21 it was primarily records, the question of maintaining
22 the proper records.

23 Q Well, one aspect of the violation was the
24 proper dew point was not maintained; correct?

25 A (WITNESS NARROW) In one case the proper dew

1 point was not maintained. That is, observing the record
2 or the information available concerning dew point and
3 outside air temperature, he found one point at which it
4 was outside the specified requirement.

5 Q Well, would you agree, then, that in that
6 instance where the proper dew point was not maintained,
7 this is an example of failure to maintain the proper
8 environmental condition?

9 A (WITNESS NARROW) I believe that in this case
10 the violation was primarily failure to maintain the
11 proper records; that one point on a curve, when the dew
12 point was not maintained at the proper point out of a
13 long series of points, I would really question whether
14 we could consider that as a failure to maintain the
15 proper environment.

16 Q Well, it was outside the specified
17 environmental limits; correct?

18 A (WITNESS NARROW) For one point over a large
19 series of points, and I don't recall how frequently
20 these records were maintained. I would assume it would
21 be a matter of, say, one point an hour or something of
22 that nature.

23 Q Well, Mr. Narrow, at page 16 of the prefiled
24 testimony you have stated, and it is in the paragraph
25 after item 11, that several of the problems which are

1 listed in the previous pages have not recurred, and two
2 of those are items 1 and 2, which are two I&E reports we
3 have just talked about. That is not entirely accurate,
4 is it?

5 [Panel of witnesses conferring.]

6 A (WITNESS NARROW) I would say that the reason
7 we didn't consider this as two instances of the same
8 type of that in one case we considered it a matter of
9 recordkeeping, in the other case we considered it a
10 problem with the environment maintained withinside the
11 vessel.

12 Q Well, it would have been more accurate, then,
13 on page 16 to say that items 1 and 2 have recurred to
14 the extent that while item 2 was not primarily an
15 environmental condition problem, there was an aspect of
16 that violation which involved a failure to maintain the
17 proper environmental conditions; correct?

18 A (WITNESS HIGGINS) No, sir. We looked at
19 those and we felt that, although they did have both to
20 do with the reactor vessel, we felt that they were
21 different enough that it was not a recurrent condition.

22 Q You don't describe that anywhere in your
23 testimony, do you?

24 A (WITNESS HIGGINS) I don't describe the fact
25 that I just stated.

1 Q Well, you do not describe in your testimony
2 that item 2 on page 15 did include an aspect of failure
3 to provide the necessary environment.

4 A (WITNESS HIGGINS) When we listed item 2, we
5 listed it as records of dew point and outside
6 temperature not maintained.

7 Q And that wasn't a complete description of the
8 violation, was it?

9 A (WITNESS NARROW) I believe I said this
10 earlier, but perhaps it didn't come through the way I
11 intended. In reviewing this item and in writing it up
12 as a violation, yes, we wrote up the fact that the dew
13 point was not maintained within the proper range, and we
14 did this for the obvious reason that we want this
15 corrected and we do not want them going outside the
16 range. However, we would not have written this as a
17 violation for a single point of a long series of points
18 falling outside the range under this type of condition.

19 Now, in some case that might be of sufficient
20 importance that we would. In this case it would not
21 be. Therefore, we wrote this up primarily because they
22 did not have the proper records. We put this other
23 point in because it was there and it was observed and it
24 was outside the record, but our consideration of this
25 violation was not that it was a violation of maintaining

1 the proper environment; the environment was maintained
2 properly. It was a concern with them maintaining
3 records of what the environment was.

4 Q Gentlemen, if you could go to Appendix 2D, or
5 2A of your prefiled testimony, page 2 of that, which is,
6 again, 79-16, which we talked about before, that has a
7 list of five areas that were cited by the inspector. Do
8 you have that?

9 A (WITNESS HIGGINS) Yes.

10 Q The last item, item 5, states that space
11 heaters in two panels were found to be de-energized.
12 Now, space heaters are provided in order to control the
13 environmental conditions; correct?

14 A (WITNESS HIGGINS) Yes.

15 Q And to ensure that whatever the item of
16 equipment is does not deteriorate; correct?

17 A (WITNESS HIGGINS) Yes.

18 Q Would you agree, then, that the finding in I&E
19 79-16 is similar to the finding in item 1 to the extent
20 that they both pertained to providing the proper
21 environmental conditions?

22 A (WITNESS HIGGINS) To the extent that they
23 pertained to the proper environmental conditions, yes,
24 but that amount of similarity, to me, is no stronger
25 than the fact that they both pertain to storage.

1 Criterion 2 states that activities affecting quality
2 shall be done under suitable environmental conditions
3 and to provide suitable environmental conditions is the
4 whole purpose of the storage control program; and to
5 that extent they are similar, and that is why we
6 included them in this grouping of storage items.

7 MR. ELLIS: Excuse me. I didn't want to
8 interrupt the witness. I was searching for a
9 clarification. I think Mr. Lanpher indicated similar to
10 item 1, and I was seeking a clarification as to what he
11 meant by item 1.

12 MR. LANPHER: Item 1 on page 15 -- I'm
13 sorry -- of their prefiled testimony.

14 WITNESS HIGGINS: That is how I answered it.

15 BY MR. LANPHER: (Resuming)

16 Q And Mr. Narrow, you believe that item 2 on
17 page 15, to the extent that the dew point was not
18 maintained within the specified limits, was a
19 temperature control problem? That is your
20 understanding, correct?

21 A (WITNESS NARROW) I said, Mr. Lanpher, that I
22 was not sure as to just how they maintained the dew
23 point; probably it was a temperature problem, but I
24 don't know that for a fact.

25 Q Gentlemen, do you still have Suffolk County

1 Exhibit 56? Well, those are the FQC audits, and I would
2 like to ask you whether you are familiar with FQC Audit
3 21, Finding B.9.

4 A (WITNESS GALLO) We have that now. We are
5 reading it.

6 [Pause.]

7 Q Gentlemen, was this one of the FQC audits that
8 was reviewed by I&E during the course of its inspection
9 activities?

10 [Panel of witnesses conferring.]

11 MR. LANPHER: For the record, the date on the
12 cover page of this audit is April 27, 1977.

13 WITNESS NARROW: I do not recall having
14 reviewed this audit. I do recall that we had a problem
15 with maintaining the temperature-humidity conditions in
16 the A level storage of the main warehouse. I can't say
17 that it was at this time and I don't know whether it was
18 prior to this or before this.

19 BY MR. LANPHER: (Resuming)

20 Q Would you agree that those problems which you
21 described in maintaining the proper humidity conditions
22 are a problem in maintaining the proper controlled
23 environment?

24 A (WITNESS NARROW) It is maintaining the proper
25 controlled environment of the warehouse, yes.

1 [Pause.]

2 Q Now, looking at page 15, item number 3, that
3 you have described as corrosion on the threads of
4 pipehangers in storage. Now gentlemen, you have stated
5 that this again is an item that has not recurred. Is it
6 your testimony that there have been no similar instances
7 either before or after this that have been cited by I&E?

8 [Panel of witnesses conferring.]

9 A (WITNESS NARROW) Could we have that question
10 again, please?

11 Q Is it your testimony, gentlemen, that there
12 have been no similar instances cited by I&E, either
13 before or after this inspection report 76-01?

14 [Panel of witnesses conferring.]

15 A (WITNESS HIGGINS) To our knowledge there are
16 not other instances where we have cited violations for
17 items like this in storage and exhibiting corrosion.

18 Q Gentlemen, would you look at Suffolk County
19 Exhibit 103, which is I&E Report 74-02, and violation
20 number 2 of that.

21 A (WITNESS NARROW) Did you say item number 2?

22 Q Item number 2, and I think page 7 of the
23 report itself has details concerning this item.

24 [Panel of witnesses conferring.]

25 My first question, gentlemen, is --

1 [Panel of witnesses conferring.]

2 Gentlemen, my first question is can you please
3 explain why this --

4 A (WITNESS HIGGINS) Mr. Lanpher, we haven't
5 finished reading it yet.

6 Q Well, I haven't asked the question yet.

7 JUDGE BRENNER: Let him ask the question and
8 then we will let you read it after he asks it. That
9 may assist in your reading it.

10 BY MR. LANPHER: (Resuming)

11 Q My first question is, gentlemen, why was this
12 item, violation number 2 of 74-02, not included in your
13 list of storage-related problems on pages 15 and 16?

14 A (WITNESS HIGGINS) We would like to read it.

15 [Panel of witnesses conferring.]

16 A (WITNESS NARROW) Mr. Lanpher, reading the
17 details of this inspection report, it appears that this
18 violation was observed on cad welds, which were a part
19 of the reactor building structure and which were in the
20 process of being installed and in which rebar was to be
21 installed, and they were outdoors awaiting installation
22 of the rebar; therefore, the situation was quite
23 different than it was with the other one where the
24 equipment was in storage.

25 Q Mr. Narrow, I'm not sure if you intended that

1 to respond to my question of why it was not included in
2 this list of all of the storage-related items.

3 A (WITNESS NARROW) Well, it possibly could have
4 been included; however, we didn't consider this as being
5 in storage, not even in place storage as we consider
6 equipment. It was being installed, it was being worked
7 on, and therefore we considered it as a separate
8 situation and not a storage situation.

9 Q Well, even items in the process of
10 installation, Mr. Narrow, are required to be protected
11 against things like weather; correct?

12 A (WITNESS NARROW) That is correct, and that is
13 the reason for this violation having been written.

14 Q And such weather protection had not been
15 provided for these cad weld sleeves; correct?

16 A (WITNESS NARROW) That is correct.

17 Q And they exhibited rust inside the sleeves;
18 correct?

19 A (WITNESS NARROW) That is correct.

20 Q Am I correct that rust and corrosion are
21 pretty interchangeable words in this business?

22 A (WITNESS NARROW) I would agree with that, yes.

23 MR. ELLIS: Excuse me. I was not quick enough
24 to get a question and answer read back to me.

25 JUDGE BRENNER: Which one do you need?

1 MR. ELLIS: It is the one about whether there
2 was actual rust or not.

3 JUDGE BRENNER: I think he pretty much asked
4 him the question directly and he answered yes. The
5 thought that crossed my mind was whether his answer was
6 based upon reading the report or anything else. I don't
7 know if that is why you wanted the particular words of
8 the question.

9 Am I guessing right, Mr. Ellis?

10 MR. ELLIS: Yes, sir.

11 MR. LANPHER: Well, why don't I ask.

12 BY MR. LANPHER: (Resuming)

13 Q What was the basis for your answer, Mr.
14 Narrow, that there was rust inside the sleeve?

15 A (WITNESS NARROW) The report states that there
16 was rust inside the sleeve, there was what he termed
17 "advanced rust;" correct?

18 A (WITNESS NARROW) He noted that, and I might
19 add that this particular I&E is very sensitive to rust.

20 [Laughter.]

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1 JUDGE BRENNER: I assume you made your comment
2 -- your comment might be pertinent, Mr. Narrow, and
3 therefore, I didn't mean to chuckle; but I would like to
4 ask you why you say that. Is that the nature of the
5 scope of the kinds of things that an inspector looks at
6 or the stage of a project that what inspector examines?

7 WITNESS NARROW: He is an inspector on
8 structural work, and he has frequently identified areas
9 of rust on rebar and rust in other areas. And while it
10 sounded facetious, actually he is sensitive to this type
11 of problem.

12 JUDGE BRENNER: That wouldn't be unusual, or
13 would that be unusual for an inspector who was
14 inspecting the structural rebar at that stage of the
15 construction? That would be an area of interest for any
16 inspector looking at that, correct?

17 WITNESS NARROW: No, sir. It is my opinion --
18 and I happened to also be a civil engineer initially --
19 that rust on rebar is not detrimental unless it is heavy
20 enough that it can flake off. And so whereas he might
21 consider it a detrimental condition in many cases,
22 probably I would not; and I cannot tell from this
23 whether the rust on the rebar was detrimental. However,
24 the rust in the sleeve was detrimental and would have
25 been subject to a violation regardless of the condition

1 of the rebar.

2 JUDGE BRENNER: Thank you.

3 BY MR. LANPHER: (Resuming)

4 Q You have no reason to disagree with the
5 inspector's findings here, do you, sir?

6 A (WITNESS NARROW) No, sir. I agree with the
7 finding.

8 Q So would you also agree that to the extent
9 that corrosion rust was exhibited in this finding, it is
10 similar to the finding which you cite in number 3 on
11 page 15 of your testimony?

12 A (WITNESS NARROW) As I said before, it's
13 conceivable that it might have been placed in that
14 grouping. We considered it to be sufficiently different
15 that we did not place it in that grouping. It was a
16 matter of judgment.

17 Q In preparation of your testimony did you
18 actually give that consideration?

19 A (WITNESS NARROW) Yes, sir, we did.

20 Q Are there any other -- well, would you call
21 this a close call on whether you were going to add this
22 into your listing of storage-related problems?

23 (Panel of witnesses conferring.)

24 A (WITNESS HIGGINS) I don't recall it myself
25 how close it was. What we did when we went through the

1 history of violations is Mr. Narrow and myself went
2 through and reviewed each one, and we made up groupings
3 and put them in the groupings. And then when we were
4 all done with that we looked at them to see what fell in
5 those particular ones.

6 After we had decided which groupings were
7 areas that over the years had required additional
8 management attention, we went back and looked at the
9 rest of them again to see if we had any other ones that
10 we wanted to add into those groups, and we had a lot of
11 working documents at the time we were going through it.
12 We utilized the listings of violations, we utilized the
13 responses, and we utilized the inspection reports
14 themselves.

15 I don't recall right now how close a call that
16 one was.

17 Q Now, in your testimony at page 16 where you
18 state that there was no recurrence of this problem, item
19 3 on page 15, you were referring solely to recurrence in
20 I&E violation citations, correct?

21 A (WITNESS HIGGINS) Yes.

22 Q Do you have any knowledge whether there were
23 instances subsequent to '76?

24 A (WITNESS GALLO) Could we take a quick break?

25 JUDGE BRENNER: Sure. Let's come back at ten

1 after 4:00.

2 (Recess.)

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1 JUDGE BRENNER: Let's continue.

2 BY MR. LANPHER: (Resuming)

3 Q Gentlemen, we were talking about the corrosion
4 matter, 76-01, item 3 on page 15. Have you performed
5 any analysis to determine whether audits by LILCO or by
6 Stone and Webster FQC subsequent to I&E inspection
7 report 76-01 have revealed instances similar to this one?

8 A (WITNESS NARROW) No, we have not performed
9 any analysis of the LILCO audits. As I said before, we
10 looked at the LILCO audits, and we reviewed them in
11 connection with a number of items. And if we happened
12 to review a particular one which identified this, we
13 would have taken this into consideration. We have not
14 made any analysis with respect to corrosion.

15 A (WITNESS GALLO) Mr. Lanpher, we have reviewed
16 the list of audits that were provided to us this week,
17 the field audits related to storage problems. So if you
18 are referring to that type of analysis, we have done
19 that, and that has been during this week.

20 Q Well, gentlemen, three of the audits that were
21 listed in that grouping of the field audits were Field
22 Audit 443, Finding 4.1; Field Audit 679, Finding 4.3;
23 and Field Audit 740, Finding 4.2.

24 Now, with respect to those three field audits
25 do you have any recollection of any knowledge concerning

1 those audits aside from what you learned this week when
2 you reviewed them?

3 (Panel of witnesses conferring.)

4 MR. LANPHER: And, Judge Brenner, all of these
5 are portions of Suffolk County Exhibit 66.

6 WITNESS NARROW: Would you repeat the
7 question, please?

8 BY MR. LANPHER: (Resuming)

9 Q My question is those three field audit
10 findings, do you recall any knowledge about any of them
11 prior to looking at them this week?

12 A (WITNESS NARROW) No, sir, I do not.

13 Q And that is the same for the entire panel?

14 A (WITNESS HIGGINS) I do not.

15 A (WITNESS GALLO) That is correct. I have not
16 seen those.

17 Q And two other items which were referenced in
18 the list of documents that might be used in examination
19 were FQC Audit 21, Finding D.18.

20 A (WITNESS HIGGINS) Mr. Lanpher, on Field Audit
21 740, was it 4.2, the item?

22 Q Yes, it was, sir.

23 A (WITNESS HIGGINS) It is difficult for me to
24 tell exactly in remembering component numbers and so
25 forth at this stage of the game, but I believe earlier

1 in the week I may have given an example to Judge
2 Carpenter about some corrosion inside a terminal box,
3 and that was before I read this, and this sounds like
4 that instance.

5 X-61 I believe is a control room air
6 conditioning system. FLT-02B is the filter for that.
7 And I believe the situation that I had been describing
8 was the inside surfaces of that electrical panel box for
9 that item. It sounds familiar. So perhaps I was aware
10 of the instance, although not through this field audit.

11 Q Are you finished?

12 A (WITNESS HIGGINS) So that was identified
13 apparently back in 1978, and on one of my walkthroughs
14 when I did identify it and asked about it, the
15 information I was given and the paperwork that I was
16 shown showed that it was documented on a
17 nonconformance-type report and scheduled to be replaced.

18 Q Well, this Field Audit 740 dates from April
19 1978. Did you become aware of this situation after you
20 became resident inspector, Mr. Higgins?

21 A (WITNESS HIGGINS) Yes, sir.

22 Q So if this is the same situation, you observed
23 this more than a year later?

24 A (WITNESS HIGGINS) That is correct. And I was
25 told at the time when I asked about it that it had been

1 in that condition for some period of time, and it was on
2 the work list to be done and had not been done yet. The
3 corrective action was to replace the entire panel, as I
4 recall.

5 Q And was that replacement of the entire panel
6 because of the extensive corrosion?

7 A (WITNESS HIGGINS) Yes.

8 Q Gentlemen, I was going to ask you about two
9 FQC audits, FQC Audit 21, Finding D.18, and FQC 23,
10 Finding D.5(2).

11 Now, prior to review of these items this week
12 do you have any recollection of any knowledge or any
13 knowledge about these items?

14 (Panel of witnesses conferring.)

15 A (WITNESS GALLO) In FQC Audit 23, the
16 observations are on page 3 of 6, D.5. And then there is
17 one, two, three, four, five items on that page, and you
18 are interested in the second one? The only reason I ask
19 is the way you enumerated it was a little bit different
20 than this, and I just wanted to make sure we were on the
21 same piece of paper.

22 Q Do any of you have any recollection of any of
23 those?

24 A (WITNESS GALLO) I've never seen any one prior
25 to this week.

1 A (WITNESS HIGGINS) No.

2 Q Thank you.

3 Gentlemen, looking at item number 6 on page 15
4 of your prefiled testimony, you describe a violation
5 from I&E report 76-12 which involved iron splatter on
6 the refueling cavity lines.

7 Now, am I correct that this was due to thermal
8 cutting of carbon steel?

9 A (WITNESS NARROW) Mr. Lanpher, this was a case
10 where the refueling cavity liner had quite a bit of
11 staging inside, using it for a working platform, and
12 much of it was made of structural steel. And at one
13 time -- and I'm not clear now whether it was during
14 removal of that platform or during installation -- I
15 believe it was during installation -- they did some
16 cutting of structural steel there, and they got splatter
17 on the surface of the refueling cavity line. This was
18 identified by one of our inspectors and written up as a
19 violation.

20 Q This was an instance where the activity, the
21 thermal cutting was not taking place with sufficient
22 care to avoid potential damage to some other item,
23 correct?

24 A (WITNESS NARROW) Correct. They did not
25 adequately protect the line.

1 A (WITNESS GALLO) I was just going to add that
2 there is a minor typographical error in that item. It
3 should be "molten splatter on the refueling cavity
4 liner," which is a stainless steel liner in their
5 refueling cavity.

6 Q In other words, instead of "line" it should be
7 "liner?"

8 A (WITNESS GALLO) Yes. It should be liner.

9 Q Gentlemen, you state that the problem in item
10 6 has not recurred. It is true, is it not, that in the
11 CAT inspection violation number 4 the inspectors
12 observed grinding next to the RHR pump with grit and
13 dust settling on the unprotected RHR pump shaft?

14 A (WITNESS HIGGINS) What page was that?

15 Q Well, is that not part of violation number 4
16 in the CAT inspection?

17 (Pause.)

18 A (WITNESS HIGGINS) No. It does not appear to
19 be part of it.

20 MR. LANPHER: If I could have one second,
21 Judge Brenner.

22 (Pause.)

23 BY MR. LANPHER: (Resuming)

24 Q Gentlemen, could you turn to page 34 of the
25 CAT inspection? In the middle of the page there is a

1 sentence, "On February 25, 1982, the inspector observed
2 grinding being conducted next to an RHR pump with grit
3 and dust settling around the unprotected RHR pump shaft."

4 A (WITNESS HIGGINS) Yes, I see that.

5 Q Further down the page they talk about these
6 housekeeping and fire protection observations form the
7 basis for a violation previously identified.

8 Now, is it your testimony that this RHR pump
9 problem with the grit was not part of that violation?

10 A (WITNESS HIGGINS) In reading Appendix A it is
11 not listed as part of the violation, and that is the
12 formal violation. It was identified as an
13 unsatisfactory condition and was written up in the
14 inspection report. And that is all I have.

15 Q Well, it is fair to state that all of the
16 details of the violation number 4, which is described in
17 Appendix A, are not in there, correct?

18 (Panel of witnesses conferring.)

19 A (WITNESS GALLO) Mr. Lanpher, everything in
20 the details is not in the violation, if that is your
21 question.

22 Q Well, that's right. And so just because this
23 particular notation is not in the Appendix A listing,
24 does that mean that it is not part of the violation?

25 A (WITNESS GALLO) Yes, sir.

1 Q Why wasn't it included as part of the
2 violation?

3 A (WITNESS GALLO) I don't know.

4 Q Well, would you agree that this problem is
5 similar to that which was noted as a violation in I&E
6 report 76-12? And 76-12 was the molten iron splatter.

7 A (WITNESS HIGGINS) Those are quite a bit
8 different, I believe.

9 Q Well, isn't it true that in each instance an
10 activity was being carried on without sufficient care
11 for the effects of that activity on other items?

12 A (WITNESS HIGGINS) In that respect, yes.

13 JUDGE BRENNER: I guess you should let him
14 explain why he thinks they are different given what he
15 said, and this would be a useful point while it is fresh
16 in our mind.

17 Mr. Higgins, you said you thought it was
18 different even though you agreed that it would fit under
19 the umbrella of the definition Mr. Lanpher suggested.
20 Why do you think they are sufficiently different as not
21 to be considered similar?

22 MR. ELLIS: May I ask a clarification? For
23 what purpose?

24 JUDGE BRENNER: For the purpose of assessing
25 whether there is a recurrent problem from a QA/QC point

1 of view, or a second occurrence of a problem.

2 WITNESS HIGGINS: No. They do appear to be
3 significant, quite a bit different from that viewpoint
4 for a couple of reasons. One is a case where -- the one
5 back in 1976 involves a completely different type of
6 cutting process and protecting something that you
7 normally would not have to protect the liner from that
8 type of thing.

9 And the second one is an instance where you
10 are doing say grinding which is different than the
11 thermal cutting that was involved, and the components
12 you are protecting is different. Also, when assessing
13 it from a recurrence in a QA/QC standpoint, in addition
14 to the processes and the groups involved, you really
15 need to take into account the time frame involved.

16 And here we have a case, 1976, one, in 1982
17 for the other, and even if they were essentially
18 identical ones, I would say that we wouldn't really
19 consider that recurrent with that time frame in between
20 the two.

21 WITNESS GALLO: From the management standpoint
22 I would agree with that. I would say that even if they
23 were the exact same items, unless they were more
24 significant than this I would not consider them
25 recurrent.

1 BY MR. LANPHER: (Resuming)

2 Q Mr. Gallo, from your last answer I got the
3 impression that the CAT inspection item that we have
4 been talking about on page 34 is not significant getting
5 into the RHR pump shaft grit and dust. Is that true?

6 A (WITNESS GALLO) I think I said I did not
7 consider it significant enough to consider it for a
8 potential recurrent item, especially in light of the
9 time between the first occurrence and this one.

10 Q Well, then, you weren't implying that this
11 wasn't necessarily significant in and of itself.

12 A (WITNESS GALLO) There certainly would be a
13 concern raised by that situation as described.

14 Q Well, Criterion 2 provides, does it not, that
15 activities affecting quality shall be accomplished under
16 suitably controlled conditions, correct?

17 A (WITNESS GALLO) I will take your word for
18 it. I believe that's correct.

19 Q Why doesn't this violate Appendix B Criterion
20 2?

21 A (WITNESS GALLO) Well, as I previously
22 answered, I do not know why this was not cited, what the
23 considerations were.

24 Q Would you agree that on its face it appears to
25 be a violation of Criterion 2 of Appendix B?

1 A (WITNESS GALLO) If an inspector wrote that up
2 as a violation of Criterion 2, I would have to take a
3 long, hard look at it before I would issue it.

4 Q Why?

5 A (WITNESS GALLO) I would first want to know
6 what the conditions were supposed to be and if there was
7 damage to the pump and what the real circumstances were
8 behind it. With the words here it's very difficult to
9 tell the actual significance of it. As an inspector I
10 would say it would be a concern, and I would look at
11 it. I would look at it more carefully.

12 A (WITNESS HIGGINS) Mr. Lanpher, there might be
13 some additional facts there that we don't have. I'm not
14 sure either even though I was involved with the CAT
15 inspection what the considerations were on this
16 particular item. I don't recall the instance coming up
17 during the CAT inspection, and there could have been
18 mitigating circumstances that resulted in it not being
19 in the violation such as actions taken afterwards, right
20 afterwards, say by the person involved, to clean up the
21 RHR pump shaft or what have you. But I am just not
22 aware of any additional facts surrounding that one.

23 Q Well, this isn't even listed as an open item,
24 correct?

25 A (WITNESS HIGGINS) That is correct. It is

1 listed under the housekeeping, and it is listed as a
2 concern, and it was not included in the violations. We
3 do not know why.

4 Q Well, if it is not listed in the violation,
5 there is also -- which is your previous testimony --
6 there is also no provision for I&E followup on it
7 either, is there?

8 A (WITNESS HIGGINS) When we follow up on the
9 housekeeping item that it is a violation, we will be
10 following up on all aspects of housekeeping; and when we
11 do that, we look at the details, and that consideration
12 would be given to that item.

13 Q Now, gentlemen, looking at page 16 of your
14 testimony, you state that items 1, 2, 3, 6, 7 and 8 are
15 specific-type problems which have not recurred. Is it
16 fair to state -- well, you also state that the other
17 items involve protection or covering of installed
18 equipment.

19 Is it fair to state that those other items,
20 which would be 4, 5, 9, 10 and 11, in your listing on
21 pages 15 and 16 were recurrent problems?

22 A (WITNESS HIGGINS) We didn't cite them
23 specifically as recurrent items in our inspection
24 reports, but we did consider that they were items all in
25 the same basic area, and it was an area that we felt

1 required more management attention.

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1 Q Now, item 4 from 76-07 involved dust and
2 debris in the switchgear cabinets and also a lack of
3 covering, correct?

4 A (WITNESS HIGGINS) Yes.

5 Q Now, item 5 from 76-09 involved again dust and
6 also dirt, and seals and covers were missing?

7 (Panel of witnesses conferring.)

8 A (WITNESS GALLO) We are searching for 76-09.

9 (Pause.)

10 A (WITNESS HIGGINS) Yes, our reading of that
11 shows that there were problems with dust and dirt and
12 coverings.

13 Q Now, 78-16, item 9 at the top of page 16, you
14 describe as dirt in the switchgear cabinet and also
15 involved a lack of covering, correct?

16 (Pause.)

17 A (WITNESS HIGGINS) That item involved an
18 accumulation of dirt, yes.

19 Q 79-06, your item 10, involved dirt and a
20 failure to properly seal, and it also involved dust in
21 the HPCI, the core spray and the RHR pumps, correct?

22 (Pause.)

23 A (WITNESS HIGGINS) That item involved the
24 HPCI, the RHR pumps, and the core spray pumps, and it
25 involves coverings, dirt and water.

1 Q Now, gentlemen, you list that as a single
2 violation. In fact, there were two violations, isn't
3 that correct?

4 A (WITNESS HIGGINS) That inspection report had
5 what appears to be three violations in it.

6 Q Well, it had two violations relating to
7 storage.

8 A (WITNESS HIGGINS) One item relates to the
9 storage activities and the second item relates to
10 failure to take adequate corrective action, which we
11 felt was a quality control type of item. That is, when
12 the initial storage problems were identified by the
13 inspector, in his opinion the Licensee did not take
14 prompt corrective action to correct them. And when he
15 went back later on in that same inspection period and
16 found the same instance, he told them that the condition
17 still existed and in his view that was a failure to
18 provide adequate corrective actions for the items he had
19 identified earlier, and therefore a citation was written
20 against the failure to take adequate corrective action.

21 Q Was there a reason that you did not include
22 that second violation in your listing?

23 A (WITNESS HIGGINS) We didn't include it in our
24 listing of storage problems. The storage conditions
25 listed in that second violation are the same as in the

1 first one. They were not corrected during the time of
2 the inspection, and for that reason the inspector felt
3 that it was, the Licensee did not exhibit prompt
4 corrective action and therefore this instance was in
5 fact written up as two separate violations, one for the
6 inadequate storage and one for failure to take adequate
7 corrective action.

8 Q Mr. Higgins, that sounds similar to a
9 situation we covered in CAT violation number 4 in the
10 housekeeping area, where the inspectors had noted
11 problems early in the CAT inspection and then, ten day
12 or so later, maybe a little longer later, they came back
13 and looked at the same areas again and didn't find the
14 deficiencies eliminated. Would you agree?

15 (Panel of witnesses conferring.)

16 A (WITNESS HIGGINS) They are similar, Mr.
17 Lanpher. A judgment was made in this case that for this
18 particular situation the inspector felt that the action
19 should have been more prompt, and the reason for his
20 judgment was -- as Mr. Gallo mentions, I'm talking now
21 about the inspection back in 1979, 79-06.

22 In that case, the inspector felt that there
23 was a continuing degradation of equipment here and it
24 was a situation that required much more prompt action.
25 It was a case where the turbines were open, the bearings

1 were open, and it was exposed to dirt and water, and he
2 felt much more prompt action was called for, and that
3 was the reason that he informed the Licensee that they
4 were not taking adequate corrective action and informed
5 them that they were in violation of Appendix B for
6 failure to take prompt corrective action. After he
7 informed them of that, he did get their attention and it
8 was corrected before the end of the inspection.

9 In the CAT inspection it was similar. Because
10 of the nature of the items, the team, the inspector and
11 management involved with the team felt that it did not
12 merit a failure to take prompt corrective action, but we
13 did have concern that they weren't taking the corrective
14 action that they should be taking, and we expressed that
15 concern to them. And before the inspection was over it
16 was cleaned up.

17 Q Would you agree, Mr. Higgins, that this is
18 sort of a judgment call on the CAT -- well, in both
19 instances, whether to cite a single violation or a
20 single violation plus one for criterion 16?

21 A (WITNESS HIGGINS) It certainly is a judgment
22 call, and one other difference that Mr. Gallo just
23 pointed out is that one is equipment storage, the one
24 back in 79-06, and the one in the CAT inspection is
25 housekeeping. And that certainly had a bearing on it

1 also, the fact that general housekeeping, being not as
2 critical to get cleaned up right away, as opposed to
3 equipment storage conditions, where the equipment is
4 open to degradation.

5 That is why we were very concerned in 79-06
6 that the action had not been taken promptly.

7 Q Well, Mr. Higgins, some of the housekeeping
8 deficiencies noted initially in the CAT inspection are
9 related to fire hazards, correct?

10 A (WITNESS HIGGINS) That is correct.

11 Q Don't you think those should be cleaned up
12 right away or fixed right away?

13 A (WITNESS HIGGINS) "Right away" is again very
14 subjective.

15 Q Well, you thought in the CAT inspection they
16 had taken too long, correct?

17 A (WITNESS HIGGINS) Yes.

18 JUDGE BRENNER: Incidentally, I know I heard
19 those last two or three questions before, but I will
20 give you a little leeway for context.

21 MR. LANPHER: I'm not going to finish this
22 area tonight.

23 JUDGE BRENNER: That's the second time I've
24 been right in this proceeding.

25 (Laughter.)

1 MR. LANPHER: I think I made a lot more
2 progress than you thought I was going to.

3 JUDGE BRENNER: That's true.

4 MR. ELLIS: Judge, can we look at the crystal
5 ball now?

6 JUDGE BRENNER: Yes, let's take a minute or
7 two.

8 MR. LANPHER: Judge Brenner, actually, before
9 we go off the record I would like to move into evidence
10 Suffolk County Exhibits 103, 105, and 106 to the extent
11 inquired into. I have marked for identification 104,
12 which is 81-22, but I in fact didn't ask any questions
13 about it. We may be coming back to that, however. 103
14 is 74-02, 105 is 77-05, the separation item, and 106 is
15 76-06, having to do with the E&DCR's.

16 MR. ELLIS: May I have those numbers once
17 again, please? 103?

18 MR. LANPHER: Is 74-02. 105 is 77-05, and 106
19 is 76-06.

20 JUDGE BRENNER: Any objections?

21 MR. ELLIS: Judge, I made a standing objection
22 which I don't want to repeat, and I understand the
23 Board's standing ruling on that objection. But other
24 than that, no, sir.

25 JUDGE BRENNER: I guess I didn't realize

1 that. I thought we had worked it out on these.

2 MR. LANPHER: That's the first time I've heard
3 that on these.

4 JUDGE BRENNER: I thought we worked this one
5 out. You go back to the transcript, Mr. Ellis, and show
6 me where it is so that I will have it fresh in my mind
7 when we go through it again. I know about the one on
8 the audits, but I thought on this one we had worked it
9 out.

10 MR. ELLIS: I think that is right. This is
11 the first time I've mentioned it, and I will go back and
12 look.

13 JUDGE BRENNER: So the objection was sitting
14 until this moment.

15 MR. ELLIS: Well, it was standing from the
16 previous time I asserted it, but I grant you that it was
17 more relaxed in that period of time.

18 I will look at the transcript, Judge.

19 JUDGE BRENNER: It has been a long time. I
20 don't know if I should consider it a recurrent objection
21 or not.

22 (Laughter.)

23 JUDGE BRENNER: All right. We will admit them
24 to the extent they were inquired into.

25 (The documents referred

1 to, previously marked for
2 identification as Suffolk
3 County Exhibit No. 103,
4 105 and 106, were
5 received in evidence.)

6 JUDGE BRENNER: I can tell you, and this may
7 or may not make you feel better, Mr. Ellis, that if we
8 get findings for the first time focused on details that
9 were not focused on at this hearing, we're not going to
10 do a lot with them without coming back to the parties in
11 some fashion, at a minimum. Now, you may find instances
12 where we have not been faithful to that, and it would be
13 appropriate for you to point that out, given my
14 statement here today.

15 MR. ELLIS: Thank you, Judge.

16 (Board conferring.)

17 JUDGE BRENNER: Judge Carpenter has one
18 question.

19 JUDGE CARPENTER: I would like to ask the
20 panel if they would help me tomorrow by, between now and
21 tomorrow, taking a look at Suffolk County Exhibit 63.
22 It is the quarterly report from the QA manager to
23 management, and I would like your help tomorrow if you
24 would look specifically at the last six reports, running
25 from May 30, 1980, through December 3rd, 1981.

1 And look particularly at the sections of these
2 reports having to do with environmental protection,
3 because I can anticipate from Mr. Lanpher's cross plan,
4 which is very useful, that we're going to come to this
5 subject in my mind. So if you could spend a few minutes
6 between now and then just becoming familiar with these.
7 I would like your help tomorrow.

8 WITNESS HIGGINS: Yes, Mr. Lanpher had
9 indicated yesterday that he was going to go over those
10 and we did look at them last night. We will go over
11 them again tonight.

12 MR. LANPHER: Do you want to tell him anything
13 else I'm going to cover, Judge?

14 (Laughter.)

15 JUDGE BRENNER: All right, let's stay on the
16 record with our prognostications, but the witnesses are
17 excused. And we will pick up at 8:30 tomorrow morning.

18 MR. LANPHER: Judge Brenner, my best estimate
19 is it's going to be very tight to finish tomorrow, but I
20 am very confident that I would finish on Monday.

21 JUDGE BRENNER: All right. I'm confident of
22 that, too, seeing the cross plan and the progress. But
23 I think there may be a significant difference in terms
24 of what we hope to finish next week between early Monday
25 or your taking all day Monday.

1 MR. LANPHER: I can't be more definite right
2 now, Judge.

3 JUDGE BRENNER: Is your two-day estimate still
4 accurate, Mr. Ellis?

5 MR. ELLIS: Well, it is still my estimate. I
6 hesitate to say that it is accurate, because I am still
7 guessing, and I plan to look at it carefully over the
8 weekend. And I am very mindful of the fact that we are
9 up against Christmas and up against this week that we
10 have off, and I will look at it with that in mind. But
11 again, I will have to cover whatever needs to be
12 covered.

13 And I'm sure the Board and I'm sure Mr.
14 Bordenick has some redirect as well.

15 JUDGE BRENNER: I agree that you should cover
16 whatever you think you should cover. And the same
17 comment to Mr. Lanpher and the same comment to Mr.
18 Bordenick. We are not going to hold what we hope to
19 accomplish on the time period as being paramount. It
20 was just our thought that the incentive plan would help
21 you truly think and double-think the so-what question:
22 If I have all the answers to these questions, so what?

23 MR. BORDENICK: Do you want an estimate from
24 the Staff on its redirect so far?

25 JUDGE BRENNER: Yes.

1 MR. BORDENICK: This is really just a ballpark
2 feel based upon what has transpired to date. And this
3 may be lengthened or shortened depending upon what Mr.
4 Ellis does. But I would say about a half a day.

5 JUDGE BRENNER: We will probably have a very
6 good idea by noon Monday as to whether we're going to
7 make it. Let us know what you want to do about going
8 half a day Thursday, if that becomes important.

9 MR. BORDENICK: Half a day meaning until
10 noon?

11 JUDGE BRENNER: Well, whatever the parties
12 want.

13 MR. BORDENICK: I have talked to the Staff
14 panel and they are willing to come back Thursday, but I
15 think they are hopeful of getting out fairly early.

16 JUDGE BRENNER: It would be certainly no later
17 than 1:00.

18 MR. BORDENICK: That is acceptable to the
19 Staff.

20 MR. ELLIS: That is certainly agreeable to
21 LILCO as well.

22 JUDGE BRENNER: Mr. Lanpher?

23 MR. LANPHER: I'm going to have to check. I
24 don't know yet.

25 JUDGE BRENNER: Okay. Let us know as soon as

1 you can either way.

2 MR. LANPHER: I will let you know no later
3 than Monday.

4 JUDGE BRENNER: Okay. I think we will be able
5 to know about location in Long Island tomorrow morning.

6 MR. BORDENICK: You're going to remind the
7 parties about the 8:30 start tomorrow?

8 JUDGE BRENNER: Yes. I thought I said that.

9 MR. BORDENICK: You may have. I didn't hear
10 it.

11 JUDGE BRENNER: While we are on the record, I
12 purposely didn't nag the Staff, so to speak, but I
13 haven't forgotten the problem of getting information to
14 Mr. Lanpher which NRR was looking at, so we don't have
15 to have another go-round. And I presume the parties are
16 taking care of that.

17 MR. BORDENICK: Judge Brenner, there was a
18 meeting this afternoon. I don't know whether the County
19 was at it or not. They were invited. I am informed
20 they were. And I am informed that the last matter was
21 resolved, and I am also informed that, as to the two
22 items that were previously resolved, the Board will be
23 distributing -- I'm sorry, the Staff will be
24 distributing whatever it is we have, and I don't know
25 what it is at this point, tomorrow, and the third item

1 probably Monday. The item that was resolved today we
2 are trying to expedite.

3 JUDGE BRENNER: Well, you know what the idea
4 was, to get it to the County so they can assimilate it
5 while their cross was still current, because otherwise
6 you may have to come back at it again, which is always
7 much more difficult.

8 MR. BORDENICK: We are aware of that.

9 JUDGE BRENNER: On a showing that it is
10 pertinent to do so, of course.

11 MR. BORDENICK: That is the status. The two
12 items that were previously resolved, I understand that
13 is being typed up right now, so it is a question of, it
14 is in existence, it is just being typed up and we will
15 have it over here in the morning. I don't know if it's
16 possible to get it this evening.

17 JUDGE BRENNER: That doesn't matter.

18 Okay, we will adjourn for the day. Thank you
19 for that report. We will adjourn for the day and pick
20 up at 8:30 tomorrow morning.

21 (Whereupon, at 4:50 p.m., the hearing in the
22 above-entitled matter was recessed, to reconvene at 8:30
23 a.m. on Friday, December 17, 1982.)

24 * * *

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NUCLEAR REGULATORY COMMISSION

This is to certify that the attached proceedings before the
BEFORE THE ATOMIC SAFETY & LICENSING BOARD

in the matter of: Long Island Lighting Company (Shoreham Nuclear Power
Station)

Date of Proceeding: December 16, 1982

Docket Number: 50-322 OL

Place of Proceeding: Bethesda, Maryland

were held as herein appears, and that this is the original transcript
thereof for the file of the Commission.

Ray Heer

Official Reporter (Typed)

Ray Heer

Official Reporter (Signature)