

NUCLEAR REGULATORY COMMISSION

ORIGINAL

ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

CONSUMERS POWER COMPANY)	
)	DOCKET NO. 50-329 OL & OM
Midland Plant, Units 1 and 2)	50-330 OL & OM

DATE: July 8, 1981 PAGES: 1166 - 1300

AT: Midland, Michigan

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ORIGINAL
To: Anita McNamara



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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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 In the matter of: :
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 CONSUMERS POWER COMPANY : DOCKET NOS: 50-329 OL & OM
 : 50-330 OL & OM
 Midland Plant, Units 1 and 2 :
 :
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Midland County Courthouse
301 West Main Street
Midland, Michigan

Wednesday, July 8, 1981

Evidentiary hearing in the above-entitled
matter was reconvened, pursuant to adjournment, at 9:05 a.m.

BEFORE:

CHARLES BECHHOEFER, Esq., Chairman,
Atomic Safety and Licensing Board

FRED COWAN, Member

RALPH DECKER, Member

1 APPEARANCES:

2 On behalf of the Applicant, Consumers Power Company:

3 MICHAEL MILLER, Esq.,
4 RON ZAMARIN, Esq.,
5 JOANNE BLOOM, Esq.,
6 ALLEN FARNELL, Esq.,
7 Isham, Lincoln & Beale,
8 Chicago, Illinois9 JIM BRUNNER, Esq.
10 Legal Department, Consumers Power Company
11 212 W. Michigan,
12 Jackson, Michigan 49201

13 On behalf of Mapleton Intervenors:

14 WENDELL H. MARSHALL

15 Appearing pro se:

16 BARBARA STAMIRIS

17 On behalf of the Regulatory Staff:

18 WILLIAM PATON, Esq.,
19 ELLEN BROWN, Esq.,
20 JAMES THESSIN, Esq.,
21 Office of Executive Legal Director,
22 United States Nuclear Regulatory Commission,
23 Washington, D.C.
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C O N T E N T S

CROSS

WITNESS: DIRECT CROSS REDIRECT RECROSS BOARD ON BOARD

Gilbert S. Keeley
(Resumed)

By Mr. Paton	1193
By Mr. Marshall	1214
By Ms. Stamiris	1220

E X H I B I T S

<u>NUMBER</u>	<u>IDENTIFIED IN EVIDENCE</u>	
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Applicant/Staff 1	1188	1188
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MILLERS FALLS
EXERASE
COTTON CONTENT

ELL1

P R O C E E D I N G S

(9:10 a.m.)

CHAIRMAN BECHHOEFER: Good morning, ladies and gentlemen.

Before we begin this morning, are there any preliminary matters that any party wants to raise? We are going to announce our decision on the stipulation, but I thought we would get rid of any preliminary matters first.

MR. MILLER: No, sir.

CHAIRMAN BECHHOEFER: Particularly, is the site tour set for this afternoon?

MR. MILLER: Yes. What time?

MR. KEELEY: It is up to the Board. It is up to your wishes.

CHAIRMAN BECHHOEFER: I thought that we would run until about 1:30, with just minor breaks, nothing more, and then quit.

Then after lunch, like 3:00 or 3:30, we could go on the tour. I don't know how long it takes to get out to the plant, but we thought it would be a good idea to change clothes at the hotel.

MR. KEELEY: It would be a good idea to get out there before 3:30. There is a shift change at 3:00.

CHAIRMAN BECHHOEFER: How long does it take to get out there?

ELL2

1 MR. KEELEY: About eight to 10 minutes, at the
2 most.

3 CHAIRMAN BECHHOEFER: Is that from here?

4 MR. KEELEY: From here.

5 CHAIRMAN BECHHOEFER: What about from the
6 Holiday Inn? Is that different?

7 MR. KEELEY: Add another five minutes.

8 CHAIRMAN BECHHOEFER: I am thinking in terms of
9 not dressing in coats and ties for the tour.

10 MR. MILLER: No.

11 CHAIRMAN BECHHOEFER: Okay. We will run until
12 about 1:30, I think, with minor breaks.

13 MR. PATON: Mr. Chairman, I do have a preliminary
14 matter.

15 CHAIRMAN BECHHOEFER: Okay. I'm sorry.

16 MR. PATON: I talked to Mr. Gilray this morning.
17 Mr. Gilray was one of the witnesses that we had planned to put
18 on the witness stand Monday morning. Mr. Gilray broke his
19 foot, and his doctor tells him that he has some concern about
20 his ability to be here. He thinks-- He will probably have to
21 come by way of wheelchair, but he does think he can make it.

22 In light of the possible scheduling problem with
23 Mr. Keppler, what I plan to do is to not have Mr. Gilray take
24 the witness stand on Monday or Tuesday, in an attempt to try
25 to finish up with Mr. Keppler on Monday and Tuesday, and then

ERASE

E1L3

1 ask Mr. Gilray, if he can, to be here on Wednesday.

2 Thank you.

3 CHAIRMAN BECHHOEFER: That's fine. We will
4 have to do something about wheelchairs, getting him up here.

5 MR. PATON: I think it is a matter of--

6 CHAIRMAN BECHHOEFER: We perhaps can have a
7 microphone on the lower level there. We can manage it.

8 MR. PATON: Okay. Thank you.

9 CHAIRMAN BECHHOEFER: Does anybody have any
10 problem with Mr. Gilray coming Wednesday?

11 MR. MILLER: No, sir.

12 CHAIRMAN BECHHOEFER: All right. I assume we
13 will still be here by Wednesday.

14 MR. MILLER: I guess we will be here for Mr.
15 Gilray, if for nothing else.

16 CHAIRMAN BECHHOEFER: The Board has reached a
17 decision on the stipulation, and you will have to be patient
18 because it runs about six pages, but I will read it into the
19 transcript and give the reporter a copy of what I am reading
20 so that it can be as accurate as possible. In case there are
21 any appeals, I am hoping that the transcript pages could be
22 Xeroxed because we can't really write a decision--issue a
23 decision, I should say, at this point.

24 Let me read the decision:

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1 MEMORANDUM AND ORDER
2 (Ruling Upon Proposed Stipulation)

3 The Applicant and NRC Staff have submitted for
4 our approval a proposed stipulation, dated June 5, 1981. The
5 stipulation includes three numbered paragraphs. Paragraph 1
6 constitutes an admission by Consumers Power Company that, prior
7 to December, 1979, there were quality assurance deficiencies
8 related to soil construction activities under and around
9 safety-related structures and systems at the Midland construc-
10 site, in several specified ways. In Paragraph 2, the Applicant
11 agrees not to contest the NRC Staff; conclusions that the events,
12 referred to in Paragraph 1 constituted a breakdown in quality
13 assurance with respect to soils placement at Midland and
14 constituted an adequate basis for issuance of the December 6,
15 1979 Modification Order. Paragraph 3 states that the quality
16 assurance program satisfies all requisite NRC criteria and,
17 further, that as a result of quality assurance program revi-
18 sions, improved implementation and other factors discussed in
19 Staff testimony, the NRC has reasonable assurance that quality
20 assurance and quality control programs will be appropriately
21 implemented with respect to future soils construction activities,
22 including remedial actions taken as a result of inadequate
23 soil placement.

24 Our acceptance of this stipulation has been
25 opposed by Intervenor Barbara Stamiris, initially through a

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1 telephone conference call and, thereafter, a pleading dated
2 June 24, 1981. We heard oral argument on this matter at the
3 outset of the evidentiary hearing on July 7, 1981 (Tr. 1044-1079),
4 during which Ms. Stamiris was joined by the other Intervenors
5 in her opposition to the stipulation.

6 Subject to the qualifications hereinafter set forth,
7 and pursuant to 10 CFR Section 2.203 and 2.753, the Board accepts
8 Paragraphs 1 and 2 of the stipulation. The Board will
9 regard Paragraph 3 of the stipulation only as the current
10 position of the Applicant and NRC Staff. We decline to rule on
11 the merits of Paragraph 3 until we have heard the testimony
12 presented on the subject matter of that paragraph. We note
13 that the stipulation does not cover the assertions in the
14 modification order concerning (1) material false statements
15 and (2) failure of the Applicant to provide adequate informa-
16 tion to the Staff.

17 Ms. Stamiris advanced essentially two reasons
18 why we should not accept the stipulation. First, she
19 complains of her exclusion from the negotiations leading to the
20 stipulation, citing a portion of 10 CFR Section 2.753 which states
21 that, on motion of all parties, stipulations "as to the pro-
22 cedure to be followed in the proceeding...may...be recognized
23 by the Presiding Officer to govern the conduct of the proceeding."
24 This provision requires the consent of all parties only with
25 respect to one type of stipulation--one governing the

ELL6

1 procedural rules to be followed in a proceeding. The
2 stipulation here is not of that sort. Moreover, no other pro-
3 vision of which we are aware would require that acceptance of a
4 stipulation be predicated on the consent of every party.

5 Secondly, Ms. Stamiris views the acceptance of
6 the stipulation as an abdication of our responsibility to
7 resolve the issues in this proceeding, including her conten-
8 tions. We agree that acceptance of Paragraph 3 on the merits
9 might have this result; we are therefore accepting that para-
10 graph only for the limited purpose of delineating the views of
11 the Applicant and Staff on the adequacy of the quality assur-
12 ance program and its implementation. Indeed, Paragraph 3
13 itself contemplates the presentation of evidence on that
14 subject.

15 As for Paragraphs 1 and 2, they essentially
16 constitute an admission of many facts contained in Section
17 II of the Modification Order. Although not every such fact
18 is covered, the Applicant and Staff indicated that we could
19 make an affirmative finding with respect to the first issue
20 in the modification proceeding (although not with respect to
21 every violation alleged in Appendix A to the December 6, 1979
22 order). That being so, litigation of all such facts would appear
23 to be unnecessary, if not cumulative. Further litigation with
24 respect to admitted past activities could not, in our view,
25 lead to any result not achieved through the stipulation. In

ELL7

1 these circumstances, acceptance of the stipulation could
2 not reasonably be construed as any abdication of decisional
3 responsibility on our part.

4 In approving Paragraphs 1 and 2, we wish to
5 stress that we are not precluding cross-examination ques-
6 tions as to whether certain past quality assurance/quality
7 control practices involved in the non-controverted breakdown
8 in quality assurance with respect to soils placement at Midland
9 have been adequately considered in developing the new quality
10 assurance program. This is so whether or not the past
11 practices are in fact encompassed within the terms of
12 Paragraph 1.

13 We view our acceptance of the stipulation (to
14 the extent indicated) as consistent with 10 CFR Section 2.203
15 and 2.753, as well as with the intent of the Commission's
16 recent policy statement on the conduct of licensing proceedings.

17 IT IS SO ORDERED.

18 That will constitute our memorandum and order
19 on that question. It will be reproduced in the transcript.
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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

_____)		
In the Matter of)		
CONSUMERS POWER COMPANY)	Docket Nos.	50-329-OM
(Midland Plant, Units 1 and 2))		50-330-OM
_____)		50-329-OL
)		50-330-OL
)		

NUCLEAR REGULATORY COMMISSION STAFF/CONSUMERS
POWER COMPANY QUALITY ASSURANCE STIPULATION

1. Prior to December, 1979, there were quality assurance deficiencies related to soil construction activities under and around safety-related structures and systems at the Consumers Power Midland Plant construction site ("Midland") in that (i) certain design and construction specifications related to foundation-type material properties and compaction requirements were not followed; (ii) there was a lack of clear direction and support between the contractor's engineering office and construction site as well as within the contractor's engineering office; (iii) there was a lack of control and supervision of plant fill placement activities which contributed to inadequate compaction of foundation material; and (iv) corrective action regarding nonconformances related to plant fill was insufficient or inadequate as evidenced by repeated deviations from specification requirements.

2. Consumers Power agrees not to contest the NRC Staff's conclusions that the events referred to in paragraph 1 constituted a breakdown in quality assurance with respect to soils placement at Midland and constituted an adequate basis for issuance of the order of December 6, 1979.

3. The quality assurance program satisfies all requisite NRC criteria. Further, as a result of revisions in the quality assurance program, the improved implementation of that program, and other factors discussed in testimony submitted by James G. Keppler, the NRC has reasonable assurance that quality assurance and quality control programs will be appropriately implemented with respect to future soils construction activities including remedial actions taken as a result of inadequate soil placement.

Michael J. Miller

One of the Attorneys for
Consumers Power Company

William D. Paton

One of the Attorneys for the Staff
of the Nuclear Regulatory Commission

Date: June 5, 1981

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MR. MILLER: Mr. Chairman, for convenience certainly of the Company in its presentation, I would like confirmation, if you could secure it, from the Staff that in fact four pieces of prepared testimony will now not be offered into the record, as was stated in Mr. Paton's June 8th, 1981 letter to the Licensing Board when he transmitted the

MILLERS TALKS
EXERCISE
COTTON CONTENT

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1 Staff's prepared testimony. It is really a question of
2 whether we prepare for cross examination or not. I would
3 hope that testimony would not be offered. It really-- It,
4 too, is cumulative of the matters stipulated to in Paragraphs
5 1 and 2, and we would ask that--

6 CHAIRMAN BECHHOEFER: Would you like to state
7 for the record your plans in this proceeding?

8 MR. PATON: Yes. Mr. Chairman, we would hope
9 that the way the proceeding develops, it will not be
10 necessary to offer that testimony in evidence. It would
11 seem quite consistent with your ruling not to offer it.

12 You did indicate that cross examination would
13 be allowed with respect to some of the past deficiencies
14 that have been acknowledged, and with respect to past
15 deficiencies that are not included within the stipulation,
16 I would not like to now close a door that may be--an option
17 that I may have to rely on later.

18 I don't expect to offer it. I hope that I do
19 not-- I do not think that it would add to this proceeding,
20 but I would rather wait and see how the proceeding develops
21 because, as I see it, it is possible that it might become
22 necessary to introduce it. I hope it is not necessary, but
23 I would not like to say at this time that we withdraw or we
24 terminate any possibility of offering that.

25 CHAIRMAN BECHHOEFER: Let me ask you one

ELL90

1 question. I assume that you intend to offer the testimony
2 that you have submitted to us on the material false statements,
3 is that correct?

4 MR. PATON: The testimony we have with respect
5 to material false statement was in connection, I think, with
6 Contention 1, Contention 1-A. We do intend to offer that,
7 yes.

8 CHAIRMAN BECHHOEFER: Right. That's explicitly
9 excluded both from the stipulation and from our ruling.

10 MR. MILLER: Well, just so that my-- My
11 understanding was that in terms of addressing the issue of
12 whether in fact there was a material false statement, that
13 that was not one of the subjects that was going to be addressed
14 at this session of the evidentiary hearing, and the Staff's
15 testimony on that subject--and indeed Mr. Howell's prepared
16 testimony sponsored by the Company--deals with the material
17 false statement only insofar as in response to Ms. Stamiris'
18 contention, that the material false statement constitutes
19 bad management attitude.

20 I think we intend to address it within that
21 limited scope.

22 MR. PATON: I agree with that, Mr. Chairman.
23 I think there is still a possibility that we would attempt to
24 enter into a stipulation on the issue of material false state-
25 ment. There are three issues--or three bases for which the

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1 order was issued. Material false statement was one of them,
2 and my understanding is that we still have open between our-
3 selves and the Applicant an attempt to stipulate that issue,
4 and I agree with Mr. Miller's statement with respect to
5 Contention 1-A, that the discussion of material false statement
6 here is intended to be within the scope of that contention only,
7 and not the main issue of material false statement as a basis
8 for the order.

9 CHAIRMAN BECHHOEFER: Well, to the extent that
10 the issue was resolved by a later stipulation, we can address
11 that at the time, if that's the case.

12 MR. DECKER: I am confused about a couple of
13 things. I understand that you did not prepare testimony on
14 the question of whether or not Applicant provided sufficient
15 information to permit Staff review to meet all the acceptance
16 criteria, is that right?

17 MR. PATON: Yes, sir.

18 MR. DECKER: What are your intentions in that
19 regard?

20 MR. PATON: Judge Decker, I think that-- One
21 of the reasons that we didn't do that is that my understanding
22 is that that is still an area where we will--we are attempting
23 to reach a stipulation and, again, this is an area like the
24 third paragraph of the QA stipulation, in that even though
25 we stipulate, I think we are both totally agreed that that

ELL12

1 would be an area where this Board would have to hear evidence
2 to make up its own mind, but that's my understanding of why
3 we have not addressed that at this point; that we are going
4 to attempt to reach a stipulation.

5 One of the reasons that we have not reached that
6 stipulation is the Staff has not analyzed boring information
7 and test data that the Applicant has taken around the diesel
8 generator building. We think that's a significant item.

9 We haven't gotten that information yet, and we
10 will be in a position to seriously talk about a stipulation
11 after we have reviewed that information.

12 MR. DECKER: All right. Now, going back about
13 five minutes, you do not now intend to offer certain testimony,
14 although you don't want to close the door on that.

15 MR. PATON: Yes.

16 MR. DECKER: Which testimony is that, in
17 particular?

18 MR. PATON: Okay. The testimony that we are
19 talking about is-- Several months ago we filed a motion
20 for summary disposition on the issue of QA breakdown prior to
21 December 6th, 1979. The testimony that we are talking about
22 now is essentially those affidavits, which I changed from
23 calling affidavits to testimony.

24 The Board never ruled on the motion for summary
25 disposition. I don't think it is necessary to rule on it now

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1 in the face of the stipulation and your ruling on the stipula-
2 tion, but Ms. Stamiris' Contention 3 discussed quality assur-
3 ance, managerial attitude, et cetera. She, in her Contention
4 3, goes back into the discussion of quality assurance before
5 December 6th, '79. The testimony that we are talking about,
6 that I hope not to introduce, addresses that issue, quality
7 assurance before December 6th, '79.

8 In light of the Board's acceptance of Paragraphs
9 1 and 2 of the stipulation, as far as I am concerned, it
10 really isn't necessary to introduce that evidence, but we
11 are still faced with Ms. Stamiris' contention, and that's
12 why I am not precisely sure to what extent I will offer evi-
13 dence on her stipulation.

14 MR. DECKER: I don't remember offhand, but is
15 the Gilray testimony part of that?

16 MR. PATON: No, sir. The Gilray testimony would
17 have been included in the discussion I just had, except that
18 paragraph--the first sentence of Paragraph 3 of the stipula-
19 tion says that the quality assurance program is good and always
20 has been good, and Mr. Gilray, I want to testify on that
21 issue; therefore, his testimony is not included in the discussion
22 that I just referenced.

23 The other four affidavits that were attached
24 to the motion for summary disposition are the testimony that
25 you asked me about. Those are the ones I am uncertain whether
we are going to introduce or not.

1 CHAIRMAN BECHHOEFER: Is Mr. Gallagher's?

2 MR. PATON: Yes; Mr. Gallagher's. Gallagher,
3 King, Hood and Keppler.

4 CHAIRMAN BECHHOEFER: Okay. Is there anything
5 further before we resume with Mr. Keeley?

6 Ms. Stamiris?

7 MS. STAMIRIS: Yes. Concerning the stipulation,
8 as I said yesterday, I wanted to appeal it, and I think
9 everyone knew that I had already attempted to appeal it. I
10 think it was dated June 29th. And I still feel strongly the
11 way that I expressed yesterday, and I would like the Appeal
12 Board to review this decision before it's final, and I think
13 it needs to be reviewed now, or else-- I just feel that it's
14 now or never. And, therefore, I would like to ask what would
15 be the proper way for me to go about getting this in the most
16 expedient way to the Appeal Board in its final form?

17 My thinking is that I will just ask them to read
18 my 6-24 objection to the stipulation as my basis for it, and
19 go to them with the fact now that the stipulation has been
20 formally approved as you read into the record, and ask them
21 to read my objection and rule on it, perhaps in a more direct
22 way than I submitted on June 29.

23 CHAIRMAN BECHHOEFER: Well, I can't express any
24 view as to whether the Appeal Board would review that. I
25 think physically the best thing to do would be to xerox the

1 transcript pages--it should be 4, 5 or 6 pages--because-- I
2 don't know if you want to appeal that soon, but it might even
3 be useful to try to put that in writing at the end of this
4 two-week period, which is the earliest I could do it. In fact,
5 it would even be beyond that, because the following Monday
6 I'm going back to Texas. I could give it to my secretary, so
7 by the time I could come back up and check it, it would be
8 another week.

9 So it's much better, I think, to just xerox
10 the transcript. We have given the reporter an exact copy, and
11 it will be put in o the transcript pages as we read it.

12 MS. STAMIRIS: Then it will be available at the
13 end of today?

14 CHAIRMAN BECHHOEFER: I assume by tomorrow
15 morning. You could make a xerox of that number of pages of
16 the transcript.

17 MS. STAMIRIS: Because my concern is that this
18 question be resolved, if they will accept it, before we proceed
19 with this quality assurance portion of the hearing, what if I
20 decided not to-- If I decided to ask them whether or not they
21 have made any decision whether or not to accept the original
22 appeal that I made by way of my motion for summary disposition,
23 is there any possibility that I could have permission to make
24 a phone call today and get some indication? Maybe they will
25 tell me point-blank already that they're not going to hear the

1 appeal.

2 CHAIRMAN BECHHOEFER: Well, we certainly can't
3 control if you make a phone call.

4 MS. STAMIRIS: Well, I thought I wasn't supposed
5 to do that unless all parties were involved, or something like
6 that. It would be all right if I made a phone call to the
7 Appeal Board, and asked them?

8 CHAIRMAN BECHHOEFER: You could certainly ask
9 them. That's basically a procedural question. That's not
10 excluded by the ex parte rule, or anything else. I'm sure
11 they will not discuss any part of the merits with you, but
12 they certainly will tell you whether they ruled or not.

13 MS. STAMIRIS: Okay.

14 CHAIRMAN BECHHOEFER: That's all I can tell you.
15 I couldn't tell you whether they have or not. My guess is
16 that they would want the positions of the other parties first.
17 I don't even know whether they've put out an order yet setting
18 up a schedule for other people's views or--

19 MS. STAMIRIS: Those are the types of things I
20 thought I would ask.

21 CHAIRMAN BECHHOEFER: Well, we have not had any
22 contact with the Appeal Board, so....

23 The Appeal Board usually would telephone the
24 parties if they were setting up a briefing schedule, or if
25 they were holding an oral argument of sorts. I doubt that they

1 would do that, but, again, I have no idea what their thinking
2 is.

3 MS. STAMIRIS: Well, I think I'll try and make
4 a phone call and ask some of those procedural questions, and
5 then maybe I can share any information and decide what my
6 next step is going to be.

7 CHAIRMAN BECHHOEFER: Well, you will have the
8 decision in printed form tomorrow, through the transcript, and
9 I would suggest, if you're going to appeal it, just xerox those
10 pages.

11 MS. STAMIRIS: Yes.

12 CHAIRMAN BECHHOEFER: If you want, I'll look
13 through the pages first, to make sure that it's exact. I
14 assume it will be, because I gave the exact copy to the
15 reporter.

16 MR. PATON: Judge Bechhoefer, could I raise a
17 point before we proceed with Mr. Keeley?

18 CHAIRMAN BECHHOEFER: Yes.

19 MR. PATON: In light of your ruling, I think we
20 should make the stipulation a part of the record. I think
21 perhaps we would offer it as a Joint Applicant/Staff exhibit.
22 I don't think it's in the record at this point.

23 CHAIRMAN BECHHOEFER: No, I don't think so.
24 It's before us, and I think it's before all the parties.

25 MR. PATON: Could I mark-- Well, I haven't

1 discussed this with the Applicant, but I would intend to mark
2 it as Applicant/Staff Joint Exhibit No. 1 and offer it in
3 evidence.

4 CHAIRMAN BECHHOEFER: Is there any thought of
5 how you want it sponsored, or who you want to sponsor it?

6 MR. PATON: Judge Bechhoefer, I'm not sure--

7 MR. MILLER: Mr. Paton and I executed it.

8 MR. PATON: Yes. It's a stipulation, and I'm
9 not sure that it would have to be sponsored by a witness.
10 It's a stipulation arrived at between the parties. Frankly,
11 I don't think it has to be offered through a witness.

12 MR. MILLER: I don't believe so, either. I
13 don't think there's any question of the authority of Mr. Paton
14 or myself to execute, on behalf of our respective clients.

15 MR. PATON: The suggestion has been made, Judge
16 Bechhoefer, that perhaps it should be attached to your order.
17 But in any event, I think it should be admitted into the
18 record as an exhibit.

19 CHAIRMAN BECHHOEFER: We have no objection to
20 it being attached to our order. Would it be useful to have the
21 Reporter print it as an attachment to our order?

22 MR. PATON: What would be very good--it's only
23 three pages--is if it could be bound into the transcript--as
24 a matter of fact, it's only two pages--then you don't lose it.
25 Everybody's always got it, if it's bound into the transcript.

1 Is that possible? It's only two pages long.

2 CHAIRMAN BECHHOEFER: It probably should be at
3 the conclusion of our order, in terms of placement.

4 MR. PATON: Judge Bechhoefer, I'd like to-- Well,
5 I offered it in evidence. Could you rule that it is received
6 or not received, and if it is, I would offer three copies to
7 the reporter.

8 CHAIRMAN BECHHOEFER: I would think that if we
9 bind it in the record, you would have to offer more.

10 MR. PATON: I can do that, if that's agreeable
11 with the Board.

12 CHAIRMAN BECHHOEFER: Do other parties have any
13 objection to that?

14 MR. MILLER: No, sir.

15 CHAIRMAN BECHHOEFER: This stipulation will be
16 accepted into evidence and bound into the record at the
17 conclusion, immediately following the conclusion, of the
18 Board's order which we issued this morning.

19 Should we identify it as you suggested,
20 Applicant/Staff Exhibit 1?

21 MR. PATON: That's what I would suggest.

22 MR. MILLER: Because there may very well be
23 additional stipulations through the course of this proceeding,
24 I think that would be a satisfactory way of handling it.

25 CHAIRMAN BECHHOEFER: It will be designated as

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1 Applicant/Staff Exhibit 1, even though it will be bound into
2 the record in this case.

3 (The document referred to was
4 marked for identification as
5 Applicant/Staff Exhibit 1 and
6 was received in evidence.)

7 CHAIRMAN PECHHOEFER: Is there anything further
8 before Mr. Keeley resumes?

9 MS. STAMIRIS: I have one question I forgot to
10 ask, from yesterday. First, I wondered if the Applicant does
11 now have permission to go ahead with those backup wells and
12 things that Mr. Hood discussed yesterday, or are they going to
13 proceed very soon now, or....

14 CHAIRMAN BECHHOEFER: The Applicant may proceed.
15 It doesn't need permission to proceed. We have authority to
16 stop it if we found that was necessary, but under the rules,
17 the way the order is worded, the Applicant has full authority
18 to proceed. It had voluntarily not done so, but as far as the
19 Commission is concerned, it has full authority to proceed.

20 MS. STAMIRIS: I understand.

21 CHAIRMAN BECHHOEFER: Unless we ruled that they
22 shouldn't proceed. We have not done that.

23 MS. STAMIRIS: In other words, it did not have
24 to wait until the end result of the proceeding; it was
25 something that--the voluntary work stop, then, is not in effect

1 anymore?

2 CHAIRMAN BECHHOEFER: Well, I'm not sure that's
3 exactly correct. It will not be in effect for those two
4 items.

5 MS. STAMIRIS: I have one other question that
6 I forgot to ask. I don't know if Mr. Hood is here.

7 CHAIRMAN BECHHOEFER: Well, Mr. Hood is no
8 longer on the stand.

9 MS. STAMIRIS: Well, I didn't know. There was
10 just one question I forgot to ask yesterday.

11 CHAIRMAN BECHHOEFER: He will be back on the
12 stand for other reasons, but that will be related to what he's
13 on the stand for at that time.

14 Mr. Marshall?

15 MR. MARSHALL: On the question, Judge, of these
16 wells, the question arises from the standpoint of a request
17 by NRC; isn't that it? It's an attempt to overcome something--
18 the wells themselves? Some sort of construction problem there,
19 but it arises on a request from NRC, isn't that true? Not from
20 the Applicant? On the wells themselves?

21 CHAIRMAN BECHHOEFER: I can't answer that. We
22 asked for the presentation concerning what will be going on
23 before the proceeding here.

24 MR. MARSHALL: What I'm trying to say, I think,
25 is: This is an attempt to overcome some deficiency of some

1 sort, and it arises from a request or a compromise by someone
2 to attempt to overcome some deficiency, by using this well
3 proposition, and more wells. You were saying the other day
4 how many wells. Evidently you were saying, "I wonder; 10, 20,
5 40--how many wells?" But what I'm trying to find out is who
6 asked for these wells to begin with? I seem to recall where
7 Applicant says it's going to cost a million dollars to put
8 down this many wells, and I believe it was NRC or their people
9 that were requesting that they try to overcome something by
10 drilling those wells.

11 MR. DECKER: Mr. Marshall, if you're after
12 factual information, I suggest you question a witness. It's
13 not the function of the Board to--

14 MR. MARSHALL: I'm trying to--

15 MR. DECKER: I know what you're trying to do.
16 We're not going to provide that kind of information.

17 MR. MARSHALL: Well, if it's prohibited, then,
18 sir; I'm not clear on that.

19 MR. DECKER: The most you would get is our
20 understanding of the matter. You question a witness if you
21 want factual information.

22 CHAIRMAN BECHHOEFER: Yes, for factual informa-
23 tion.

24 MR. MARSHALL: Yes, I understand.

25 MR. PATON: Mr. Chairman, could I provide

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1 the reporter with copies of the stipulation?

2 CHAIRMAN BECHHOEFER: Yes.

3 (Documents handed to the reporter.)

end 2

4 (Continued on following page.)

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MILLERS FALLS
ERASE
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E3L1

1 CHAIRMAN BECHHOEFER: Back on the record.

2 Mr. Keeley.

3 I believe Mr. Keeley has been made available for
4 cross examination. Ms. Stamiris.

5 MS. STAMIRIS: One other thing I forgot to ask
6 was I wondered if it matters if I go first. When I talked
7 to Ellen Brown about a week ago, I think she indicated that the
8 NRC might go first in their cross examination, and I just
9 thought it might be helpful to me since I am new at this,
10 just to--

11 CHAIRMAN BECHHOEFER: That is not the usual
12 practice.

13 MS. STAMIRIS: Is it supposed to be that I go
14 first?

15 CHAIRMAN BECHHOEFER: Normally the Staff would
16 go after everyone else because their responsibility is to
17 make sure the record is complete, but there is no ironclad
18 rule.

19 Mr. Paton.

20 MR. PATON: Whatever you say, Your Honor. We
21 have no preference. I would be glad to proceed.

22 CHAIRMAN BECHHOEFER: Normally the Staff does
23 go last, but would you prefer they go first this time?

24 MS. STAMIRIS: I would prefer, but is it not
25 also-- Isn't there redirect? Can't we go back and forth more

E3L2

1 than once, if it would be necessary? In other words, if
2 the Staff went first and then they wanted to come back to
3 something that they felt needed to be clarified, they could
4 come back another time, couldn't they?

5 CHAIRMAN BECHHOEFER: That's correct.

6 MS. STAMIRIS: I would prefer that.

7 CHAIRMAN BECHHOEFER: Well, for this time we
8 certainly will do that.

9 MS. STAMIRIS: Okay.

10 CHAIRMAN BECHHOEFER: Ms. Brown or Mr. Paton.

11 MR. PATON: All right. Thank you, Mr. Chairman.

12 Whereupon,

13 GILBERT S. KEELEY

14 resumed the stand as a witness on behalf of the Applicant and,
15 having been previously duly sworn by the Chairman, was
16 examined and testified further as follows:

17 CROSS EXAMINATION

18 BY MR. PATON:

19 Q Mr. Kelley, do you have a copy of your testimony
20 with you?

21 A Yes, I do.

22 Q I direct your attention to Page 4. The second
23 paragraph discusses nonconformances, and in the last sentence
24 you state that, "neither the Staff nor Region III had made
25 any comment or suggestion whatsoever to Consumers Power or

E3L3

1 Bechtel that adequate corrective action had not been taken
2 with respect to soils nonconformances."

3 Would you tell me what you believe Consumers
4 Power's responsibility is with respect to nonconformances?

5 MR. FARNELL: You mean at that time, during
6 the period in which these nonconformances deal with?

7 MR. PATON: That's correct.

8 A The responsibility of Consumers Power Company
9 is, No. 1, nonconformances are written by our QA Department
10 on anybody involved in the project. The nonconformances also
11 require that they be closed out; that is, that corrective
12 action be taken to close the nonconformance out to take remedial
13 action to either correct what was done improperly or an
14 evaluation for use as is, and also to take a look to see if
15 there should be any corrective action to prevent repetition,
16 and this is the responsibility of the Consumers QA Department,
17 to do that.

18 Q All right. With respect to those responsibilities
19 that you have just indicated, are those responsibilities de-
20 creased in any way by the fact that the Staff had not made
21 any comment or suggestion with respect to these nonconformances?

22 A No.

23 Q Referring to the first sentence of the next
24 paragraph, the statement appears that, "In August, 1977,
25 Consumers Power became aware of settlement of a grade beam for

E3L4

1 the Administration building".

2 When did Mr. Keeley become aware of that settle-
3 ment?

4 A Well, I became aware, if my memory serves me
5 right, along about September of 1977 when a contractual
6 memo was written to Bechtel concerning the grade beam failure,
7 and on all of these, what we call, Article 9's, part of the
8 contract, when they are having problems, I always talk it over
9 with the people in the field who issued this particular memo.

10 Q So your statement is that you learned of it
11 within a month?

12 A Roughly a month. I don't remember the exact
13 date of the memo.

14 Q Did you ever have any discussions with anyone
15 from the NRC concerning when you learned of this settlement
16 of the grade beam for the administration building?

17 A Yes, I did.

18 Q Who did you have discussions with?

19 A With Mr. Gallagher.

20 Q Can you summarize that discussion?

21 A Yes. He asked me when I became familiar with
22 that. I indicated the same as what I just described. I went
23 back and reviewed my notes of my conversation with him to
24 that effect.

25 After that investigative--investigation by

1 Region III, I had a debriefing of myself, plus two other
2 people, as to what went on. The other people indicated they
3 had told Mr. Gallagher they were not aware of this until the
4 diesel generator building failure. This was the project
5 engineer and one of our engineering services people.

6 Q What was the name of that project engineer?

7 A Ron Bauman. The other man was Chuck Hunter.
8 In fact, when I was deposed, I turned all my records over to
9 you, and included in that record was my handwritten memo to
10 that effect.

11 Q The project engineer at that time spent approxi-
12 mately how much of his time on the site?

13 A I would say he got up at the site maybe eight
14 hours out of the month, or something like that.

15 Q How much time elapsed between the time of this
16 settlement of the grade beam for the administration building
17 and the time that the project engineer discovered it? In
18 other words--

19 A The project engineer didn't discover it.

20 Q Okay. When did he become aware of it?

21 A Well, I would guess approximately a year. It
22 was not a direct concern of the project engineer. It was
23 handled by the field group or project supervisor.

24 Q Do you know when the NRC was first advised of
25 the settlement of the grade beam for the administration

E3L6

1 building?

2 A It is my understanding it was sometime during
3 the investigation by Gallagher.

4 Q Please put times on it because the record
5 doesn't reflect those.

6 A Oh, I think it was late 1978, December.

7 Q More than a year later? More than a year
8 after the actual settlement?

9 A Oh, yes, yes.

10 Q In the last paragraph on Page 4, you discuss
11 that the problem with the administration building was that
12 U.S. Testing had made an error in selecting maximum laboratory
13 dry density standards.

14 Is that, in your opinion, because of the settle-
15 ment of the grade beam at the administration building?

16 A That is my opinion, yes.

17 Q Did you at that time take steps to remedy that
18 error?

19 A We took-- Well, No. 1, we wanted to determine
20 if it was a generic problem or not, so there were two borings
21 made right in the immediate area to determine the cause.

22 There were two additional borings made, one
23 in the diesel generator building area, one over by the evaporator
24 building, which showed that the soils where these borings
25 were taken was okay.

E3L7

1 The other thing that was done was to give
2 training to the U.S. Testing personnel who had been involved
3 in this, in the test run in that area.

4 Q Mr. Keeley, my question was directed this way:
5 You indicate there that U.S. Testing had made some kind of an
6 error in selecting lower maximum laboratory dry density
7 standards. What I intended by my question was, did you take
8 any steps to assure that that error, the error made by
9 U.S. Testing, would not occur again?

10 A That's what I just said. They were given some
11 additional training to sensitize them to the need for taking
12 proper tests.

13 Q Did those errors in fact occur again in the
14 future?

15 A Yes, they did.

16 Q Tell us over what period of time they occurred
17 after the error at the administration building.

18 A Well, they occurred-- I can't give you the
19 exact period of time, but they occurred when further soils
20 tests were run. Well, it was during 1978 when the soils work
21 was still going on in the power block area.

22 Q Okay. Can you explain-- Strike that.

23 You made some effort to assure that the error
24 made by U.S. Testing at the administration building did not
25 occur in the future, and I believe you just testified that

E3L8

1 those errors did occur in the future.

2 Do you now know why you were not able to make
3 that correction? Do you know now why you weren't able to
4 correct that error?

5 A Well, I guess I can give you my opinion--

6 Q That's what I want.

7 A --of why it occurred. Again, I think it was
8 due to not having-- Well, No. 1, people not paying enough
9 attention to detail.

10 No. 2, that there was not a qualified geotechnical
11 engineer on the site a hundred percent of the time supervising,
12 having direct supervision of all these activities.

13 Q Okay. When you say, "People not paying enough
14 attention to detail," are you talking about Consumers' people
15 or Bechtel people?

16 A I am talking about everybody, and by "detail",
17 I guess what I am saying is that geotechnical engineer would
18 have been more deeply involved in observing, and things like
19 that, the tests that were going on.

20 Q Okay. Now, I direct your attention to Page 5
21 of your testimony, the second paragraph that begins with the
22 words, "To determine the extent", and particularly the last
23 sentence of that paragraph.

24 Please correct me if I am wrong, but I would
25 summarize that to indicate that you are saying that you made

E3L9

1 an investigation, following the discovery of the problem at
2 the administration building, to determine whether that problem
3 was localized or it was generic to the site, and you concluded
4 at that time that the problem was localized, is that correct?

5 A That's correct.

6 Q All right. Did you subsequently learn that the
7 problem was not localized?

8 A Yes, we did.

9 Q Mr. Keeley, I direct your attention now to
10 Page 15 of your testimony. About 15 lines down from the top,
11 a sentence begins--no, no. Strike that. About eight lines
12 down from the top the sentence begins, "It had been assumed
13 by Consumers Power".

14 Would you read that one sentence to yourself?
15 I want to ask you a question about that.

16 CHAIRMAN BECHHOEFER: What page is that?

17 MR. PATON: I'm sorry. Page 15, about eight
18 lines from the top, the sentence that begins, "It had been
19 assumed".

20 CHAIRMAN BECHHOEFER: Okay.

21 A Yes, I have read it.

22 Q (By Mr. Paton) All right. The Staff sent you
23 more than one 50.54F question, though, is that correct, or
24 sent you a series of 50.54F questions, is that correct?

25 A That's right. They sent us Questions 1 through

E3L10

1 22, to start with. I believe that was in March of '79.

2 Then they sent us Question 23, which had to do with QA, a
3 few months later.

4 Then, I believe it was around, oh, the latter
5 part of November 1979, they sent us additional Questions
6 24 through 38, something like that.

7 I think the pertinent fact in my mind is that
8 in July of 1979, we had a meeting with the Staff, and Region
9 III personnel sat in, to discuss in detail our proposed
10 remedial fixes and the history of what had occurred, the
11 surcharge, the dewatering, all of the issues, and after that
12 meeting, I think all of us had an impression that the Staff
13 was pretty favorable to the proposed remedial fixes we had.

14 Then along in about October or so of that year,
15 the Staff got the Corps of Engineers for assistance as consul-
16 tants, and then it was shortly thereafter that we received the
17 extra set of questions.

18 So what I was trying to say here was that this
19 assumption was made based upon our evaluation of what had
20 occurred at that July meeting.

21 Q Okay. I guess it is fair to say that in
22 November when you received additional questions, and in
23 December when you received a copy of the order, you became aware
24 that Staff was not that satisfied with your fixes at that
25 time?

E3L11

1 A That's right. We were very surprised at that
2 time.

3 CHAIRMAN BECHHOEFER: Could I interrupt for just
4 one thing? Were the only NRC people, who attended that
5 meeting that you referred to, Region III people?

6 THE WITNESS: No, sir. They were Staff--several
7 Staff people, geotechnical people, as well as some supervisory
8 personnel from the Staff.

9 CHAIRMAN BECHHOEFER: So there were others
10 present?

11 THE WITNESS: Yes; yes, sir.

12 Q (By Mr. Paton) Mr. Keeley, you were present
13 here yesterday for the entire day, I believe.

14 A Yes, sir.

15 Q Did you hear the testimony concerning any work
16 that would have been prohibited by the order that had taken
17 place after December 6th, '79?

18 A Yes.

19 Q Would you please tell the Board, in your opinion,
20 what work took place after December 6th, 1979 that would have
21 been prohibited by the order.

22 A I guess I am not aware of any work, other than
23 we had to install a cable system to support the feed water
24 valve pits. This was in order to take the--because we were
25 at that time going to tunnel under the feed water valve pits

E3L12

1 to install the caissons under the electrical penetration
2 areas, and then they were going to backfill with concrete
3 under the feed water valve pit.

4 Now, in order to maintain some support for
5 that feed water valve pit, we installed some cabling.

6 Q Did you hear the testimony that there was
7 some excavation made at the diesel generator building to
8 grout the crack, grout the cracks there?

9 A Oh, yes.

10 Q Would you add that to your list?

11 A Well, I don't view it quite that way.

12 Q Go ahead and tell us why.

13 A Well, because the grouting of-- It is not
14 cracks in the wall. It is underneath, where there were some
15 voids, possible voids in the soils.

16 We had discussed this with the NRC. I think,
17 if my memory serves me right, it was in that July meeting,
18 or perhaps later on. The question was asked by the Staff
19 or Region III--I can't remember for sure--if we intended to
20 grout under the footings in the building, and we said yes, we
21 were, so it was, to me, just an ongoing activity; no major
22 construction activity, as such.

23 Q All right. Let me read to you from Page 5 of
24 the order. It says, "The following prohibited activities
25 are prohibited:"--the order, as everybody knows, is not in

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E3L13

1 effect.

2 "A. Any placing, compacting or
3 excavating soil materials under or around
4 safety-related structures and systems."

5 Would you agree that at least technically, the
6 work done, as you have just described, at the diesel generator
7 building would fall into that category?

8 A I guess I would have to agree with that. I would
9 also point out that on all occasions, we discussed what we
10 intended to do with the Staff.

11 Q Okay.

12 A As was brought up yesterday, these other things
13 we have discussed.

T 14 Q Did you do any repairs to duct banks that involved
15 any kind of excavation?

16 A Those repairs were done prior to the order.

17 Q Prior to the order, okay. Have you done any
18 excavating or soils work in the front of the service water
19 structure?

20 MR. FARNELL: Do you have any time frame?

21 MR. PATON: After December 6, '79, up to the
22 present time.

23 Q (Continuing) By the "front", I mean away from
24 the pond.

25 A Yes. I think we had to install a valve pit there

E3L14

1 as a result of the design change of the plant.

2 Q Would you put that in the same category as
3 not major construction?

4 Let me ask you a different question. Would you
5 agree that it would technically fall within the words that I
6 read to you?

7 A I guess technically it would.

8 Q Tell us why you didn't consider it; because
9 it wasn't major construction, or what?

10 A Well, it wasn't major construction, and it also
11 wasn't directly related to the remedial activities going on.

12 Q All right. I want to ask you about that. When
13 you gave your answer-- Your opinion of it is that what is
14 prohibited is soils work in connection with the remedial
15 measures only? Is that your understanding?

16 A No, I wouldn't say completely, but we looked
17 upon this as a minor construction activity, I guess.

18 Q All right, all right. Was any soils work done
19 in and around the borated water storage tanks since December
20 6th, 1979?

21 A Any soils work? I know the ring beam foundation
22 was completed. I don't remember the exact date. There may
23 have been some backfill at the higher levels around there.

24 The other activity, as was discussed yesterday,
25 was the construction of the borated water storage tank.

COTTON CONTENT

E3L15

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1 Now, we committed in the July meeting and
2 several other discussions with the Staff, that part of
3 assuring that there was no soils problems in other areas
4 would be to load the tanks--for instance, the borated water
5 storage tanks--with water, but we also committed--I don't
6 know whether the word is "committed", but we also informed
7 the Staff that we would not construct those tanks or fill
8 them with water until after we had completed a soils--a review
9 of the soils in the tank area, and this was done.

10 The tanks were finally completed, I believe,
11 around October of 1980, somewhere along in there, and we
12 started putting water in them to check for settlement.

13 Q Okay. To the extent to which the work you
14 have just described to the Board does involve placing, com-
15 pacting or excavating soil materials under or around safety-
16 related structures, you didn't consider that work to be
17 major construction, is that correct?

18 MR. FARNELL: Objection. I don't think he
19 testified to anything about placing soil.

20 MR. PATON: I will ask him a different question.
21 I will withdraw that question.

22 Q (By Mr. Paton) Let me ask you why you didn't
23 list that in your original response to my question as to what
24 soils work had been done after December 6th, 1979.

25 MR. FARNELL: Objection.

E3L16

1 A Because I didn't think of it, I guess.

2 MR. PATON: I guess that's fair.

3 CHAIRMAN BECHHOEFER: I think he has answered
4 the question.

5 Q (By Mr. Paton) Mr. Keeley, after December 6th,
6 1979. has there not been major soils work excavating for
7 hydrogen tanks?

8 A For hydrogen tanks? There has been some
9 excavation along the north side of the aux building.

10 Q Let me ask you why you didn't include that in
11 your initial response to my question.

12 A Again, I didn't think of it.

13 Q Okay. May I suggest to you that I think you
14 indicated that the list you gave related only to remedial
15 actions. This does not relate to remedial actions, is that
16 correct?

17 A Yes, that's correct.

18 Q All right. I am going to ask you a question
19 that calls for a legal conclusion, but you have been answering
20 this kind of question.

21 Do you think that the excavation for the hydro-
22 gen tanks would have been prohibited by the order?

23 MR. FARNELL: I would object on the grounds of
24 a legal conclusion also.

25 MR. PATON: I don't mind, but he has been.

E3L17

1 answering those questions all morning.

2 CHAIRMAN BECHHOEFER: Well, the Board will
3 overrule that objection. There is a provision in the Federal
4 Rules which allows a technical witness to express an opinion
5 on an ultimate conclusion, even though the trier of fact has
6 the ultimate responsibility of making that conclusion.
7 I can't cite you the number now. I think it is in the 800's,
8 but I am not sure.

9 MR. FARNELL: Why don't you hand the witness
10 a copy of the order, if you would.

11 MR. PATON: I would be glad to. What portion of
12 the order would you like me to hand to him?

13 MR. FARNELL: The portion that you are going to
14 ask him about.

15 MR. PATON: I have been reading it to him.

16 MR. FARNELL: Yes, that portion.

17 MR. PATON: It doesn't-- I am trying to cooperate
18 with the Applicant, but I don't know how this fits in with the
19 pending question.

20 MR. FARNELL: You asked him, I believe, if--

21 MR. PATON: Oh, was it prohibited by the order?

22 MR. FARNELL: Yes.

23 MR. PATON: Would you like to take a look at the
24 order?

25 If this takes much more time, Mr. Chairman,

E3L18

1 I will change the question.

2 Q (By Mr. Paton) Let me ask you, Mr. Keeley,
3 do you understand the question?

4 A I would like to have it repeated.

5 Q Okay. You indicated that there has been,
6 since December 6th, '79, some excavation, soils excavation
7 work done for hydrogen tanks, is that correct?

8 A That's correct.

9 Q Okay. Let me ask you this question: Would that
10 work have been prohibited by the order, in your opinion?

11 A Yes, I guess it would, from a legal standpoint.

12 Q Okay. Let me direct your attention to Exhibit 2
13 of your testimony. Do you have Exhibit 2?

14 A Yes, sir.

15 Q I direct your attention to Footnote No. 1.
16 Would you read it to yourself, please?

17 A Yes, I have read it.

18 Q All right. I want to ask you about the word
19 "support". Does that mean soil under the structures, or does
20 it mean something other than that?

21 A No. It means soils under, as well as surrounding
22 the structure.

23 Q Does it mean all soils that support the struc-
24 ture?

25 A Well, no. All soils would have to include till.

E3L19

1 This includes the--

2 Q Soils placement?

3 A Yes.

4 Q Excuse me. Right. Does it include all soils
5 that have been placed that support the structure?

6 A Yes.

7 Q In light of the answers you have just given
8 me, would you review the completion dates? You have six
9 completion dates on the right-hand side of that exhibit. Would
10 you just review those quickly and see if you would change
11 any of those in light of the answers you have just given me.

12 A Well, I would have to modify it to indicate
13 that this was--this exhibit was to show when the major place-
14 ment of fill under and around the various structures was made.
15 Now, as modifications--or, as you quoted, the tank positions,
16 this does not include that.

17 Q Okay. I think the Board has some interest in
18 knowing any work that was done after December 6th, '79.

19 Let me ask you to put a completion date on all
20 work, soils placement, not just major. For example, would you
21 extend any of these dates for work--for any work, as opposed
22 to just major work?

23 A Yes, I would extend them.

24 Q Would you extend any of them beyond December 6th,
25 1979? If you would, please tell us which ones.

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A Well, I would extend the ones we talked about, the valve pit and the service water structure, the excavation for installing the tanks.

(Continued on next page.)

MILLERS FALLS
ERASE
COTTON CONTENT

1 Q. Does that complete your answer?

2 A. And the grouting under the diesel generator
3 building.

4 Q. I don't want to rush you, but--

5 A. Yes, that's it.

6 Q. Okay. I have one more. Was there any damage
7 to the service water lines between the turbine building and
8 the diesel generator building where the repairs caused you to
9 do some soil excavation?

10 MR. FARNELL: Are you talking about after
11 December 6?

12 MR. PATON: Yes, after December 6.

13 A. I don't recall any.

14 MR. PATON: Mr. Chairman, may I have one minute?
15 I think I'm just about finished.

16 CHAIRMAN BECHHOEFER: Yes.

17 (Pause.)

18 Q. (By Mr. Paton) Mr. Keeley, can you tell me,
19 after December 6, 1979, approximately what percent of your
20 time was spent on the site?

21 A. Until reorganization of the project, which took
22 place in March, 1980, I spent approximately one day a week;
23 so, 20 percent.

24 Q. Okay. How about after March of '80?

25 A. After March of '80, probably five percent.

1 MR. PATON: That's all the questions we have,
2 Mr. Chairman.

3 CHAIRMAN BECHHOEFER: Why don't we take a
4 short break before Ms. Stamiris begins cross. Ten minutes.

5 (Recess.)

6 CHAIRMAN BECHHOEFER: Back on the record.

7 The Board would like to put the Applicant on
8 notice that during this two-week period, if possible, we would
9 like to have available for questioning the top Bechtel people
10 on the project. We're thinking of two people; first, the
11 top--we were looking for the organization charts--the Bechtel
12 project manager, and on the other side, the person--the top
13 Bechtel person in the joint QA organization, which we were
14 trying to figure out who that was. Apparently the reports
15 do not have that, if I'm reading the charts correctly. We
16 would like to ask them a question, just in terms of how the
17 system is working today, and the interface between Bechtel and
18 Consumers Power.

19 MR. MILLER: So that, it is the current Bechtel
20 project manager?

21 CHAIRMAN BECHHOEFER: The current people, yes.

22 MR. MILLER: I'd have to determine whether these
23 people are available, and what their schedules are. But we
24 will report back to you tomorrow morning.

25 CHAIRMAN BECHHOEFER: Okay. We would not expect

1 that you would have to prepare any testimony. You might want
2 to furnish their qualifications--I mean their background; I'm
3 sorry--but purely for identification.

4 The Board was interested in the subject,
5 because all the witnesses are Consumers' people, and we had
6 a few questions we wanted to ask the other side of the
7 organization.

8 MR. MILLER: Yes, sir.

9 CHAIRMAN BECHHOEFER: Either Ms. Stamiris or
10 Mr. Marshall may proceed.

11 MR. MARSHALL: Well, I have a couple of questions
12 I want to ask, but that's all; just a couple.

13 CHAIRMAN BECHHOEFER: Would you prefer to ask
14 them first? We don't care.

15 MR. MARSHALL: Do you want me to?

16 MS. STAMIRIS: That's fine.

17 BY MR. MARSHALL:

18 Q Witness, are you qualified to speak to the
19 question as relates to the borings of the well?

20 A Yes.

21 Q I am concerned and interested in the deficiency
22 that formulated the starting of that well question to begin
23 with. Could you speak something to that?

24 A Yes. I think I could describe that. As a result
25 of the diesel generator building settlement problem, test

1 borings were made throughout the site. The remedial action to
2 take care of the settlement of the diesel generator building
3 which our consultants recommended, which was implemented, was
4 surcharging the building with soil--I think sand, as most
5 everybody is aware of.

6 Another issue that came up from the results of
7 the borings was that some of the sands had not been adequately
8 compacted, as well as the clays. So in order--and there was
9 no settlement problem with this. But the consultants got to
10 worrying about, under seismic conditions, if we had a fault
11 out there, that these sands could liquefy and cause a problem.

12 So in order to remedy that situation, they
13 recommended that the site be dewatered. That resulted in a
14 dewatering plan which included the installation of these wells
15 you're asking about.

16 (Continued on following page.)

end 4

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E5L1

1 Q (By Mr. Marshall) I am concerned now, in your
2 testimony, as to the reference to the word "they". Who are
3 "they"?

4 A "They" are our consultants, Dr. Peck and Dr.
5 Hendron.

6 Q Now, then, we have that straightened out. Who
7 made the original recommendation for the wells?

8 A Dr. Peck and Dr. Hendron.

9 Q Then it wasn't made by the NRC?

10 A No.

11 Q It wasn't made by the NRC. Then did later the
12 NRC, through their qualified men, make a recommendation for
13 additional borings?

14 A Additional borings?

15 Q Yes.

16 A Additional wells or borings?

17 Q Yes, that's what I am talking about.

18 A Additional wells?

19 Q Yes.

20 A No, they made no recommendation for additional
21 wells.

22 Q Were there additional borings requested?

23 A Well, they asked that they take additional
24 borings around the dike area, as well as in the diesel generator
25 building area, to substantiate the condition of the soils.

E5L2

1 They wanted us to take borings, and also to substantiate the
2 fact that the sand surcharge on the diesel building area had
3 accomplished what it should.

4 Now, in addition, they asked that we take--
5 When we went to them and proposed these 20 wells that were
6 discussed yesterday, they asked for some borings for, I think
7 it was, every two wells, or something like this, to assure
8 that the strata where the well point was placed was proper,
9 so that's all of the borings that the NRC requested.

10 Q Now, then, there is a void in there at this
11 particular point, a void. When I say "a void", there is a
12 question of time lapse right in that particular area that
13 arises from a question posed by the Applicant.

14 Now, what I want to know is, was this an
15 engineering difference, this lapse of time before they performed
16 as the NRC requested, or was this an engineering question,
17 or was this a financial question that brought this into this
18 lapse of time in there before they performed?

19 MR. FARNELL: Objection. You haven't connected
20 this up with anything that Mr. Keeley has testified to either
21 in the main body of his testimony or in any cross examination
22 to date.

23 Also, I just don't understand your question. I
24 believe he is going in to the boring issue, which will be
25 something that will be dealt with when we discuss the diesel

1 generator building preload.

2 MR. MARSHALL: No, it hasn't been spoke, to in
3 the record here today, but I did ask the man if he was
4 qualified to address himself to these questions.

5 MR. FARNELL: I believe he was talking about
6 back-up wells, dewatering. You are talking about something
7 different.

8 MR. MARSHALL: I am talking about information
9 given to the Applicant about price, how much it is going to
10 cost to do what the NRC requested, and I am talking about the
11 lapse of time that it took the Applicant to make up their mind
12 that it was going to comply with the NRC.

13 CHAIRMAN BECHHOEFER: That deals with borings.

14 MR. MARSHALL: I understand that, but what I am
15 asking him is, is it an engineering basis that constitutes
16 this lapse of time, or does it arise on the part of the attorneys
17 or the financing of the Applicant, or what caused this delay.
18 Was it engineering? If it is an engineering question, he can
19 speak to it, but if it is not, he can't.

20 CHAIRMAN BECHHOEFER: Well, I am not sure that
21 this is the right witness to speak to it, even if he is
22 qualified.

23 MR. MARSHALL: That's why I asked him if he is
24 qualified.

25 CHAIRMAN BECHHOEFER: Well, he is qualified,

E5L4

1 but there may be a different witness on the boring question.
2 I am not sure I know who it is, but whoever it is will be here.

3 MR. MARSHALL: Okay. I will take that witness
4 when he comes.

5 CHAIRMAN BECHHOEFER: It is on the borings.

6 MR. MARSHALL: I will take that up with that
7 witness. I know there is a lapse of time, and I want to estab-
8 lish on the record who is at fault, the NRC or the Applicant.
9 Why this lapse of time. Was it an engineering question? Was
10 it a legal question? Was it a financial question? What
11 caused that lapse of time. That's what I am trying to establish,
12 and I don't know how to just go about that.

13 CHAIRMAN BECHHOEFER: Well, when the witness
14 who is addressing the borings is here-- I am assuming you
15 are referring only to the borings now.

16 MR. MARSHALL: That's right. It is an additional
17 request for, now, wells. Now, he has already established
18 that the Applicant themselves proposed this remedy, but then
19 we go along and the NRC goes along with it, and then they say,
20 "Yes, this is go, as far as you went, but you haven't gone
21 far enough."

22 This is how I understand it. There they objected.
23 They said, "No. We are going to pack up our tools and go
24 home."

25 CHAIRMAN BECHHOEFER: Well, I think you will

E5L5

1 have to wait on the borings, at least, and that's how I under-
2 stand your question.

3 MR. MARSHALL: Okay. That is what I am trying
4 to get to, and if this witness can't--or if it is objectionable,
5 then I will wait.

6 CHAIRMAN BECHHOEFER: They have another witness.

7 MR. MARSHALL: Fine. I will wait for him.

8 CHAIRMAN BECHHOEFER: He is the one who is the
9 expert on that.

10 MR. MARSHALL: Very good.

11 CHAIRMAN BECHHOEFER: That one I will sustain.
12 Do you have further questions?

13 MR. MARSHALL: That's all I wanted, is to get
14 to that question and get it on the record. I don't care who
15 speaks to it.

16 CHAIRMAN BECHHOEFER: Okay. Well, when the right
17 person gets here, you may ask that.

18 MR. MARSHALL: Very good.

19 CHAIRMAN BECHHOEFER: Ms. Stamiris.

20 CROSS EXAMINATION

21 BY MS. STAMIRIS:

22 Q Mr. Keeley, do you agree with the essence of the
23 quality assurance stipulation as formulated?

24 MR. FARNELL: Objection. It is beyond the scope
25 of the testimony.

E5L6

1 MR. PATON: I object to the words "essence of
2 the stipulation". I may have other objections, but right now
3 I don't know what she means by "essence".

4 Q (By Ms. Stamiris) Do you agree with the portion
5 of the quality assurance stipulation which states that there
6 was a quality assurance breakdown prior to December 6th, 1979?

7 MR. FARNELL: I will object. It is beyond the
8 scope of direct examination, and also it is irrelevant.

9 MR. PATON: I also object on the grounds that
10 it is outside the scope of his direct.

11 MR. FARNELL: It is a misstatement of the stipula-
12 tion.

13 MS. STAMIRIS: If I ask him specifically on
14 those items listed in Part 1 of the stipulation, and whether
15 he agrees that, as it says in Part 2, whether that conclusion
16 which you can draw-- You know, if we were to read Part 2
17 word for word, do those items in 1, in his mind, represent
18 the conclusion that is stated in Part 2 of the quality assurance
19 stipulation?

20 MR. FARNELL: Same objection as before. I don't
21 even understand that, also.

22 MR. PATON: Staff also has its objections. It
23 is just outside the scope of the direct.

24 (The Board conferring.)

25 CHAIRMAN BECHHOEFER: The Board would like to

E5L7

1 rephrase your question because we think in one form, it is
2 permissible, and it is also something we would like to find
3 out.

4 We believe the witness could give his opinion
5 about whether the facts agreed to in Paragraph 1 of the stipula-
6 tion, whether in his opinion that does constitute a quality
7 assurance breakdown. We are wording it that way because there
8 is no agreement that there was such a breakdown. There is
9 just an agreement not to contest it, so I think the permissible
10 question is whether the witness, from the management side
11 of Consumers, agrees--not agrees, but considers the facts
12 stated in Paragraph 1 to constitute a quality assurance
13 breakdown. That question may be asked, if that is what it
14 is that you are driving at.

15 MS. STAMIRIS: But you said there was not
16 an agreement that there was a quality assurance breakdown.
17 There was just an agreement not to contest those things.

18 CHAIRMAN BECHHOEFER: That's correct; that's
19 correct.

20 MS. STAMIRIS: But my reading of Part 2 of
21 the stipulation--and I would like to reread it to make sure--
22 is that there was an agreement, with the conclusion that those
23 items in Part 1 did constitute a quality assurance breakdown.
24 In other words, they didn't outline each and every part of
25 it, but they agreed with the conclusion that those items--

E5L8

1 CHAIRMAN BECHHOEFER: I don't think that's right.
2 They agreed not to contest the Staff's conclusions.

3 MS. STAMIRIS: Could I read to myself a minute,
4 just find my own copy and read that portion of the stipulation?

5 MR. FARNELL: Chairman Bechhoefer, I also have
6 two other objections to your rephrased question, one of which
7 is that Mr. Keeley has not been put on as a quality assurance
8 witness. He has been out of the quality assurance aspect of
9 the--directly out of the quality assurance aspect for several
10 years, and we are putting on other witnesses who are more
11 intimately involved in it.

12 Second of all, we don't have any definition and
13 she hasn't set forth any definition of a "quality assurance
14 breakdown", what that is.

15 MS. STAMIRIS: As defined in Part 1 of the
16 stipulation; that's what I meant.

17 MR. FARNELL: It is not defined in Part 1.

18 MS. STAMIRIS: Those items that are listed in
19 Part 1, whether you call it a definition--

20 CHAIRMAN BECHHOEFER: Well, we are using a break-
21 down in quality assurance as mentioned in Part 2. Whatever
22 the Applicant is not contesting, that's what we will take those
23 words to mean at this stage.

24 We do think that management witnesses, who were
25 familiar with the QA program back in the time when there was

E5L9

1 some problems, should be able to answer that question.

2 MR. FARNELL: Mr. Keeley was not in the quality
3 assurance department at the time the soils were placed that
4 constituted this problem.

5 CHAIRMAN BECHHOEFER: Right. I see July '75.

6 MR. FARNELL: Right.

7 CHAIRMAN BECHHOEFER: We will wait for our
8 question, then, until the right witness gets here. I missed
9 the '75 cut-off date. I think we will hold that question until
10 the person gets here who was involved in the quality assurance.

11 (The Board conferring.)

12 CHAIRMAN BECHHOEFER: Before we finally rule on
13 that, actually, Mr. Keeley, in your position from July '75
14 to March 1980, did the Midland QA people report to you?

15 THE WITNESS: No, they did not. They reported
16 to the Vice President of Engineering and construction. It was a
17 requirement that was placed on us back in 1972 by the NRC;
18 that quality assurance not report to the project manager, but
19 that it report to a higher level person for day-to-day direction.

20 CHAIRMAN BECHHOEFER: Right. Well, you were
21 not project manager then. I wasn't sure--or were you project
22 manager?

23 THE WITNESS: I have been project manager from
24 1975 to the present.

25 CHAIRMAN BECHHOEFER: I see. What happened in

E5L10

1 March 1980?

2 THE WITNESS: There was a reorganization which
3 put a Vice President in charge of the Midland project. We
4 formed a project office, and I worked directly under the Vice
5 President, and we had six departmental managers, one of which
6 was QA, who still--or in 1980 and still reports to this Vice
7 President of Midland, Mr. Cook.

8 MR. PATON: Mr. Chairman, could I ask a question?

9 CHAIRMAN BECHHOEFER: Certainly.

10 MR. PATON: I have a chart that indicates--
11 that is attached to the testimony of Mr. Cook, but it clearly
12 indicates to me that the quality assurance manager, Mr. Bird,
13 reports to Mr. Keeley. Now, maybe that chart is wrong, but
14 it certainly appears to be the case, according to this diagram
15 I have.

16 THE WITNESS: That is not the case. As I
17 indicated, the various managers report for day-to-day direction
18 either to Mr. Cook or to myself. Mr. Bird reports directly to
19 Mr. Cook, not to me.

20 MR. PATON: Mr. Chairman, this is just a little
21 out of order. Could I just show this to Mr. Keeley and let
22 him look at the chart I am looking at and see if he agrees
23 with that?

24 CHAIRMAN BECHHOEFER: Yes. I have the same chart,
25 and I was wondering about it myself.

E5L11

1 MR. PATON: May the record show that I am
2 showing a chart to Mr. Keeley, which has not been introduced
3 into evidence. It is a chart attached to the testimony of
4 Mr. Cook. It has on it "Exhibit", but evidently has not been
5 numbered. It is captioned, "Midland Project Organization."

6 Would you look at that, Mr. Keeley, and I ask
7 you, does it indicate that Mr. Bird would report to you?
8 Is that chart inaccurate?

9 THE WITNESS: It indicates that all project
10 managers report to the project office, and within that office
11 we have decided certain reporting direct relationships, and this
12 is what I pointed out in the first paragraph of my testimony.

13 MR. PATON: Would you agree that looking at
14 that chart would not show the reader--would not indicate to
15 the reader the testimony you have just given?

16 MR. FARNELL: Objection. It is irrelevant.

17 MR. PATON: It seems like it is the point.
18 It is not irrelevant.

19 CHAIRMAN BECHHOEFER: The objection is overruled.
20 I think that is relevant.

21 MR. FARNELL: Well, we don't have any testimony
22 that he drafted this chart.

23 MR. PATON: I'm sorry. I did not hear Mr. Keeley's
24 answer. Did he answer the question?

25 THE WITNESS: No. I would like the question

5L12
1 repeated.

2 MR. PATON: Did you see the chart that I showed
3 you?

4 THE WITNESS: Yes, I did.

5 MR. PATON: Is there any indication in that
6 chart that Mr. Bird did not report to you?

7 THE WITNESS: No.

8 MR. PATON: Does that chart indicate that Mr.
9 Bird reports to you?

10 THE WITNESS: It indicates that all project
11 managers report to the project office, not directly to me
12 or to Mr. Cook, if you go strictly by the chart.

13 MR. PATON: Okay. You could not tell by reading
14 this chart whether Mr. Bird reports to you or Mr. Cook, is
15 that right?

16 THE WITNESS: That's right.

17 MR. FARNELL: Objection.

18 MR. PATON: All right. That's all.

19 MR. DECKER: Mr. Keeley, if I understood you
20 correctly, you stated that during the period that you were pro-
21 ject manager, from 1975 to March 1980, that quality assurance
22 did not report to you as a result of a requirement of the
23 NRC.

24 THE WITNESS: That's correct.

25 MR. DECKER: To whom did they report, by name and

E5L13

1 title, please?

2 THE WITNESS: They reported to Mr. Howell,
3 Vice President of Engineering and Construction.

4 MR. DECKER: Thank you.

5 CHAIRMAN BECHHOEFER: Okay. We will wait until
6 Mr. Howell gets here to ask the question, then.

7 I guess the line of your questions would have
8 to go to Mr. Howell, at least that one question. We haven't
9 determined, as you, I guess, who to ask.

10 MS. STAMIRIS: I think I need to ask some
11 more questions about the quality assurance stipulation. Just
12 as to procedure, who can I ask about it, or can I make the
13 assumption that Consumers management agrees with this stipulation?

14 CHAIRMAN BECHHOEFER: No. You can ask them.
15 If you don't, we will. This person apparently is not the right
16 person. I think they identified Mr. Howell, Mr. Howell or
17 Mr. Cook. Both will be here.

18 MR. MILLER: Excuse me, Judge Bechhoefer. I
19 guess I would like some clarification because I want to know
20 what the Board's line of questioning is so that we can be
21 certain that we do have a witness who will be responsive,
22 because Mr. Marguglio is going to be testifying too, and he
23 is the Director of quality assurance for the Company.

24 Is the line of questioning designed to go behind
25 the facts in Paragraph 1 of the stipulation?

E5L14

1 CHAIRMAN BECHHOEFER: The line of questions
2 would be to determine whether the people who were then in charge
3 of quality assurance, through hindsight, perhaps, would agree
4 that there was--or would agree with the Staff that the items
5 listed in Paragraph 1 constitute a quality assurance breakdown
6 in the soils area, which is what you are not contesting.

7 MR. MILLER: That's correct, and--

8 MR. PATON: Could I respond to that, Mr. Chairman?
9 Go ahead. I thought you were through.

10 MR. MILLER: I am really a little bit puzzled
11 by the procedure for the following reasons:

12 We have agreed not to contest it, and when I
13 say "we", that's a commitment by the Company and its witnesses
14 and the officers who are going to be testifying, and so on.

15 It seems to me in those circumstances, that
16 if the Staff wishes to pursue whatever additional facts are
17 needed, in its judgment, to establish that a breakdown, what-
18 ever that means, has taken place, that's the Staff's burden.

19 MR. PATON: The Staff has not indicated that in
20 any way. We don't intend to do that, and I don't think we
21 have indicated that we have.

22 CHAIRMAN BECHHOEFER: I might add that one of
23 the things the Board is interested in is finding out, first,
24 whether the officers of Consumers Power really thought that
25 something was wrong, because if they didn't, any steps to

E5L15

1 correct it might also not be given very much weight. That's
2 our thought.

3 MR. MILLER: I think that that's--

4 CHAIRMAN BECHHOEFER: That's the scope.

5 MR. MILLER: It seems to me that those are issues
6 that people--that witnesses from the Company will be prepared
7 to respond to. I guess my problem was--and perhaps it arose
8 from the way Ms. Stamiris asked the first question, which
9 was, "Do you agree that there was a breakdown?" If you ask
10 it with that kind of an ultimate fact, I am not certain that
11 you will get to the underlying facts, which seems to me
12 are more pertinent to the inquiry that you are pursuing.

13 CHAIRMAN BECHHOEFER: Theoretically, if an
14 officer thought that, well, the Company is just agreeing
15 to this to avoid the trouble of litigating it, and they really
16 didn't think there was anything wrong, their efforts to correct
17 it might not be the same if they thought that there were the
18 problems. This is the general area we would like to explore.

19 MR. MILLER: All right. Although it is the
20 Company's view, speaking as its counsel, that having agreed
21 that there were the enumerated quality assurance deficiencies
22 in Paragraph 1, that that was a serious admission. I mean
23 no one took that admission lightly, and it was because of the
24 conclusory nature of the word "breakdown", that Paragraph 2
25 was worded the way it is.

E5L16

1 I guess we really ought to wait and ask the
2 responsible Company officials.

3 CHAIRMAN BECHHOEFER: Right. Well, we just
4 wanted to make sure the right person was here. We don't
5 want to be asking the questions of a person who had no
6 responsibility or connection with it.

7 MR. PATON: Mr. Chairman, could I ask for a
8 clarification? I think I understand your statement,
9 permitting inquiry into the agreement by Consumers to the
10 first paragraph of the stipulation. I think the Board's--
11 I understand your inquiry to be whether or not in fact the
12 responsible Company officials in fact agreed with those
13 statements, and if that is correct, that decision was arrived
14 at very recently, and I would assume that would indicate
15 who the responsible Company officials would be. For example,
16 I wouldn't see Mr. Keeley being involved or being the responsible
17 official.

18 CHAIRMAN BECHHOLFER: No. We have already
19 determined that.

20 MS. STAMIRIS: Did you say you would or would
21 not?

22 MR. PATON: I would not think Mr. Keeley was.

23 CHAIRMAN BECHHOEFER: No. We have already
24 agreed with that.

25 MR. PATON: All right. I just wanted to make

E5L17

1 sure that the inquiry is limited in that respect.

2 CHAIRMAN BECHHOEFER: No. We believe the
3 question is not appropriate for Mr. Keeley.

4 You may continue.

5 MS. STAMIRIS: I would like to really correct
6 one thing or ask one thing, and I don't know who to ask it
7 of, but Mr. Miller, referring to what he said yesterday about
8 the stipulation--one other thing that he said yesterday was
9 that it did not represent a change in position, and the stipula-
10 tion is in direct contradiction to the position Consumers
11 has taken as recently as April, I think it was--no--May 25th
12 when they responded to the summary disposition motion that the
13 NRC Staff submitted on quality assurance prior to December 6th.
14 The Applicant submitted a motion like this (indicating)
15 that was in complete contradiction to the essence of the
16 stipulation, and also their answer to the notice of hearing
17 was in complete contradiction to those things that they have
18 agreed to in this stipulation, and I would just like that to
19 be known or ask who I can explore that with, if it is something
20 that I can.

21 I mean it is obvious that the stipulation is
22 really a big thing that is, like I said in my appeal, going
23 to affect the very essence of this proceeding, and I think
24 that these are questions that need to be asked and answered.

25 MR. PATON: Mr. Chairman, I would object to a

E5L13

1 line of inquiry along those regards. I mean if the Applicant
2 changed his position, so what? I don't see that that has
3 any relevance to this proceeding. I don't think they changed
4 their position, but if they did, so what? I don't think that
5 has any relevance in this proceeding.

6 MS. STAMIRIS: I would like to know who I can
7 ask to find out if they did change their position.

8 MR. PATON: I think it is irrelevant.

9 (The Board conferring.)

10 CHAIRMAN BECHHOEFER: The Board has considered
11 this. The reasons of whether the Applicant changed its posi-
12 tion or why it changed its position I don't think is relevant.
13 The underlying activity, how they regard that and what they
14 are going to do to correct it, that is relevant, but the
15 fact that they changed positions, if they did--I am not saying
16 that they did, but I can't see what difference it makes
17 We will not permit questions on that. It is just not relevant
18 to the safety of the plant, which we are trying to adjudicate.
19 It is their litigating position. Whether they agree or
20 whether the effect of certain past practices is relevant and
21 what they have done to correct it, if anything, is also rele-
22 vant, but why they take certain litigating positions is not
23 relevant, I don't think.

24 When those questions come up, we will probably
25 have to sustain objections to them.

E5L19

1 MS. STAMIRIS: I wasn't going to ask them
2 why they took different positions. I was going to ask if they
3 did take different positions, and I was going to talk about
4 the substance of the position that they set forth in answer
5 to the summary disposition motion by the Staff and the position
6 they set forth in their April answer to the notice of the
7 hearing.

8 CHAIRMAN BECHHOEFER: Well, again, I don't
9 think that that would be relevant, except to the extent that
10 they may have changed their position about the importance of
11 certain activities. You may want to ask about that, but I
12 don't know that this person is the right one to ask about
13 that.

14 MS. STAMIRIS: No, I didn't intend to ask Mr.
15 Keeley. I asked you who I could ask.

16 CHAIRMAN BECHHOEFER: Well, that, I, offhand,
17 don't know. The mere fact of the change in the litigating
18 position is not relevant, really.

19 Q (By Ms. Stamiris) Mr. Keeley, in 1974 you
20 testified in the show cause hearing on cadwelding.

21 A That's correct.

22 Q And near the end of that decision-- I would
23 like to read from it. It is LBP-74-71. I would like to read
24 the portion of your testimony that was put in the final decision
25 and ask you about it.

E5L20

1 It says, "The attitude toward compliance
2 with Commission rules and regulations was set forth by Gilbert
3 S. Keeley, Director for Project Quality Assurance Department
4 Services in response to a Board question as to why the future
5 implementation of the Midland Quality Assurance Program will
6 be better than its past implementation in terms of effectiveness."

7 This is your response now. "There is no
8 doubt in my mind that we have been implementing the upgraded
9 QA program carried out since October 1st, 1973. If the AER
10 feels that they want us to provide more visibility on any
11 of these functions we are doing, we are going to do it, as far
12 as I am concerned. As I say, I have been given that responsi-
13 bility to implement or to set QA policy and to see that the
14 policy is implemented, not only by Consumers Power Company,
15 but by B and Bechtel."

16 Do you still agree with the statements that I
17 just read?

18 A I agreed with the statements when I was still
19 responsible for quality assurance, yes.

20 Q That was up until 1975?

21 A That's correct.

22 Q Knowing what you know, as project manager,
23 about what took place in the soils settlement deficiencies
24 since this decision at the end of 1974, do you believe that the
25 assurances that you gave there or the commitments to improvement

1 turned out to be correct?

2 MR. FARNELL: Objection. That's hypothetical
3 and not relevant because he wasn't in a QA position at that
4 time.

5 MS. STAMIRIS: But he was project manager, and
6 that was how I asked the question.

7 MR. PATON: Judge Bechhoefer, I would like to
8 object. I am not sure that I understand what it is she is
9 asking him that turns out to be correct. I am not sure
10 that there is anything in the question that-- She ended up
11 saying, "Is that correct", but I am not sure that the question
12 gave a predicate for that. I am not sure what she is asking
13 him is correct. Could I ask that she either repeat it or
14 rephrase it?

15 CHAIRMAN BECHHOEFER: Would you repeat it
16 or clarify it?

17 Q (By Ms. Stamiris) The question that came
18 from the Board in this 1974 hearing was a question--and I
19 am reading from this decision--"as to why the future implementa-
20 tion of the Midland quality assurance program will be better
21 than its past implementation in terms of effectiveness".

22 Do you, as project manager, with full knowledge
23 of what happened in the soils settlement question and the
24 area that this hearing is about, believe that the Midland
25 quality assurance program was better than its past implementation

E5L22

1 in terms of effectiveness? In other words, the implementation
2 since this September 1974 decision, do you believe it was
3 better in terms of effectiveness?

4 CHAIRMAN BECHHOEFER: Do you have an objection
5 to that?

6 MR. FARNELL: No.

7 CHAIRMAN BECHHOEFER: Okay.

8 A I believe there have been several improvements
9 made in the quality assurance program since I was quality
10 assurance director. These have included voluntary changes
11 to the QA program that Mr. Marguglio has made, getting more
12 people involved, hiring more people, reorganizing, putting
13 more people on site, implementing an over-inspection activity,
14 and since quality assurance, in my mind, has always been a
15 developing sort of thing, and if you find problems in an area,
16 you take corrective action to try to do something so that they
17 hopefully won't occur again, I think it is much better now
18 than when I was QA Director. That's the way I understood your
19 question.

20 Q I asked the question not about the program,
21 the QA program, and that was what you answered. You told me
22 about all the improvements in the QA program, but I asked you
23 despite these--I am asking you now, despite these programmatic
24 improvements that were set forth, do you believe that the
25 implementation of your quality assurance program was better since

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E5L23

1 1974 in terms of effectiveness regarding the taking into consid-
2 eration of the soils settlement deficiencies?

3 A I discussed not only the program. I discussed
4 another aspect, which was over-inspection. That is an
5 implementation activity, and I think that has been a big
6 plus.

7 Consumers has been conducting a lot more over-
8 inspections. I also would point out that the problem on the
9 soils, on the soils placement, and the quality assurance
10 program that was involved in that, did not only include quality
11 control inspection of the activities and Consumers audits
12 and over-inspection, but part of that quality assurance
13 program also included monitoring buildings for settlement.
14 That is another step in quality assurance. and that detected
15 the problem, and we are taking corrective action to take care
16 of the problem.

17 Q So your answer is yes, that you think it has
18 been, in the words of this Board, better than its past implementa-
19 tion in terms of effectiveness?

20 A It is my opinion it has, yes.

21 Q In your testimony on Page 4, you begin a
22 discussion of the administration building problem, in the last
23 paragraph on Page 4, and I think it is on-- Well, it is not
24 in this part. I will have to look again. It is later in your
25 testimony. It is on Page 7.

E5L24

1 You mention a task force made up of Consumers
2 Power and Bechtel personnel was formed to resolve the technical
3 issues related to foundation soils. I would like to ask you
4 questions about that task force.

5 When was that task force first put together?

6 A I can't give you an exact date. It was shortly
7 after the settlement problem. I would guess around September
8 1978, something like that.

9 Q Can you tell me who it was made up of?

10 A The task force was made up of Bechtel personnel,
11 plus the consultants, Dr. Peck, Dr. Hendron. I can't remember
12 all the names. There was Loughney on dewatering. There was a
13 couple of other consultants on instrumentation for monitoring
14 settlement. Then there was Consumers Power Company personnel
15 and Bechtel personnel.

16 Q Could you tell me who the Bechtel personnel
17 and who the Consumers personnel were?

18 A Bechtel personnel principally consisted of
19 Carl Weidner, who was the manager of their civil group. It
20 consisted of the Bechtel project manager, and I believe
21 there was a couple of other people that I can't remember.

22 Q Who was the Bechtel project manager again?

23 A The Bechtel project manager in those days was
24 Phil Martinez.

25 Q Who were the Consumers people involved?

E5L25

E Z E R A S E
C O T T O N C O N T E N T

1 A Consumers people were Tom Cook, our project
2 superintendent on site.

3 Q C-o-o-k-e?

4 A No "E". Excuse me. There is an "E", yes.
5 Don Sibbald, who is a field engineer, works for Tom Cook
6 in the area of soil activities; Don Horn, quality assurance.
7 I think that was about it, if my memory serves me correctly.

8 Q Now, I understand that this task force was
9 basically a decision-making body, as far as determining what
10 to do. This task force was formed specifically because of
11 the soil settlement problems, is that not correct?

12 A That's correct. It came up with recommenda-
13 tions.

14 Q Would you explain that?

15 A Well, you said it was a decision-making body.
16 The final decision as to which direction we should go rested
17 with Consumers management.

18 Q Okay. Thank you. Can you tell me who in
19 Consumers management made the final decision on this?

20 A Mr. Howell.

21 (Continued on next page.)

22

23

24

25

1 Q So all of the decisions or the recommendations
2 of this task force were taken to Mr. Howell for his final
3 approval?

4 A The recommendations were discussed with Mr.
5 Howell, yes.

6 Q Were any actions--did any actions take place
7 from these recommendations without Mr. Howell's knowledge, on
8 the basis of the people who were involved in the task force?

9 A No. Mr. Howell was kept thoroughly informed
10 by me and by Tom Cook.

11 Q You were on the task force too?

12 A No, I was not on the task force.

13 Q Did they report to you before they-- What was
14 the chain of command with this?

15 A The chain of command was that the group would
16 come up with recommendations and discuss them, either with me
17 initially, or with me and Mr. Howell. And Mr. Howell would
18 not sit in on all of the discussions. I kept him informed.

19 Q So if they came to you initially with some
20 recommendations, you would not have had the authority to tell
21 them to go ahead unless you got that from Mr. Howell?

22 A That's correct.

23 Q I think I'll go back to the administration
24 building at a later time, and I'll ask you now whether the
25 root causes for the settlement of the diesel generator building

1 had been established by the end of September?

2 MR. FARNELL: What year?

3 MS. STAMIRIS: 1978.

4 A. The root causes, if I remember right, were not
5 definitely established until later, to tie all the root causes
6 together. This was answered in Question 23, which was provided
7 later on. But of course there were some preliminary indications
8 of what the causes were in late fall of '78.

9 Q. (By Ms. Stamiris) Did you believe that determin-
10 ation of the root causes was necessary or-- Well, did you
11 believe that the determination of root causes was necessary
12 prior to implementation of remediation?

13 A. No.

14 Q. Why not?

15 A. Root causes, I think, are necessary to take a
16 look at to-- Well, I assume-- Well, I guess I'd have to have a
17 more clear definition of what you mean by "root causes."

18 Q. I do mean beyond the technical identification
19 of compaction or settlement, but as to why some of these
20 problems have--

21 A. Okay. That's the way I initially interpreted
22 it, but I was wondering.

23 The root causes of why it occurred, not dealing
24 with it technically, such as it was not adequately compacted, I
25 don't think have to be completed before you decide what

1 remedial action is proper to take. I think that goes to
2 quality assurance aspects of evaluating, to assure yourself
3 that you're not going to have a similar problem later on.

4 Q Do you believe that there is a danger that
5 could be involved or--well, I can't think of a better word--
6 in repeating some of the same, let's say, people problems, or
7 procedural problems that led to the original problem? Do
8 you believe that there's a danger that they could be, in fact,
9 repeated in remediation itself if they had not been
10 identified?

11 A Oh, that's true; and I think that the "people
12 problem" was resolved before remedial actions were taken.
13 The remedial actions on the placement of the surcharge--I see
14 no question between that the "people problem," as you call it.

15 Q When was the preload option first adopted?

16 A It was first formally adopted in December of
17 1978.

18 Q When was it first practically adopted? I mean
19 to say--

20 MR. FARNELL: What do you mean by "practically
21 adopted"?

22 MS. STAMIRIS: Okay.

23 Q (By Ms. Stamiris) I mean had you first ruled
24 out the removal and replacement option?

25 MR. FARNELL: Objection. It's not in evidence

1 yet that it has been ruled out, or the fact that it hasn't
2 been.

3 MS. STAMIRIS: I mean as a choice, not as an
4 ultimate--like, I'm not asking if you have to go back and
5 ultimately rule to replace it, but it has been rejected as a
6 first choice.

7 MR. FARNELL: That clarifies it for me.

8 CHAIRMAN BECHHOEFER: Okay.

9 Q (By Ms. Stamiris) When was the removal and
10 replacement first ruled out as a choice of action to proceed
11 with?

12 A I don't remember the exact date. I guess it was
13 in the late fall of 1978.

14 Q When were your soils consultants, Drs. Peck and
15 Hendron, first retained?

16 A I can't give you the exact date. It was very
17 shortly after--I thought you asked that question or a similar
18 question before--I think it was around September--August or
19 September of 1978.

20 Q On page 6 of your testimony, I have some
21 questions.

22 In the paragraph starting on the third line, it
23 says:

24 "In July 1978, during routine monitoring of
25 structures for settlement, it was found that settlement

6WEL5

1 of the diesel generator building was in excess of
2 that which would have been expected."

3 Was this visual monitoring?

4 A. Yes. This was visual monitoring by use of
5 surveying instruments.

6 Q. When were the first surveying instruments put
7 in place in the first attempt to record settlement at the
8 diesel generator building?

9 A. This, to my knowledge, was the first case;
10 which is, as I mentioned before, a requirement in the FSAR,
11 that we have a monitoring program for all structures.

12 Q. Okay. So obviously it has to compare the
13 settlement in July of 1978 to some prior--

14 A. No; it compares it to a benchmark.

15 Q. Would you explain about the benchmark to me?

16 A. Well, a benchmark is a concrete monument, or
17 something, that is used as a reference point, and they start,
18 by their surveying instruments, taking level shots from a
19 benchmark to whatever structures they wish to monitor.

20 So this was the start of the program on the
21 particular diesel generator building for monitoring settlement.
22 It had already been started on other buildings which were
23 more nearly complete.

24 Then I guess, to answer your question more
25 clearly, the people doing the surveying detected that it had

1 settled, and that is was, in fact, settling more than what
2 would have been expected. And this was based upon what I
3 have discussed here as the formal program. But there were
4 some construction shots taken previous to this, when they
5 placed forms, things like that. When I say "shots," I mean
6 monitoring levels, taking levels. So this, when they look at
7 this official start of the monitoring program and compared it
8 to the construction-type surveying which they make, they
9 detected settlement.

10 Q Was the NRC informed about the informal measure-
11 ment shot that you just mentioned that were taking place with
12 construction? The reason I ask that is because I thought that
13 the formal program that was instituted then was the very first
14 measurement of settlement. I didn't know there had been any
15 informal construction--

16 A You have to, in order to place forms. In
17 construction, you have to start at the bottom of the concrete
18 forms, and you have to determine where the building base
19 starts, put your forms in, take measurements. This is just
20 normal construction practice.

21 Q That would seem to make sense. I mean, what
22 you're saying to me is that none of these informal techniques
23 discovered any kind of settlement?

24 A No, because they were a reference point for
25 starting construction. And then later on, when further shots or

1 further level shots were taken, and compared to the construction
2 levels, then they determined that it was settling.

3 Q At the bottom of this page, near the bottom,
4 at the end of the fourth paragraph, it says-- Well, maybe I
5 should read that whole paragraph:

6 "On September 7, 1978 the NRC Region III
7 Resident Inspector was notified that Consumers
8 Power had determined that the condition with respect
9 to the diesel generator building soils was reportable.
10 This was based on the fact--" and this is the part
11 I want to ask you about "--that analysis of soil borings started
12 on 8-25-78 showed that compaction of soil was sig-
13 nificantly less than was measured during initial
14 placement of the fill."

15 Will you tell me about what measurements were
16 taken during the initial placement of the fill?

17 A During initial placement of the fill, tests
18 were run to determine--they're called proctor tests--to
19 determine whether the soil had been adequately compacted to
20 the spec that gets involved in moisture content, things like
21 that. Based upon those test results, when the soil had been
22 placed, it indicated that the soil had been compacted to an
23 optimum value and densities of the soil were also checked, and
24 then later on these new borings showed that that soil was not
25 adequately compacted.

1 Q There's no way that adequately compacted soil
2 later becomes uncompacted, is there? Or do you believe that
3 this difference is due to the tests?

4 A Yes.

5 Q One of the things that I remember Dr. Peck as
6 having said early on, was that the fill was settling of its
7 own weight. Were there any indications of this prior to the
8 construction of the diesel generator building, or at any
9 early stages?

10 A Not that I'm aware of. I think that what Dr.
11 Peck was referring to is that since the problem occurred--of
12 course, all soils would settle of its own weight, fill-type
13 soils--but that that was the problem, why settlement was
14 taking place. If it had been adequately compacted, it
15 wouldn't be settling to the extent it was from its own weight,
16 plus the diesel generator building. |

17 Q You may have already explained this, and I
18 don't understand the details of all these things, but I meant
19 to ask if, when the soil was originally placed, it was not a
20 routine procedure then to measure what settlement may have
21 taken place in that soil just prior to starting of construction
22 of a building? In other words, when you're going to start
23 constructing a building, is it not--would it not have been--
24 was it not your procedure to check and see whether any
25 settlement had taken place in that soil before you start

1 building it?

2 A Well, I think, yes; and, again, I think the
3 construction surveys I was talking about would have checked
4 the levels of where the base mat was to go in, but the
5 settlement--or the soils had not been in there long enough for
6 anybody at that time to observe or note that there was
7 settlement taking place; plus, as you add more weight to the
8 soils, you're going to get a larger change in settlement--I
9 mean a faster rate of change.

10 Q This is meeting notes of September 28, 1978,
11 and it was in the first tab of Volume III of the 50.54(f), and
12 it says, speaking of the section above:

13 "The backfill under the building was done
14 during the latter months of 1975 and 1977. Most
15 fill was placed in 1977, which was a dry year,
16 starting in May. Latest placed in October."

17 So it says here that most of the fill was
18 placed between May and October for the diesel generator
19 building. Is that correct?

20 MR. FARNELL: Objection. I'd like the witness
21 to take a look at the document she's referring to.

22 CHAIRMAN BECHHOEFER: I was going to ask you,
23 should this be one that is marked for identification? Because
24 I think the Board--before the question is asked, the board
25 would like to see it. It's hard for us to understand or to

6WEL 10

1 follow, without having it in front of us. If this could be
2 one that is marked--

3 MR. MILLER: Off the record.

4 (Discussion off the record.)

5 (Document handed to the witness.)

6 CHAIRMAN BECHHOEFER: Let's have a five-minute
7 recess.

8 (Recess.)

9 (Continued on following page.)

end 6

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E7L1

COTTON CONTENT

1 CHAIRMAN BECHHOEFER: Back on the record.

2 Before we resume, we would like to put the
3 Applicant on notice that we are going to ask Mr. Marguglio,
4 when he is here, to produce information--and this is to give
5 him a chance to put it together because he may not have it--
6 stretching back until the period which encompasses, at least,
7 October '75 to the present. We want, on a six-month basis--
8 but you don't have to do October '75. It is whatever date
9 the figures may be available--the numbers of QA personnel
10 assigned to the Midland project, and as a subcategory,
11 the numbers of QC inspectors.

12 When I say "QA personnel", that would include
13 QC, but we want a break-out of the QC people, and also the
14 total number of construction workers on the site on each of
15 those dates.

16 Now, we are not--we wanted to start with about
17 October '75, but if your figures are, like, August or September
18 '75 or December '75, we don't care about any particular date,
19 but October '75 was the start of soils work on, I believe,
20 the diesel generator building, which is the period we want
21 to encompass.

22 If your figures are for different dates-- What
23 we want to get is a statistical analysis or trend.

24 MR. MILLER: And you want it up to the present?

25 CHAIRMAN BECHHOEFER: As recently as you have

MILLERS FALLS

E7L2

1 got.

2 MR. MILLER: And at approximately six-month
3 intervals?

4 CHAIRMAN BECHHOEFER: Approximately six-month
5 periods, but we don't want you to have to go and figure the
6 numbers of each of these personnel on dates when you don't
7 have the figures available. We are not familiar with the
8 Company's reports at this time.

9 MR. PATON: Mr. Chairman, could I make a sugges-
10 tion? Since the issue in this proceeding is the soils area,
11 if there is any way that the Applicant could delineate in
12 these totals the numbers of people that were involved in
13 QA regarding soils work-- I don't know if that can be done,
14 but that might be--

15 CHAIRMAN BECHHOEFER: If it could be done, that
16 would be desirable. We want the overall figures, as well,
17 but if soils work could be broken out, that would be desirable
18 also.

19 Again, I am not familiar with the Company's--
20 the way the Company keeps its records or what information
21 is in there, and we do not want to impose any obligation on
22 you to try to survey individual personnel on a given date.
23 We would not want that.

24 MR. MILLER: May I inquire a little further
25 about your earlier request with respect to the Bechtel project

E7L3

1 manager and a representative of the Bechtel--an employee
2 of Bechtel who was in the Midland project quality assurance
3 organization?

4 The Bechtel project manager is very straight-
5 forward, and that person will be made available, perhaps as
6 early as tomorrow.

7 With respect to the Bechtel employee in the
8 Midland project quality assurance organization, it really
9 doesn't--it isn't set up so that there is a head of the Mid-
10 land project quality assurance organization, then a top Consumers
11 employee and a top Bechtel employee. The organization is
12 completely integrated, and there are some Bechtel employees
13 who work in that organization.

14 I think that perhaps the Board might find it
15 more productive, if I understand the thrust of your inquiry,
16 to talk to the head of the Midland project quality assurance
17 organization. He is a Consumers Power Company employee. His
18 name is Walt Bird. I don't know that it would necessarily
19 be productive to talk to a Bechtel employee who is in that
20 group.

21 DR. COWAN: This integrated organization is
22 fairly recent.

23 MR. MILLER: Yes, sir.

24 MR. PATON: Mr. Chairman, I am told that there
25 is a gentleman on site, Gene Smith, who is the top Bechtel

ERASE

E7L4

1 QA person on site, if that's what the Board is looking for.

2 MR. MILLER: Well, we better investigate
3 further. I just wanted to make you aware of the fact that
4 Mr. Bird is head of the MPQAD. He is a Consumers Power Company
5 employee.

6 Maybe I should look a little further and determine
7 whether there is a Bechtel employee that will fit the descrip-
8 tion you asked for.

9 CHAIRMAN BECHHOEFER: Right. We would like
10 to be able to ascertain how the unit relationship works from
11 the standpoint of both companies, and there is testimony
12 concerning that organization from the Consumers Power side
13 already.

14 MR. MILLER: I see.

15 CHAIRMAN BECHHOEFER: We wanted to try to figure
16 out **whether** disputes are likely to arise or if there are
17 differences of opinion caused by the organizational affiliation
18 of the persons involved, and how that would be taken care of.
19 We are trying to get some feel about whether an organization
20 of this type will work. It isn't the usual type of quality
21 assurance organization, at least in the cases that I have
22 been involved in--that we have been involved in.

23 MR. MILLER: All right, sir.

24 CHAIRMAN BECHHOEFER: It is a little bit different,
25 and we want to explore that a little bit, so that was our

E7L5

1 feeling.

2 MR. MILLER: Okay.

3 CHAIRMAN BECHHOEFER: Ms. Stamiris, are you
4 ready to proceed?

5 MS. STAMIRIS: Yes. I got one copy made of
6 this. Do you need a copy now?

7 MR. PATON: What's that again?

8 MS. STAMIRIS: I have a copy of this now, and
9 I just wondered-- They cost 25 cents a sheet, and so I didn't
10 get a lot of copies made, so if you do have one, I will
11 give it to Mr. Paton, and if you want it, I will give it to
12 you. You get first choice.

13 MR. PATON: I can get along without it.

14 MR. MILLER: The Board is using ours.

15 CHAIRMAN BECHHOEFER: Is this one that you
16 think should be marked as an exhibit for identification?

17 MS. STAMIRIS: I think that was what Mr. Miller
18 had been indicating.

19 MR. MILLER: Yes, I think that would be helpful.

20 MR. FARNELL: I think we can identify it by
21 saying that it comes from 50.54(f), Volume 6, Tab 1.

22 MS. STAMIRIS: It is not Volume 6, is it?

23 MR. FARNELL: Yes.

24 MS. STAMIRIS: I only have Volume 3. I never
25 even had six volumes.

E7L6

1 THE WITNESS: Those volumes were reorganized,
2 and this is just a change in the way it is placed.

3 MS. STAMIRIS: Oh, okay.

4 CHAIRMAN BECHHOEFER: You say Volume 6?

5 MR. FARNELL: Tab 1, meeting notes, 28 September
6 1978. I think that would be sufficient to identify it for
7 all of us.

8 CHAIRMAN BECHHOEFER: Oh, okay. Well, as long
9 as-- I guess it will be reasonably available to the Appeal
10 Board, as well, and the Commission and the Courts, and whoever
11 else.

12 Q (By Ms. Stamiris) When it says that most
13 of the fill was placed for the diesel generator building
14 starting in May, and the latest placed in October of 1977, can
15 you tell me when the very first step of the foundation was?
16 I understand it was late in October of 1977, on the diesel
17 generator building. Do you know what day or what week in
18 October?

19 A I don't know offhand, no.

20 Q Is it common practice to put--to build a struc-
21 ture on fill that has been placed as recently as a month or a
22 week?

23 A Yes, it is.

24 Q Was that ever identified as part of the problem
25 associated with the administration building footing settlement,

E7L7

1 that the excavation that was made, I understand, for the steam
2 tunnel wall, was done-- Well, I think I will go to that now.
3 That's one other thing I wanted to point out.

4 The fill that was placed in the excavation
5 for the steam tunnel wall was placed in approximately the
6 same time period as the fill that was placed for the diesel
7 generator building, according to some documents that I
8 received in discovery and what it says here, is that correct,
9 as to what you remember?

10 A That's correct, per my memory, yes.

11 Q Was it ever identified that that was part of
12 the problem with the administration building settlement,
13 that in fact the building had been built too soon--or the
14 footing had been placed too soon on that new fill?

15 A No, that was not the problem, and the building
16 had not been built. At that point in time when the problem
17 was discovered on the admin building, there were columns,
18 footings installed, and a grade beam across these footings,
19 and there had been no additional construction. I mean the
20 building hadn't been completed. It was just the base that was
21 being prepared.

22 Now, I have forgotten the question. Would you
23 repeat it?

24 Q I asked you whether the fact that that footing
25 and grading had been placed too soon on that--

E7L8

1 A No, that was not the problem. The problem
2 was that that soil had all been placed with heavy equipment
3 in through there, which is the most expedient way to place
4 soils, and then it had been dug out for installation of the
5 steam tunnel, and when you dig out like that, you have got to
6 angle the sides in, and the grade beam that settled was in
7 this area where it had been dug out, and then some fill placed
8 back in after the construction of the steam tunnel, so it was
9 not because of timing--from the time the fill was placed until
10 the grade beam was placed.

11 Q And there was only that--the footing in that
12 particular area of the excavation that experienced the settle-
13 ment, correct?

14 A That's correct.

15 Q When the settlement at that administration
16 building, if it was not due to the timing, would you say that
17 it was due to the quality of the fill?

18 A It was due to, yes, inadequately compacted
19 fill right in that area.

20 Q You have already established that that fill
21 was placed in the same time frame, within a few months of the
22 placement of the fill under the diesel generator building.

23 Q Do you have any records that show whether the
24 fill was coming from the same place? In other words, do you
25 have records that show that, you know, within this four-month

E7L9

1 period or this six-month period, the fill soil was coming
2 from such and such location?

3 A I don't believe--

4 MR. PATON: I am on time, I object to the
5 question, Mr. Chairman. The question seemed to me to be in
6 the nature of general discovery.

7 If Mrs. Stamiris--she may be addressing Contention
8 3-C, which is that the settlement of the administration
9 building was an indicator of the problem that was going to
10 happen later at the diesel generator building. I have been
11 trying to listen carefully to the questions and see where she
12 is going. They are either, as far as I can determine, general
13 discovery questions, or they are related to Contention 3-C.

14 Could I ask that she make a proffer of where
15 she is going so that we can see whether they are within the
16 scope of this direct testimony? It just seems like--you know,
17 it seems like we are wandering. I am not sure what the object
18 of the question is. They are off--you know, this case has a
19 tremendous history. If we go back and repeat the history of
20 the case, we will be here forever.

21 If there is a purpose to it, fine, but I just
22 can't connect it up with Mr. Kecley's direct testimony.

23 CHAIRMAN BECHHOEFER: Ms. Stamiris, do you want
24 to explain?

25 MS. STAMIRIS: Well, I had not-- Definitely,

E7L10

1 in my mind, it relates to my Contention 3-C, and if they seem
2 to be discovery-type questions, a lot of my discovery was
3 denied, and I thought that I was going to be able to--in fact,
4 at a later date, I hope to ask some of the questions that I
5 didn't get answered in discovery.

6 At one point--I can't remember when--I remember
7 reading a statement by you, something to the effect that these
8 were informational questions, and I got the definite impression
9 that I was going to be afforded some leniency in my areas of
10 questioning during the hearing.

11 MR. PATON: Mr. Chairman, you know, I wouldn't
12 object to some leniency, but I think Ms. Stamiris--I think
13 she said she is on Contention 3-C, and if that's true, then I
14 strenuously object. We are not on Contention 3-C. We are on
15 Mr. Keeley's direct testimony.

16 I don't mean to be too technical with the
17 Intervenor; but, you know, it just seems to me like we are
18 adrift.

19 CHAIRMAN BECHHOEFER: Now, I think we will
20 overrule the objection because at least on Page 4 of the testi-
21 mony there is a discussion, to some extent, of the administration
22 building, so the objection is overruled. He may answer. I
23 don't remember the question.

24 MS. STAMIRIS: I don't remember if I had one out
25 there that hadn't got answered, myself.

E7L11

1 MR. FARNELL: Why don't we have the court
2 reporter read it back.

3 CHAIRMAN BECHHOEFER: Why don't you read the
4 question back. I think the witness gave about half an answer,
5 but not a full one.

6 MR. PATON: Mr. Chairman, could I make-- I have a
7 question, but I will either ask it before or after.

8 (Question and answer read by reporter.)

9 A (Continuing) We do have records some place on
10 site indicating where the fill came from for the various
11 areas. I can't, off the top of my head, answer the question,
12 except I would point out that regardless of where the fill
13 came from, it is my opinion that if the fill had been compacted
14 properly for the type of fill used and the tests run for
15 that type of fill to show it was placed near optimum moisture
16 content, the problem wouldn't have occurred.

17 Q Then in your mind, it would be more--the more
18 salient question would be whether it had been--the procedures
19 had been the same as opposed to whether the fill itself had
20 been the same under the two buildings?

21 A That's correct.

22 CHAIRMAN BECHHOEFER: Were you referring
23 there to compaction procedures?

24 MS. STAMIRIS: I wasn't the first time, but right
25 now I was.

E7L12

1 CHAIRMAN BECHHOEFER: Just on this last answer?

2 MS. STAMIRIS: Yes.

3 CHAIRMAN BECHHOEFER: I want to make sure what
4 the answer means.

5 THE WITNESS: No. My answer was couched on
6 what I had previously said about testing, test procedures, not
7 placement procedures.

8 CHAIRMAN BECHHOEFER: I see.

9 Q (By Ms. Stamiris) Well, not making a distinc-
10 tion between test procedures and placement procedures, would
11 you say that you believe that inadequate procedures that led
12 to the settlement of the administration building footing and
13 the inadequate procedures that led to the settlement of the
14 diesel generator building, were the same?

15 MR. FARNELL: Objection. He testified that they
16 are two different items, two procedures, and you asked him to
17 disregard that, so I don't think that's a proper question.

18 (The Board conferring.)

19 CHAIRMAN BECHHOEFER: We want to ask the witness
20 to answer a question.

21 MR. DECKER: I was under the opinion that
22 somewhere in this maze of testimony provided us, Staff testi-
23 mony provided us, that they were saying that the same specifica-
24 tions and procedural requirements were there for both the
25 administration building and the diesel generator building.

E7L13

1 Is that your understanding? Is that correct, in terms of
2 soils?

3 THE WITNESS: It is my understanding that there
4 were two separate sets of procedures. We are talking about
5 placement procedures, as to what criteria the soils was placed.
6 There are two sets of those specs. I believe that there is
7 one set of testing type procedure requirements.

8 Now, let me differentiate. There was a sub-
9 contractor who placed the soils in the dike area, out around
10 the perimeter of the dike, as well as soils in the power block
11 area, which is immediately surrounding the plant.

12 He had finished the major part of his work,
13 and he was using heavy equipment for compaction of the soils.
14 He was also running tests--or there were tests run by U.S.
15 Testing, which were the same for the--basically the same for
16 the dike, I believe, as for the power block area.

17 Now, at some time frame, there was a lull in
18 soils placement, so he was removed from the site, and Bechtel
19 issued a different spec and rented equipment from him, as
20 well as other people, and placed, where they had excavated,
21 and things like this, soils there, but it was a different spec,
22 I understand, but that only has to do with placement.

23 Now, I am not sure whether that answers your
24 question, but if you look at the spec for testing and to what
25 extent moisture content and the tests that were run on the
soils, that, to my knowledge, was the same spec.

SWELL

1 CHAIRMAN BECHHOEFER: Well, we're a little
2 confused now as to the nature of the objection. Is it because
3 the placement and the testing procedures are being confused or
4 lumped together?

5 MR. FARNELL: Being lumped together; that's
6 correct. As I understand the question, she said--

7 MR. DECKER: Well, in terms of your objection,
8 I don't understand that at all.

9 MR. FARNELL: The witness indicated there were
10 different procedures for testing and for placement, and then
11 she said--I believe she connected it with the diesel generator
12 building, saying, "Are there procedures..." without differ-
13 entiating between these two differences.

14 CHAIRMAN BECHHOEFER: Well, could you just sort
15 of start over, and bear in mind there are differences between
16 the testing and the placement procedures? You could perhaps
17 repeat your question, bearing that in mind.

18 MS. STAMIRIS: Well, I have to admit that I'm
19 going to have difficulty pursuing my own line of questioning,
20 as far as my own limitations in understanding of the testing
21 and compaction procedural differences in all the specifications
22 and all these things, and so I don't know that-- That's why
23 I wondered if they could be grouped together and-- You know,
24 I asked whether--I think I asked whether you thought that the
25 procedure-- Well, you know, I think, unless-- I think maybe

1 I'll drop it. I think he already answered that he believed
2 the procedure was a more significant question than where the
3 fill came from.

4 THE WITNESS: That's correct.

5 MS. STAMIRIS: And he already answered, "Yes,"
6 that he thought that. And, I'm sorry, I can't remember and
7 follow through with where I was on the other train of thought.
8 I'll just ask another question, unless you want to pursue it.

9 Q (By Ms. Stamiris) On page 6, in the middle
10 paragraph, you're talking about the diesel generator building,
11 and you said that as of August 23rd, 1978, 55 percent of the
12 concrete for the diesel generator building had been placed,
13 with the walls in place, to an elevation of 30 feet above
14 grade, the generator pedestals poured, the mud mat poured
15 inside the building, the electrical duct banks placed under
16 the building with horizontal and vertical runs completed, the
17 underground piping in the area under and adjacent to the
18 building installed, and all backfill placed to grade level.

19 I don't know if you can answer this question, but
20 to me there's an underlying implication there that an awful
21 lot of the building was completed at this point, and Mr.
22 Miller referred to this 55 percent completion, although he
23 didn't specify it was the concrete yesterday when he talked
24 about choosing to preload the structure.

25 Would you be able to say that a building which

1 is 50 percent along, that this is not an economically sound
2 plan, to excavate the subsoils?

3 A. I guess I don't understand your question.

4 "Excavate the subsoils?" For what?

5 Q. In other words, if a building is 50 percent
6 complete, or to the degree of completion that this paragraph
7 outlines, could you say, in a general way, that it is
8 economically a poor time to consider tearing it up and
9 replacing the fill underneath it?

10 MR. FARNELL: Objection. I think she's framing
11 it in a hypothetical sense, and the only building we're
12 talking about is the diesel generator building at a specific
13 point in time. The question is too general.

14 Q. (By Ms. Stamiris) I'll make it specific.

15 With the diesel generator building 55 percent
16 complete on the concrete, and to the degree that is explained
17 in this paragraph, did you believe that it was not a sound
18 decision from an economic point of view to tear down the
19 building and remove and replace the subsoils at that point?

20 A. Well, I would say "Yes," in direct answer to
21 your question. But let me further expand.

22 We also factored into the decision some
23 of the recommendations of Dr. Peck, who has always had the
24 philosophy of the best method of determining what settlement
25 is going to take place and to postulate what settlement is

1 going to take place, is to go ahead and surcharge and run,
2 basically, if you want to call it a field experiment, and
3 that also entered into our thinking.

4 I would also have to indicate that, yes,
5 economics does enter into decision-making, and I guess as
6 project manager, I'd be pretty remiss if I didn't factor in
7 economics costs and schedule effects.

8 But there was also, as I pointed out, the
9 feeling from Dr. Peck that we would really be putting to bed
10 any question on settlement if we tore the building out, tore
11 the soils out, and we would go back and replace the soils and
12 based upon what we would learn, I know we would have gotten
13 an adequate compaction effort.

14 But even then, as Dr. Peck had said, the most
15 expensive way to prove a building isn't going to settle is to
16 go ahead and load it. And this is what we did.

17 I guess what I'm trying to point out is, we
18 factored both safety and--well, not safety directly, but a
19 technical evaluation of the end result, and economics, into
20 that decision.

21 Q Okay. I didn't mean to imply that you hadn't
22 factored into this any other considerations, but I wanted to
23 zero in on the economic portion alone. If that had been the
24 sole basis of your decision, just in economics, would you say
25 that--and you did, by answering "yes," in the first place--

1 would not be a sound decision for a building that is that far
2 complete?

3 MR. FARNELL: Objection--if there's a question.

4 MR. PATON: I have the same objection.

5 CHAIRMAN BECHHOEFER: If it's a question, it
6 goes beyond the diesel generator building.

7 MS. STAMIRIS: No, I meant just with the diesel
8 generator building. I was just trying to set the frame for
9 my next question.

10 MR. PATON: Could we hear it again, Mr.
11 Chairman? If it's a question, I have an objection to it.

12 MS. STAMIRIS: It's not a question. I was
13 about to ask a question.

14 MR. PATON: Okay.

15 MS. STAMIRIS: I mean, I did feel that it was
16 necessary for me to state that, and I feel like it's a
17 preceding clause to my question, that if you believe this,
18 then can you believe that this was the proper time to first
19 check for settlement? In other words, the building was this
20 far completed in August 23 of 1978, and yet you said in the
21 preceding paragraph that the very first settlement check was
22 taken--the first formal check was taken in July of 1978. And
23 it seems strange to me, just from an economic point of view
24 alone, that you would wait until a building was 50 percent
25 complete before you first checked to see if there was any

1 settlement involved.

2 MR. FARNELL: Objection. That doesn't have
3 anything to do with this hearing.

4 MR. PATON: It's an observation. I believe
5 she said it seemed strange to her. I don't see a question
6 there.

7 MS. STAMIRIS: I did ask a question in the
8 first place, and I'm sure I shouldn't have expanded on it,
9 but--

10 MR. PATON: Mr. Chairman, could I suggest that
11 we go back and regroup and ask her to please, if she has a
12 question, to start at the beginning and give us the whole
13 question? Because we've had several statements and observa-
14 tions, but I'm getting, now, mixed up on what the predicate
15 is to what question.

16 CHAIRMAN BECHHOEFER: Yes, I think-- Let me
17 ask you: You used one phrase there in which you mischaracter-
18 ized what is in this paragraph. That paragraph doesn't say
19 that the first monitoring took place in July of '78; it says
20 "during routing monitoring." And I'm not sure where--

21 MS. STAMIRIS: He said in testimony a little
22 while ago that the first formal monitoring took place in
23 July of 1978. He indicated that this was the first, other
24 than some informal--you know, he referred to "shots,"
25 construction shots, something like that.

1 CHAIRMAN BECHHOEFER: Well--

2 MS. STAMIRIS: My question was: Is this the
3 usual time? And when I say, is this stage of building
4 completion, this 50 percent building completion stage--or
5 concrete, whatever stage this is, the usual time to institute
6 the first formal settlement checks?

7 MR. PATON: Object.

8 MR. FARNELL: Objection. It appears to be
9 irrelevant.

10 MR. PATON: I don't think she has established
11 that this was the first formal settlement check.

12 MS. STAMIRIS: He said that.

13 CHAIRMAN BECHHOEFER: Why don't you ask him to
14 first clarify that, because I didn't recollect that he said
15 precisely that, either. So why don't you ask him to--

16 MS. STAMIRIS: Well, I think maybe we should
17 go back and see what was on the record, unless--

18 CHAIRMAN BECHHOEFER: It would take an awful
19 long time.

20 MS. STAMIRIS: Well, maybe he remembers what he
21 said.

22 THE WITNESS: Based upon my knowledge, I
23 believe that this was the first--and I so indicated previously--
24 this was the first formal survey made on this particular
25 building. There were other surveys--construction-type surveys--

1 made as the building moved up, or was built.

2 BY MS. STAMIRIS:

3 Q And my question was: Is this the usual time
4 for that to be established?

5 A I can't answer you as to what is the usual
6 time. I think that it is usual construction practice, as I
7 said, to take survey measurements. The surveying program--
8 and I'm sure other nuclear plants have, too--was started to
9 be implemented in July of 1980, and there was no prior
10 indication from construction-type surveys going on that there
11 were settlement problems.

12 But you have to have a starting point. This
13 was where it really became apparent.

14 MR. FARNELL: Mr. Keeley, did you mean to say
15 July of 1980?

16 THE WITNESS: No, I meant July of 1978. Excuse
17 me.

18 Q (By Ms. Stamiris) You said that you couldn't
19 state whether this was the usual practice, and you have no
20 idea when, for the other structures at the plant, in proportion
21 to the percentage complete that they were when their
22 settlement was first formally surveyed?

23 DR. COWAN: I'd like to make a little comment
24 here.

25 I've been listening to this, and it seems to me

1 that there really isn't any basis for misunderstanding. When
2 you build a building, as you start laying the foundations you
3 start surveying against the benchmark. Then as it progresses,
4 you have a series of measurements. And then eventually they
5 aren't any longer in the construction phase, as it becomes
6 more of a building, and somewhere down the line in this
7 series of measurements, you notice that it settled more than
8 the proper amount.

9 Is that a correct summary of the situation?

10 THE WITNESS: That's correct, yes.

11 DR. CCWAN: Now, there may be a certain gap
12 of time from the very first measurement to the time when it's
13 noticed that it's settled. I say, when it's noticed that
14 it's settled more than the permitted amount. And I think
15 that's what I hear you saying, and I don't understand why
16 there's any problem.

17 THE WITNESS: That's right.

18 Q (By Ms. Stamiris) On page 8 of your testimony,
19 at the bottom of the first paragraph there's a reference to
20 tests done by Mr. Dunnicliff to assist in developing a soils
21 monitoring program.

22 A Yes.

23 Q Some of the discovery questions that I asked
24 were asked too late, and had to do with when the first
25 expenditures were made for the preloading program, and I

1 wonder if you can tell me, in what month of the year of 1978
2 you made your first major expenditures? I don't know if you
3 can qualify it with "major."

4 A. No. Off the top of my head, I can't answer
5 that question.

6 Q. In the next paragraph it says:

7 "After a careful consideration of alternatives,
8 the task force, upon the unanimous recommendation
9 of the consultants, decided upon the 'preload' or
10 'surcharge' approach."

11 And since you said, "After a careful consider-
12 ation of alternatives," were you considering the removal and
13 replacement option as one of the alternatives at that point?

14 A. That's correct.

15 Q. And do you believe that you carefully considered
16 the removal and replacement option?

17 A. I do.

18 Q. Did your consultants make any statements about
19 the removal and replacement option on its geotechnical merits
20 that were not in the 54(f) or 55(e) volumes?

21 MR. FARNELL: Objection. He'd have to read
22 all of it in order to answer that question.

23 Q. (By Ms. Stamiris) Do you remember any discussions
24 that you had with your consultants about the removal and
25 replacement option in September of 1978?

32 ERASER
COTTON CONTENT

1 A. I think I testified previously that from my
2 memory Dr. Peck thought that--again, overall, his philosophy
3 was that the surcharge program would really be a proof test,
4 and we would be better with that and the knowledge of what
5 resulted from that, than from a technical standpoint, and then
6 going back and replacing soils.

7 Q. Do you think that there were other people--
8 I think I'll have to pursue that question with other people
9 at a later time, but I would like to pursue it a little bit
10 further in terms of the 50.55(e) report on this subject. And
11 what I'm trying to pursue is the fact that Mr. Keeley believes
12 there was a careful consideration of the removal and
13 replacement option in the early days.

14 In the 55(e) interim report No. 2, that was
15 issued on November 7, 1978--although there's another date in
16 here on the second page of it, where it's dated November 3,
17 1978--I would like to read one portion of that, and ask you
18 a question about it.

19 MR. FARNELL: Why don't we wait until we get
20 copies for him.

21 (Pause.)

22 MS. STAMIRIS: The portion I'm going to read
23 from is on page 3 of that report.

24 CHAIRMAN BECHHOEFER: I guess maybe it would be
25 easier for him to read it. You'll have to show it to the

1 witness.

2 MS. STAMIRIS: Shall I read it first, and then
3 give it to Mr. Keeley?

4 CHAIRMAN BECHHOEFER: Yes, we'll have to see
5 whether you're in context.

6 MS. STAMIRIS: This is the second interim
7 report on the settlement of the diesel generator foundations
8 and building, and I'm not sure which--the cover page is
9 dated November 7, 1978, and then the next page is dated
10 November 3, 1978, and on page 3, under Section 5, which is
11 titled "Related Activities," it says:

12 "Based on preliminary evaluation of the soil
13 boring/soil test results, the consultants' comments
14 and the construction schedule, several activities
15 common to any corrective actions may be started
16 before the next interim report."

17 Then four activities are listed.

18 I will have to show this to Mr. Keeley and ask
19 whether he believes that these four activities are common to
20 the corrective action of removal and replacement, or if-- Well,
21 I should finish my question there.

22 MR. PATON: Mr. Chairman, I don't-- Can we have
23 the question read back again? It doesn't seem to be relevant.

24 First of all, I think she should put on the
25 record what those four activities are. It doesn't make sense

1 four activities.

2 CHAIRMAN BECHHOEFER: You would have to at least
3 identify the document and read--it depends on how long it
4 is.

5 MS. STAMIRIS: Would Mr. Keeley like to read
6 them aloud at the same time he's reading them, to answer the
7 question?

8 MR. PATON: Mr. Chairman, could I make a
9 suggestion?

10 I do not think we're going to speed up this
11 process. I think we should stop, make copies, and everybody
12 will have a copy in front of them, and then we could proceed.
13 Proceeding with everybody wondering, I just don't think works.

14 CHAIRMAN BECHHOEFER: It doesn't.

15 MR. PATON: I have quarters I would be delighted
16 to contribute for that purpose.

17 MS. STAMIRIS: If you want me to come back with
18 this line of questioning later, I could do that.

19 CHAIRMAN BECHHOEFER: Well, how much do you
20 have on Mr. Keeley?

21 MS. STAMIRIS: I have more. I wouldn't say how
22 much more.

23 CHAIRMAN BECHHOEFER: Would you be finishing
24 with him this afternoon, or--

25 MS. STAMIRIS: I would think so.

8WEL14

1 CHAIRMAN BECHHOEFER: Fifteen or twenty minutes
2 or a half hour?

3 MS. STAMIRIS: Well, I would think it would be
4 at least another half an hour, but possibly more than that.

5 CHAIRMAN BECHHOEFER: Well, he'll still be here
6 tomorrow. We have some questions, so if you could hold that
7 one until tomorrow morning, and perhaps get some copies-- It's
8 really impossible for us to follow the question unless we
9 have it.

10 MR. MILLER: I again urge, if we could simply
11 have a listing of the pieces of paper in advance, we'll be
12 glad to supply the copies for everybody so that we could move
13 on with this. We're taking a half hour on each piece of
14 paper. It's just stringing this out interminably.

15 CHAIRMAN BECHHOEFER: Let's do that one
16 tomorrow morning. But make sure the Applicant knows what it
17 is, so that he can get some copies.

18 MS. STAMIRIS: Well, I will follow through with
19 that later. I'm sorry for the inconvenience it's caused, and
20 I tried to do this yesterday when I asked about, you know,
21 reading a few questions from a document that we've all seen--
22 although I can understand the difficulty that it causes, too.

23 I do have copies of the next exhibit that I'd
24 like to ask Mr. Keeley about, so I'll pass out the copies.
25 I don't know how it should be labeled.

end 8

E9L1

1 CHAIRMAN BECHHOEFER: Why don't we label it
2 Stamiris Exhibit 1 for identification. I don't know whether
3 you are going to attempt to introduce it or not, but that will
4 be just for identification purposes. Have we done one already?

5 MR. FARNELL: Not by exhibit number, no.

6 MS. STAMIRIS: No.

7 CHAIRMAN BECHHOEFER: Okay. Let's just call
8 this one Stamiris Exhibit 1 for identification.

9 MR. MILLER: I would like the record to reflect
10 that Stamiris Exhibit 1 is a memorandum dated December 4,
11 1978 from Mr. Keeley, Mr. Cook, to the Midland file, and it
12 comprises eight pages.

13 MS. STAMIRIS: I have to tell you that the
14 eight pages are not all that went together with it, but
15 because I was paying for this myself, I only Xeroxed half
16 of it, so if you want the other half--

17 MR. MILLER: We are on our own, yes.

18 MS. STAMIRIS: I am not going to ask questions
19 from that half which I did not Xerox.

20 MR. PATON: Mr. Chairman, may I inquire? Do
21 you intend to offer this as an exhibit?

22 MS. STAMIRIS: I need to know what is the
23 difference between an exhibit and evidence. I mean I would
24 like for this to go into the record.

25 MR. PATON: I am just going to indicate at this

E9L2

1 time that if you are going to offer this as an exhibit, that
2 the reporter is going to need three copies.

3 MS. STAMIRIS: I was hoping that the copies
4 I have handed to you, for your convenience, could be handed
5 over to the court reporter after we are done with them.

6 MR. PATON: How am I going to write my proposed
7 findings? How am I going to know?

8 MS. STAMIRIS: I asked this question yesterday,
9 and I asked what was the bare minimum I had to provide, and I
10 thought that I was told four, three for the court reporter
11 and one for Judge Bechhoefer.

12 CHAIRMAN BECHHOEFER: I said one for the other
13 parties, to the extent they needed it, because I don't know
14 what they have. They have to go to the reporter.

15 MS. STAMIRIS: Is there any possibility that
16 for the sake of expediting the hearing, some of these Xerox
17 costs could be borne by the whole--

18 CHAIRMAN BECHHOEFER: Unfortunately not.

19 MR. MILLER: Judge Bechhoefer, if Ms. Stamiris
20 will tell us which documents are involved, we will get
21 copies because this is just--we have really been fooling
22 around with this for an hour already, and if that's going to
23 happen with every piece of paper, we are just going to be
24 here forever.

25 DR. COWAN: True.

E9L3

1 CHAIRMAN BECHHOEFER: Why don't you get together
2 with the Applicant and just show them the documents that
3 you are going to ask questions about so that they can come
4 back with a requisite number of copies. That will save a lot of
5 time.

6 MS. STAMIRIS: Well, I don't know myself at
7 this point, and so I have not--

8 MR. MILLER: If you will tell us at the end
9 of each day what you are going to be using the following
10 day, that will be sufficient notice.

11 MS. STAMIRIS: You may find it hard to believe,
12 but that's exactly what I am telling you, is that I did
13 not know until this morning exactly which documents I was
14 going to need.

15 MR. MILLER: If you will call us, you know,
16 before 8:30 p.m. the night before, we will still be able to
17 get copies.

18 MS. STAMIRIS: As soon as I know, I will let
19 you know.

20 CHAIRMAN BECHHOEFLER: What purpose do you want
21 this in the record for, just the witness' answer or for the
22 truth of the matters stated in the document?

23 MS. STAMIRIS: I think for both.

24 CHAIRMAN BECHHOEFER: Then it would have to be
25 in the record.

E9L4

1 MS. STAMIRIS: Judge Bechhoefer, I just would
2 like to state on the record again, first, that I am sorry
3 for this inconvenience; but, secondly, I did ask at the last
4 pre-hearing conference, you know, if I could get together the
5 documents that I intended to use and submit, and put my position
6 together, and I was told that I could not because since I
7 didn't have witnesses of my own, I was going to be just using
8 the witnesses that were available since that would be the
9 only way it would be done for cross examination, and so I
10 just wanted you to know that, you know, I would have gladly
11 done this earlier and indicated which documents I intended to
12 use, and as soon as I know which ones they are or can tell
13 the Applicant, I will tell them.

14 CHAIRMAN BECHHOEFER: All right, because that
15 will save a lot of time, and we are spending really too
16 much time on documents now.

17 While we are shuffling through documents,
18 we are not finding out any information, and that's one of the
19 problems.

20 MS. STAMIRIS: I agree.

21 Q (By Ms. Stamiris) First of all, Mr. Keeley,
22 before I start with this document, I want to ask you what
23 is the purpose of the final safety analysis report.

24 A The purpose of the final safety analysis report
25 is to provide information to the Staff, wherever possible,

E9L5

T

1 the as-built conditions of the plant, the systems design. It
2 includes design bases for which the plant was designed to,
3 as well as certain types of engineering drawings for the
4 various systems, for the Staff to review and evaluate and
5 comment on.

6 Q When you say it is a design basis, then, is
7 it to serve, in a sense, as--you are supposed to go to the
8 FSAR to determine how a structure is to be built, and then
9 build it according to the directions in the FSAR?

10 A That's correct.

11 Q If you need to make changes or decide that
12 changes are appropriate, what is the criteria you use for
13 determining when the NRC needs to be notified of those changes?

14 A Well, we have attempted historically to set
15 up a documentation system of what we call SAR change notices
16 to document between the preliminary safety analysis report
17 and the final safety analysis report what the changes were,
18 because a preliminary safety analysis report, of course,
19 doesn't have as much detail as the final, but it also is used
20 for review.

21 Q In noting the changes between these two docu-
22 ments, is there ever a stage or a degree of severity or degree
23 of change which would require receiving approval from the
24 NRC?

25 A Yes, I believe that's true.

E9L6

1 Q Could you tell me what is that criteria?

2 A I don't know of any specific criteria. I think
3 it is an engineering judgment by the particular people
4 doing the design, that if it has been a significant change
5 from what was in the PSAR or FSAK, there has to be an amend-
6 ment supplied, and a good example of this is due to the Three
7 Mile Island problems, we have had to make major changes in
8 the plant, and we have provided an awful lot of amendments
9 on those changes that resulted from that.

10 Q When was the foundation design changed for the
11 diesel generator building?

12 MR. FARNELL: Objection. I don't understand
13 what foundation design change you are talking about.

14 Q (By Ms. Stamiris) Was the diesel generator
15 building foundation changed from an original design to be a
16 mat foundation, and then at one time changed to a spread
17 footing?

18 A Yes. I cannot give you the exact date.

19 Q Can you give me a rough idea?

20 A It was sometime prior to 1978. That's about as
21 close as I can get.

22 Q Did you seek approval from the NRC for this
23 change?

24 A No.

25 Q Can you tell me why you didn't?

E9L7

1 A No.

2 Q Was the design of the diesel generator building
3 then changed back to the mat foundation?

4 A No.

5 Q When the pre-load was placed, was there any
6 change to the foundation at that point? I will just say
7 prior to--within three months prior to the placement of the
8 pre-load. Oh, I shouldn't say three months.

9 Q What is the foundation design of the diesel
10 generator building at this time?

11 A It is a spread footing.

12 Q There were ... modifications made to that spread
13 footing as a result of the soil settlement problems, to the
14 foundation?

15 A Not that I am aware of.

16 Q On the second page of this document that I
17 handed out, which is meeting notes of a November 2nd, 1978
18 meeting, under Part B, you are referring to comments that were
19 made during an NRC investigation. I believe it was Investiga-
20 tion 78-12. You are talking about-- In the first one, you
21 said, "We see no need to change from FSAR commitment."

22 In the second one, you said, "Use of random
23 fill was identified as okay in Dames & Moore and PSAR and as
24 long as adequately compacted is okay."

25 Then the next sentence is the important one.

E9L8

1 It says, "Will change FSAR to indicate random fill will be
2 used."

3 Now, these are your meeting notes, aren't they?
4 I mean you wrote this.

5 A That's correct.

6 Q Okay. When you said that you will change the
7 FSAR to indicate random fill will be used, is it not true
8 that the random fill had already been used?

9 A That's correct.

10 Q Do you believe that-- Is this the normal--
11 Did you practice this as a rule, to make changes to the
12 FSAR after the fact?

13 A No. I would also point out that as a result
14 of this problem, we went through an extensive re-review
15 program on the FSAR to assure ourselves that the corrections
16 had been made.

17 Q Could you, in any rough form of percentage,
18 tell us how much of the FSAR has been corrected after the
19 fact? Would you care to speculate?

20 MR. FARNELL: What time are we talking about?

21 MS. STAMIRIS: I mean all of it. I want to
22 know how rare or common of an occurrence he thinks this is.

23 A Oh, I think every applicant--

24 Q I mean with Consumers' FSAR.

25 A I guess I don't understand the question.

E9L9

1 Q I asked you if this was a usual practice,
2 and you said no. Can you indicate, with any more specificity,
3 how unusual it was? I asked if you could put a rough percentage
4 as to how much of the FSAR you thought had been changed
5 after the fact.

6 A I don't know. No, I can't, off the top of
7 my head; no.

8 Q Okay. In the next-- In Point 3 that follows,
9 it reads, "Due to the various types of equipment, acceptance
10 was performance rather than procedure. Copied from dike
11 work, not applicable to backfill."

12 Then the last sentence again is the one that
13 I want to ask you about. You say, "The table should be
14 modified."

15 Do you happen to remember the specifics of what
16 table you were talking about?

17 A No, I can't remember the specific details,
18 but this had to do with what I was talking about before, that
19 we had two specs on soils placement, the one for the dike and
20 for the power block area soils, which was using heavy equip-
21 ment, and it was a performance--that is, the equipment was
22 qualified for certain thicknesses, and it was dependent
23 more upon the performance of the placement versus depending
24 upon test results.

25 Q What I am trying to zero in on is the last

E9L10

1 sentence that says, "The table should be modified." Do you
2 think that this table then was modified after the fact?

3 A Yes.

4 MR. FARNELL: Objection.

5 Q (By Ms. Stamiris) In No. 4, it says, "Cover
6 this in compaction explanation. Review and change the FSAR."

7 Then the next sentence is, "The PSAR said one-
8 half inch is a ballpark figure." This is talking about some
9 kind of settlement calculations, to the best of my understanding.

10 The second sentence is the one I want to draw
11 your attention to, where it says, "Review and change the
12 FSAR."

13 Do you believe that this is another example
14 of where the FSAR was changed after the fact to reflect what
15 indeed had actually been done?

16 A Yes.

17 Q On Page 4 of this same document, at the top,
18 No. 14, the second part of it says, "Bechtel disagrees on
19 blow count question and noted that tests may have been taken
20 at planes." Then there is a diagram below that. Can you tell
21 me what that diagram represents?

22 A I think that diagram represents what I discussed
23 before, that in installing certain pieces of equipment or
24 piping, after the initial fill was placed and compacted,
25 trenches had to be dug to place the pipe, and then backfilled

E9L11

1 and compacted with smaller equipment.

2 Q At the diesel generator building?

3 A Throughout the whole plant area.

4 CHAIRMAN BECHHOEFER: Ms. Stamiris, we are
5 getting fairly close to 1:30. Are you through this immediate
6 line, or getting close to it?

7 MS. STAMIRIS: I think I would probably be
8 almost through with this particular document.

9 CHAIRMAN BECHHOEFER: Okay. We may want to
10 break after that, so why don't you ask whatever you want to.
11 You know, finish the document up.

12 MS. STAMIRIS: Finish this document?

13 CHAIRMAN BECHHOEFER: Well, that will be a good
14 breaking point then.

15 MS. STAMIRIS: Okay.

16 Q (By Ms. Stamiris) On the second part, which
17 is Attachment A, I guess what I would like to do is just,
18 first, go through it briefly together, the conclusions under
19 each of these numbered points, and I want to refer back to your
20 statements about the--I want to know whether you believe that
21 the root cause of a problem such as--no--whether the root
22 cause of the settlement problem at the diesel generator
23 building could be affected by repeating--or by putting the
24 same people in charge of the remediation that were also in
25 charge or caused the problem.

E9L12

1 A Yes, if we had the same people, but since that
2 time we have required that there be a qualified geotechnical
3 engineer on site during soils placement.

4 Q Was there a qualified geotechnical soils engineer
5 on site in 1981 at the first investigation report of the
6 NRC? It was Report 81-01. Mr. Gallagher, and I don't know
7 what other inspectors--

8 MR. FARNELL: Objection. I would like Mr.
9 Keeley to see that document before he answers any questions
10 concerning it or its substance.

11 MR. PATON: Mr. Chairman, may I ask a question?
12 Could I ask Ms. Stamiris if she is addressing one of the
13 contentions, or what? She may be. If she is, I would like
14 to know. Could I ask her that question?

15 CHAIRMAN BECHHOEFER: Yes. Could you indicate
16 that?

17 MR. PATON: This should either be relevant
18 to--

19 MS. STAMIRIS: You mean in asking--

20 MR. PATON: This line of questioning-- I am
21 just wondering, are you cross examining Mr. Keeley on his
22 direct testimony, or are you now on a contention?

23 MS. STAMIRIS: No. It is on his testimony,
24 because it was in his testimony where he was referring to the
25 task force, who made the decisions and the people who were

E9L13

1 on that task force, and I wanted to make some points about
2 who comprised the task force.

3 MR. PATON: That's this line of questioning?

4 MS. STAMIRIS: That's this line of questioning,
5 yes.

6 MR. PATON: All right. Thank you.

7 MS. STAMIRIS: I am not sure whether I can ask
8 Mr. Keeley when he believes that geotechnical engineer was on
9 site full-time, as I understand the requirement was.

10 MR. PATON: I will object to that, Mr. Chairman.
11 I don't see the relevance of that question, as to who was
12 on the task force. Mrs. Stamiris just indicated that she
13 was asking questions about who was on the task force.

14 MS. STAMIRIS: No. I'm sorry. I didn't mean
15 that. I was asking whether that previous question could be
16 just asked in another way. That question did not have to do
17 with the task force. I will now ask questions that have to
18 do with the task force.

19 Q (By Ms. Stamiris) Looking at Attachment C,
20 under these numbers of references, I will read just the last
21 sentence of each part.

22 In No. 1, the sentence reads, "Bechtel Field
23 did not have a soils engineer on site."

24 No. 2 reads, "Obviously, these two requirements
25 conflict."

E9L14

1 No. 3 reads, "This does not address the ques-
2 tion of removal or recompaction upon resumption of work."

3 No. 4 states at the end, "Specification and
4 design standard conflict."

5 No. 5 says, "Boring logs show us that the soil
6 was not removed; however, it may be greater than 75 percent."

7 I realize that those sentences in themselves
8 don't say a whole lot, but in reading through this report,
9 would you say that Consumers or that you, at this point,
10 had identified that the soils settlement problems were due
11 in great part to the deficiencies in the Bechtel work?

12 MR. PATON: I object. I don't see the relevancy
13 of this, as to who was on the task force.

14 MS. STAMIRIS: Well, the Bechtel people were
15 on the task force, and that's why I was trying to ask him
16 about it.

17 MR. PATON: Mr. Chairman, I am trying to follow
18 her line of questioning, what it is relevant to, and she said
19 it was relevant to her inquiry of who was on the task force
20 because Mr. Keeley has, in his testimony, some discussion of the
21 task force, and she says-- I don't want to be too technical,
22 but I think we should have some idea of where she is, and
23 she is saying she is asking about who was on the task force.

24 That question has nothing to do with who was
25 on the task force. I just want to know where we are.

E9L15

1 MS. STAMIRIS: Well, I will tell you what I am
2 trying to show by it or trying to understand for myself,
3 is whether or not the Bechtel--or the problems had been
4 identified, yet those same people were put in charge of the
5 remediation.

6 MR. PATON: All right. Mr. Chairman, that may
7 be a perfectly fine question, but the issues in this case
8 have been determined, and I am just asking her what issue
9 is that relevant to, Issue 1, 2, 3 or what? We are entitled
10 to have some idea of where we are.

11 There are lots of interesting questions around,
12 but you have determined what the issues in this case are,
13 and I think we should know which ones we are addressing.

14 CHAIRMAN BECHHOEFER: Yes. Where does that--

15 MS. STAMIRIS: Well, as I said before, I was
16 getting some background clarification to Mr. Keeley's testi-
17 mony.

18 CHAIRMAN BECHHOEFER: I don't believe at this
19 stage the questions have to be tied up to a specific conten-
20 tion. This testimony is not offered with respect to any one
21 contention. This is to clarify what's in this testimony.

22 I think when we get proposed findings, that
23 will have to be done. You will have to clarify how you are
24 using that information, but to the extent that it relates to
25 the direct testimony, questions may be asked.

E9L16

1 We are getting very close to-- In fact, it is
2 after 1:30.

3 MS. STAMIRIS: I have one last question.

4 CHAIRMAN BECHHOEFER: Okay. That's fine.

5 MS. STAMIRIS: In Mr. Keeley's testimony,
6 I believe at the very last part--and when I say I have one
7 last question--

8 CHAIRMAN BECHHOEFER: Concerning that document.

9 MS. STAMIRIS: --I mean concerning this document
10 now.

11 CHAIRMAN BECHHOEFER: Okay. All right.

12 MS. STAMIRIS: Mr. Keeley was talking about the
13 removal of the layer of sands--and I really should say that
14 this is the last question concerning this document.

15 CHAIRMAN BECHHOEFER: Right, okay.

16 MS. STAMIRIS: Okay. I mean the document that
17 I passed out.

18 Q (By Ms. Stamiris) On the very last page,
19 although it refers back to the page before it, Page 16,
20 it says, "The above information demonstrates that the resolu-
21 tion of the loose sands question had no relationship whatso-
22 ever to 'financial and time pressures'. On the contrary,
23 Consumers Power took the necessary steps and incurred the
24 necessary expense, both in money and time, to ensure that a
25 satisfactory technical resolution was achieved."

E9L17

1 It is my understanding that there was a PSAR
2 requirement that the loose sands on the site were to be
3 excavated.

4 A That's correct.

5 Q Would you agree to that? Were those sands
6 excavated according to the requirement?

7 A Yes, we couldn't prove, and it was because
8 we couldn't prove it that I required them to go back and
9 take test borings and discuss it with the NRC to determine
10 if there was any problem.

11 Q I believe in No. 5, of the numbers I was just
12 reading from, which are captioned, "Inconsistencies Discovered
13 To Date", at the bottom it reads, "Discussion:

14 "The question of whether the loose sands as
15 described in the PSAR were ever removed is a good example of
16 why there should be mechanisms to ensure that commitments
17 are properly conveyed to the construction group and that the
18 outlined work is successfully concluded. When the note to
19 Drawing C-44 was added, it was too late to economically excavate
20 the loose sand since they had for the most part been covered
21 by backfill."

22 Could you tell me what the note was to Drawing
23 C-44?

24 A I can't tell you now. I would have to go back
25 and look at the drawing.

E9L18

1 Q The next sentence says, "The attached boring
2 logs and locations confirm existence of the sands, although
3 the blow counts look very good."

4 I wonder if in hearing this, whether you believe
5 that that contradicts with what you just said, that you did
6 not know whether those loose sands had been removed.

7 MR. FARNELL: I object to that line of ques-
8 tioning. There has been no proof, to my knowledge, what
9 Attachment C really is. I didn't see any reference to it in
10 the document when I looked through it. To date, it is just
11 entitled "Inconsistencies to date", so I don't know who prepared
12 it or what it was.

13 CHAIRMAN BECHHOEFER: I think we will overrule
14 that because it is an attachment to a document prepared by
15 Mr. Keeley, and if he didn't prepare it or if he doesn't
16 know what it means, he can so state.

17 MS. STAMIRIS: It is listed in the very first
18 paragraph. It says, "An agenda and names of personnel in
19 attendance are attached". Oh, no. That's--

20 CHAIRMAN BECHHOEFER: Well, that's different.

21 MS. STAMIRIS: That's different.

22 CHAIRMAN BECHHOEFER: If he didn't prepare
23 this, he can so state. The objection is overruled. You can
24 answer.

25 THE WITNESS: I guess I will have to have the

E9L19

1 question repeated, please.

2 Q (By Ms. Stamiris) I asked whether what I just
3 read, whether that contradicted with what you had said when
4 you answered that you did not know whether these loose sands
5 had been removed.

6 A I said we could not prove that the loose sands
7 had been removed; therefore, we took action to either determine
8 if they had or if they had not, they were adequately compacted.

9 Q Did not this action that's referenced in the
10 last sentence-- It says, "The attached boring logs and loca-
11 tions confirm existence of the sands". Doesn't that say to
12 you that you had then confirmed that they had not been removed?

13 A Yes, yes.

14 MR. FARNELL: I would also note--

15 A (Continuing) That was why we took the borings.

16 Q (By Ms. Stamiris) Do you believe that the
17 sentence that reads, "It was too late to economically excavate
18 the loose sands since they had for the most part been covered
19 by backfill", that that indicates that there were some time
20 or financial pressures involved with this compromise to
21 requirements?

22 A As I have said before, I think I would be remiss
23 in my responsibilities as a project manager if I didn't take
24 into account cost and schedule effects in making decisions,
25 in making engineering type decisions, and if the borings had

E9L20

1 proven that the sands were not adequately compacted, we
2 would have had to take corrective action.

3 Q So it is your position that the existence
4 of the sand did not in any way compromise the safety of the
5 structures?

6 A That's correct.

7 MS. STAMIRIS: I don't have any more questions
8 about this.

9 MR. PATON: Mr. Chairman, could I inquire
10 whether Ms. Stamiris-- I don't think she offered her Exhibit
11 1 into evidence.

12 CHAIRMAN BECHHOEFER: Not yet.

13 MS. STAMIRIS: I would like this to go into
14 the record as evidence.

15 CHAIRMAN BECHHOEFER: Now, what you would have
16 to do is, say, by tomorrow, come up with some more copies
17 for the reporter, three more.

18 First I would inquire, are there going to be
19 any objections to her offer of these documents?

20 MR. FARNELL: Yes, there will be, because she
21 hasn't provided a full copy, and also it appears that some
22 of the markings on this document are her own. They are not part
23 of the original document.

24 MS. STAMIRIS: That's right.

25 (Continued on next page.)

1 MR. FARNELL: We would not object to a proper
2 copy of this document.

3 CHAIRMAN BECHHOEFER: Could that be obtained
4 in any way?

5 MR. FARNELL: Yes, we will get it.

6 CHAIRMAN BECHHOEFER: All right. We will-- A
7 copy will go in that does not have your markings on it.

8 MS. STAMIRIS: They are going to provide the
9 clean copies, is that right?

10 MR. FARNELL: Yes.

11 MS. STAMIRIS: Yes, because I don't have one.

12 MR. PATON: Mr. Chairman, do you have one or
13 two minutes?

14 Could the Applicant indicate the testimony that
15 we expect to get into tomorrow, or the next two days or so?

16 MR. MILLER: I assume that we're going to
17 conclude Mr. Keeley at some early time tomorrow morning. I
18 don't know how much-- Perhaps if the Board would tell us how
19 many questions, or how long their questioning is like to be,
20 that would enable us to plan the rest of the day.

21 MR. DECKER: Well, I should think, in my case,
22 roughly half an hour.

23 MR. MILLER: We would then plan on putting--

24 MR. DECKER: It depends, of course, on whether
25 or not some of the questions are answered in response to Mrs.

1 Stamiris' questions. In fact, a couple of them have been
2 already.

3 MR. MILLER: We would then plan on putting Mr.
4 Marguglio on. It is also conceivable that--and I'll report
5 to the Board first thing tomorrow morning--that Mr. Rutgers,
6 who is the Bechtel project manager, and the other Bechtel
7 employee, as yet unidentified, would be available as well,
8 tomorrow.

9 CHAIRMAN BECHHOEFER: My guess, then, is that
10 we will not get beyond Mr. Marguglio tomorrow, plus the
11 other individuals you mentioned.

12 MR. MILLER: Then we would plan on Mr. Cook
13 the first thing Friday morning, or right after Mr. Kimball.
14 He has to appear.

15 CHAIRMAN BECHHOEFER: We have a Saturday
16 morning session scheduled as well.

17 MR. MILLER: May we go off the record?

18 CHAIRMAN BECHHOEFER: Off the record.

19 (Discussion off the record.)

20 CHAIRMAN BECHHOEFER: We're recessed until
21 9:00 tomorrow.

22 (Whereupon, at 1:45 p.m., the hearing was
23 adjourned, to reconvene at 9:00 a.m., Thursday, July 9, 1981.)

24 - - -

25 COTTON COUNTRY

This is to certify that the attached proceedings before the
Nuclear Regulatory Commission, Atomic Safety and Licensing Board
in the matter of: CONSUMERS POWER COMPANY (Midland Plant, Units 1 & 2)

Date of Proceeding: July 8, 1981

Docket Number: 50-329 OL&OM; 50-330 OL&OM

Place of Proceeding: Midland, Michigan

were held as herein appears, and that this is the original transcript thereof for the file of the Commission.

Eddie Spriggs Daniels

Eddie Spriggs Daniels

William E. Landon

Official Reporter (Typed)

W. E. Landon

Official Reporter (Signature)