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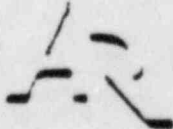
In the Matter of:

CONSUMERS POWER COMPANY	:	DOCKET NOS.	50-329-OL
(Midland Nuclear Power	:		50-330-OL
Plant, Units 1 and 2)	:		50-329-OM
			50-330-OM

Deposition of SHERIF EL-SAYED AHMED AFIFI

DATE: October 31, 1980 PAGES: 223-261

AT: Ann Arbor, Michigan

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THE UNITED STATES
NUCLEAR REGULATORY COMMISSION

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In the matter of: Docket No. 50-329 OL
50-330 OL
CONSUMERS POWER COMPANY 50-329 OM
(Midland Nuclear Power Plant, Units 1 and 2) 50-330 OM

-----X

777 East Eisenhower Parkway
Ann Arbor, Michigan

Friday, October 31, 1980

Deposition of

SHERIF EL-SAYED AHMED AFIFI

the deponent, called for examination by the staff of the Nuclear
Regulatory Commission, pursuant to notice, at 9:10 a.m., when were
present on behalf of the respective parties:

For the Nuclear Regulatory Commission

WILLIAM PATON

JOSEPH KANE

HARI SINGH, United States Army Corps of Engineers

On Behalf of Consumers Power Company

JAMES BRUNNER

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C O N T E N T S

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WITNESS:

EXAMINATION

Sherif El-Sayed Ahmed Afifi (Resumed)

224

300 7TH STREET, S.W., REPORTERS BUILDING, WASHINGTON, D.C. 20024 (202) 664-2316

P R O C E E D I N G S

1
2 MR. PATON: This is the third day of the deposition of
3 Dr. Sherif El-Sayed Ahmed Afifi at Bechtel, and I will ask each
4 person in the room to identify themselves for the record.

5 MR. AFIFI: Sherif El-Sayed Ahmed Afifi.

6 MR. FARNELL: Alan Farnell.

7 MR. BRUNNER: James Brunner, B-r-u-n-n-e-r, attorney
8 for Consumers Power Company.

9 MR. SINGH: Hari Singh, U.S. Army Corps of Engineers,
10 Detroit.

11 MR. KANE: Joseph Kane, K-a-n-e, United States Nuclear
12 Regulatory Commission.

13 MR. PATON: William Paton, P-a-t-o-n, of the Nuclear
14 Regulatory Commission staff.

SHERIF EL-SAYED AHMED AFIFI

15
16 having been previously duly sworn, was examined and testified as
17 follows:

EXAMINATION

18
19 BY MR. PATON:

20 Q Dr. Afifi, do you have a copy of what has been marked as
21 N.R.C. Deposition Exhibit Number Two, the document entitled,
22 Problem Alert, dated October 3rd -- August 3, 1979?

23 A Yes, sir.

24 Q And, have you had an opportunity to review that document?

25 A I did read it this morning.

1 Q On page one there are listed items A, B, and C under a
2 sentence that reads, based on a thorough investigation, the most
3 probable causes for the resulting remedial work includes the
4 following, and they list A, B, C. Do you agree that the matters
5 listed in A, B, C, are the most probable causes for the resulting
6 remedial work?

7 Let me amend the question. I don't mean to change the
8 sentence. The sentence indicates that, based on a thorough
9 investigation, the most probable causes for the resulting remedial
10 work include the following. Do you agree with that statement?

11 A I recall that a study had been made of the most probable
12 causes, and I'm not sure that this list here is an all-inclusive
13 list.

14 Q Okay.

15 A I cannot specifically pin down just from memory that these
16 come from that list or a partial or complete list of that study
17 that has been made.

18 Q So, there was a study made by Bechtel?

19 A Yes, sir.

20 Q Do you know if that study has been sent to the N.R.C.?

21 A To the best of my recollection, the study has been
22 presented to the N.R.C. in July of 1979, at Bethesda, and I
23 believe the text of the study has been included among other things
24 that were presented at that meeting and submitted to the N.R.C.

25 Q Do you know who in Bechtel was responsible for the

1 preparation of that study?

2 A To the best of my recollection, the study was done under
3 the direction of Mr. P. Martinez.

4 Q Did you say you attended a meeting at Bethesda where that
5 study was presented to the N.R.C.?

6 A Was presented, yes.

7 Q Do you know to whom it was presented in the N.R.C.?

8 A There were many people, including staff personnel and
9 others.

10 Q Was Darl Hood at that meeting, do you know?

11 A I don't recall.

12 Yes, sir. He was in the meeting.

13 Q I'm not familiar with the report, I'm trying to make sure
14 that it's been identified properly. Did it have a title?

15 A I don't recall what title it had. I recall that the
16 slides were presented, the viewgraphs were presented.

17 Q And, was the purpose of the study to identify the
18 probable causes for the settlement problem at Midland?

19 A To the best of my recollection.

20 Q Would you turn to page two of Staff Exhibit Two and see
21 at the top III, Corrective Action. Do you agree that the Corrective
22 Actions listed there are the ones that were taken?

23 (Discussion held off the record.)

24 A I believe that list is not complete. There are more
25 comprehensive presentations elsewhere.

1 Q Let me ask you about that. This note is dated, August 3,
2 1979. Let me ask you about the first item. It says, the
3 structures are being modified to compensate for the in situ soil
4 conditions using the following solutions. Then, it lists three
5 solutions.

6 Is that true, that the structures are being modified in
7 the manner indicated in Item A?

8 A Can I talk to my counsel?

9 Q Certainly.

10 (Discussion held off record.)

11 A My interpretation, sir, is that the first item, number
12 one refers to under pinning, and under pinning has not been under-
13 taken, and was not undertaken at the time this list was written,
14 according to this statement.

15 Q Let me stay with this. It says, the structures are being
16 modified, so am I correct that you would not agree with the literal
17 interpretation that those structures are now being modified, that
18 is, effective August 3, 1979?

19 A Yes, sir.

20 Q You've addressed number one, and let me ask you, is that
21 under pinning by use of caissons and piles for structures partially
22 supported by fill, is that now, as of today's date, being done?

23 A To my knowledge, it is a plan.

24 Q Tell us what stage of the planning it's in, briefly?

25 You say it's being planned. What, in fact, is being done

1 now as far as the plan is concerned?

2 A From the soil's engineering area, we have conducted
3 computations on bearing capacity and settlement, and coordinated
4 various thoughts about the system with our consultants. I under-
5 stand that the structures' people are working on this, but I'm not
6 familiar with the details of what they're doing.

7 Q When you say bearing capacity and settlement, you meant
8 the bearing capacity and settlement of the caissons and the piles?

9 A Yes.

10 Q Would you move now to the second item, number two,
11 reduction of residual settlement by surcharge loading structures
12 totally supported by fill and -- just a minute.

13 (Discussion held off record.)

14 Q With respect to Item A two has that been accomplished?

15 A Sir, with respect to the diesel generator building, that
16 program has been undertaken.

17 Q In fact, that program has been completed?

18 A Yes, sir. It has.

19 There are two sets of plans that exist. One is called the
20 condensate tanks. They are non-category one tanks, and they have
21 been filled some time ago with water and are being monitored.

22 Q Okay.

23 A Two additional tanks north of the diesel generator area
24 are, my understanding, is that either the filling has starting or
25 it's imminent on the surcharge.

1 One more item that I have forgotten. The transformer
2 foundation to the west of the diesel generating building is also
3 surcharged with sand.

4 Q Am I correct, that to the extent of your recollection
5 right now, that is all the surcharging that you're aware of?

6 A Yes, sir.

7 Q I want to read number three, and then ask you about that.
8 Elimination of the possibility of liquifaction of extensive sand
9 back fill areas during a seismic event by installing a permanent
10 dewatering system.

11 Could you tell us briefly the status of the installation
12 of a permanent dewatering system?

13 A The permanent dewatering system is the responsibility of
14 another group in the Geotechnical Department who are familiar with
15 the details. I am aware, however, that there is work being done
16 in connection with designing the system.

17 Q Moving now to Item B, which I will read, the earth work
18 specifications has been revised so that all soil compaction require-
19 ments are clearly defined in the specifications. Let me ask you
20 whether you agree that that statement was true on August 3, 1979,
21 if you recall?

22 A I would not, sir, be able to recall if that was true.

23 Q Okay. Can you tell me if that is true as of today's
24 date?

25 A I believe so, sir.

1 Q I'm skipping Item C. With respect to Item D, a resident
2 Geotechnical Soils Engineer has been assigned to the site to over-
3 see the back fill operation. Do you know whether that was true as
4 of August 3, 1979?

5 A I do not recollect if that was true. I'm aware it's true
6 sometime, either shortly thereafter, and it's true now.

7 Q Is that within your area of responsibility to see that a
8 resident Geotechnical Soils Engineer is assigned to the site?

9 A It is within my area of responsibility to provide technical
10 guidance to the resident Geotechnical Soil Engineers.

11 Q Okay. That resident Geotechnical Soils Engineer does not
12 work for you?

13 A My understanding is the resident Geotechnical Soils
14 Engineer has a dual reporting function. He reports to Field
15 Engineer. He's a member of the construction group, and as a member
16 of the construction group, he receives technical guidance and
17 technical direction from Jim Wanzack.

18 Q With respect to Item F, which reads, all of the
19 construction equipment to be used for compacting the various types
20 of soils at the site are being qualified to a maximum thickness
21 with a specified number of passes.

22 Is that true now?

23 MR. FARNELL: That they are being qualified?

24 Q (By Mr. Paton, continuing): Let me strike that.

25 Do you know whether that statement was true on August 3,

1 1979?

2 A I do not recall if it was true on that date.

3 Q Do you know if that statement has been true at any time
4 between August, 1979 and today's date?

5 MR. FARNELL: They are being qualified?

6 Q (By Mr. Paton, continuing): Yes.

7 A I have trouble with the word, all, in the sentence. To
8 my knowledge, we have performed tests to qualify construction
9 procedures for various pieces of equipment, and resulted in
10 qualification of equipment for the use in sand or placement of
11 sands in the Q list area. There has been also tests on clays for
12 non-Q areas, areas that are not subject to quality issues.

13 Q Dr. Afifi, do you remember the statement that I read to
14 you yesterday about somebody at Bechtel said, if you got the right
15 result, if you got the right compaction, he didn't care what kind
16 of equipment you used --

17 MR. FARNELL: I don't think that's a proper characterization
18 of the statement.

19 Q (By Mr. Paton, continuing): Without asking you any
20 specifics about it, do you remember that exchange, the questions
21 and answers?

22 A Yes. I do remember.

23 Q My question is this; if all that is needed is the right
24 compaction, regardless of how you get it, why do you care about
25 qualifying the equipment or the methods used?

1 A Would you read that back, please?

2 (Record read back.)

3 Q If you don't understand the question, I'll ask it another
4 way.

5 A Yes. If you would, please.

6 Q Have you ever heard a theory that says, it doesn't matter
7 what method or equipment used, if, in fact, you end up with the
8 right compaction?

9 MR. FARNELL: Is this a general theory you're talking
10 about?

11 Q (By Mr. Paton, continuing): Yes.

12 A I don't believe that this is the understanding that I
13 would derive from that particular subject. I recall stating that
14 there are two schools of thought on compaction, one whereby you
15 let the contractor select the procedure and do the work in the
16 manner he thinks will achieve the job, use the tests as control
17 methods to determine how well you are doing in achieving the
18 quality fill that's intended. The other is to develop a
19 procedure in which you have confidence that will give you the
20 result you are looking for and require the contractor to follow
21 that procedure and, be willing to accept certain amounts of tests
22 that may not successfully reach the final end result.

23 Q Okay.

24 A But, in that regard, assure yourself with uniformity of
25 placements.

1 Q In this case, Bechtel is the contractor?

2 A Which case?

3 Q In the Midland case?

4 A Well, when I used the word contractor, I did not
5 necessarily mean to imply Bechtel. I meant the contractor who is
6 responsible for placement of the fill.

7 Q In the diesel generator building, the contractor that
8 placed the fill was that Canonie?

9 A I do not know for sure who was the contractor for fill
10 placement, but I have heard that Canonie had placed some of the
11 fill, and Bechtel placed some of the fill, but I don't know for
12 sure which one.

13 Q Dr. Afifi, have you had an opportunity to read on pages
14 two and three, in N.R.C. Deposition Number Two all of the actions
15 recommended to Bechtel projects, listed under A through H?

16 A Yes, sir. I would like to review them one at a time once
17 more.

18 (Discussion held off record.)

19 Q If it will make it any easier for you, as you read them
20 one by one, I'm going to ask you if you agree with those recom-
21 mendations. You can wait until --

22 A I would prefer to answer as I go along.

23 The first sentence, was the Bechtel compaction there with
24 earth works specifications, should have a method's basis as well as
25 a performance basis for acceptance. Each type of compaction

1 equipment should be qualified at the job site for the respective
2 types of soils to be compacted. I agree with the concept, sir.

3 Q Fine. You're certainly entitled to read them out loud
4 if you want to. You don't have to do them on my account.

5 MR. FARNELL: He's going to do it sentence by sentence.
6 I prefer to have him do it this way.

7 Q (By Mr. Paton, continuing): That's fine.

8 A On the second sentence, I agree with it. I agree with
9 those as minimum requirements, sir.

10 I agree with the last sentence, sir. Provided the rest
11 of the paragraph is implemented.

12 Q Fine.

13 A I agree with Item B.

14 Q Thank you.

15 A Item C, I neither agree or disagree. It doesn't -- I
16 don't consider it to be important or necessary to have two different
17 specifications.

18 Item D, I agree with Item D.

19 Q May I ask you one brief question about Item D. Do you
20 know whether U.S. Testing specialized in the soils area?

21 MR. FARNELL: At what time?

22 Q (By Mr. Paton, continuing): At the time they were
23 performing work for Bechtel at the Midland site?

24 A I do not know, sir..

25 I agree with Item E.

1 I agree with the concept in Item F, sir.

2 I would like to make clarifications for F, for placing
3 the fill below structures. I would require a one to one
4 correspondence between proctor tests and in situ tests. That's a
5 further refinement of this technique.

6 Q Thank you.

7 A I agree with the intent of the statement in Item G-1. I
8 believe it could be stated in a better fashion.

9 I agree with Item G-2.

10 On Item H-1, I would believe it would be some cases, too
11 restrictive, in certain cases, and I would qualify it for
12 important structures.

13 I agree with Item H-2 and Item H-3.

14 Q All right, sir. Now, do you know whether these
15 recommendations have been accepted by Bechtel?

16 MR. FARNELL: We have the same problem. I want to go
17 over each one separately, and accepted by Bechtel, section four,
18 actions recommended to Bechtel Projects, I think refers to many
19 projects.

20 Q (By Mr. Paton, continuing): Do you know if any of these
21 recommendations have been accepted by Bechtel Projects?

22 MR. FARNELL: By that, you mean any projects at which
23 Bechtel's worked since August 3, 1979?

24 Q (By Mr. Paton, continuing): This is a Bechtel document,
25 and the expression is on there, Bechtel Projects --

1 MR. FARNELL: But, he didn't write it.

2 MR. PATON: I didn't write it either.

3 MR. FARNELL: I don't understand that, Bechtel Projects.

4 Q (By Mr. Paton, continuing): Do you understand what
5 Bechtel Projects means?

6 A I would interpret this to mean all Bechtel Projects or
7 all projects on which Bechtel is working. I would say -- my answer
8 to that would be, I don't know.

9 Q Do you know if these actions that were recommended have
10 been accepted by anybody in Bechtel?

11 MR. FARNELL: Are you talking about any individuals in
12 Bechtel?

13 Q (By Mr. Paton, continuing): Anybody in Bechtel.

14 MR. FARNELL: Any individuals that accepted it?

15 Q (By Mr. Paton, continuing): I don't understand your
16 question. Are there persons other than individuals?

17 I said anybody in Bechtel.

18 MR. FARNELL: Has accepted these or what?

19 Q (By Mr. Paton, continuing): Their actions recommended
20 to Bechtel, and I'm asking, if to his knowledge, has anybody from
21 Bechtel accepted any of these recommendations?

22 MR. FARNELL: You said that he didn't know if Bechtel did,
23 now you're asking whether any individual accepted?

24 Q (By Mr. Paton, continuing): Any individual in Bechtel?

25 A If any individual in Bechtel accepted all these

1 recommendations or --

2 Q All of them or any one of them or part of any one. Do
3 you have any knowledge that any one in Bechtel or any one in the
4 world ever accepted any of those recommendations?

5 MR. FARNELL: When you're talking about any one in the
6 world it's patently a little bit over broad.

7 Q (By Mr. Paton, continuing): He hasn't indicated yet that
8 he has any idea whether anybody, anywhere, at any time has
9 accepted any of these recommendations, and I just want to start it
10 by asking him --

11 I thought my questions were pretty straight forward, that's
12 why I expanded it. I want to ask him, does he know if any one,
13 I'll restrict it to Bechtel, do you know if any one at Bechtel
14 has accepted any of those recommendations?

15 A With respect to Midland, I would say the answer for that
16 would be yes, to the Midland operation.

17 Q Do you know if any one at Bechtel has accepted these
18 recommendations with respect to any other projects?

19 A No, sir.

20 Q Do you know if any one in Bechtel has taken any action
21 of any kind with respect to these recommendations on projects,
22 other than Midland?

23 MR. FARNELL: Do you mean, implementation or reviewing
24 these recommendations?

25 Q (By Mr. Paton, continuing): So far, he's indicated he has

1 no knowledge whatsoever. I'm asking him to start out with any
2 actions, any kind?

3 Do you know if anybody has looked at them with respect to
4 other projects?

5 A In Ann Arbor on the Belle River Project, which is a Fossil
6 Plant, some of these ideas are implemented, but not to the letter
7 as stated here, since the fill in this job is not critical, the
8 job is primarily on piles.

9 Q What's the name of that project?

10 A Belle River; the job is primarily on piles, but certain
11 ideas, as we felt are necessary.

12 Q Do you know whether at Belle River, those concepts came
13 from this document which is Staff Exhibit Two?

14 A I don't believe it necessarily came from that document.

15 Q Dr. Afifi, I show you N.R.C. Staff Exhibit Two-A, dated
16 today's date. This is a one page Bechtel Corporation inter-office
17 memorandum, dated November 28, 1979 from J. Milandin to E.A.
18 Rumbaugh, titled, subject, Problem Alert-Large Settlement Due to
19 Incorrectly Placed Backfill, and ask you to read that document.

20 Dr. Afifi, prior to reading this inter-office memo which
21 I have marked as N.R.C. Exhibit Two-A, had you ever heard that any
22 one in the Bechtel organization had rejected the corrective actions
23 proposed by the Ann Arbor office in N.R.C. Deposition Exhibit
24 Number Two?

25 For the record, that N.R.C. Deposition Exhibit Number Two

1 states, attached for your review is a draft of a copy of, Problem
2 Alert --

3 MR. FARNELL: Wait, wait a minute. You're saying there
4 were recommendations? This is a draft?

5 MR. PATON: Are you testifying or what?

6 MR. FARNELL: I'm just telling that I don't think your
7 statement was correct.

8 MR. PATON: All right.

9 MR. FARNELL: You said there are recommendations in a
10 draft?

11 This document also refers to a different date.

12 (Discussion held off the record.)

13 Q (By Mr. Paton, continuing): Dr. Afifi, have you ever
14 heard -- did you see a document entitled, Problem Alert by T.E.
15 Johnson, dated October 19, 1979?

16 A Sir, are you referring to the document I just read from?

17 Q No, sir.

18 A I would not recall. I don't recall.

19 Q Do you know if any one from Bechtel ever rejected any
20 corrective actions proposed by the Ann Arbor office, arising out of
21 the Midland settlement problem?

22 MR. FARNELL: What are you talking about?

23 Q (By Mr. Paton, continuing): Just as stated; I didn't
24 refer to any documents.

25 (Record read back.)

1 MR. FARNELL: When you say, Ann Arbor office, I have to
2 think that's the final report dated therein, he said that he hasn't
3 seen it.

4 MR. PATON: You can think that if you want. I didn't
5 refer to any documents.

6 MR. FARNELL: You're talking about corrective --

7 MR. PATON: I stated the question exactly as I meant it.
8 Is the witness doesn't understand it, he should say he doesn't
9 understand it.

10 (Record read back.)

11 A Sir, before I read this memo that you presented me with,
12 the memo is signed by Mr. Milandin.

13 Q The one page?

14 A Yes. I did not recall specifically that any of the
15 Ann Arbor recommendations were rejected by any one. However, I do
16 recall after I read this letter, that I read it before. That's the
17 extent of my knowledge. I have previously read this letter.

18 Q Dr. Afifi, were inclinometers installed in the area of the
19 diesel generator building, prior to or during the surcharge?

20 A I don't recall. I don't recall if there were any
21 installed.

22 Q Dr. Afifi, have there been any meeting between Bechtel and
23 their consultants concerning the N.R.C. staff request for additional
24 borings and lab tests, and I'm referring to the staff request of
25 June 30, 1980?

- 1 (Record read back.)
- 2 A I don't believe there were meetings.
- 3 Q Were there telephone consultations?
- 4 A Yes, sir.
- 5 Q Do you have any record of those conversations?
- 6 A No, sir.
- 7 Q Dr. Afifi, I believe I asked you that question with
8 respect to Bechtel and its consultants. Can you tell me whether
9 there have been any meetings between Bechtel and Consumers with
10 respect to the staff's request of June 30, 1980, for additional
11 borings and lab tests?
- 12 A Yes, sir.
- 13 Q Can you tell us the dates of those meetings?
- 14 A I can't recall.
- 15 Q Was there more than one meeting?
- 16 A I believe the matter was discussed in more than one
17 occasion.
- 18 Q Was there at least one meeting?
- 19 A To the best of my recollection, the matter has been
20 discussed on more than one occasion. I cannot specifically point
21 out if the occasion was just designated for that purpose, or if
22 that was an item that was included as part of other matters.
- 23 Q Was the item discussed at at least one meeting?
- 24 A Yes, sir.
- 25 Q More than one meeting?

1 A Yes. It was discussed at more than one meeting.

2 Q Are those discussions recorded in any meeting notes?

3 A I'm not sure.

4 Q Dr. Afifi, I show you a Appendix C, Volume 3, to the 5050
5 4-F responses. It's entitled, Consultant Communications. The
6 first page, which is C-1, is titled, Index to Consultant
7 Communications. I ask you to look at the last two pages which
8 are 13 and 14. In fact, you can look at any part of the document
9 that you want. It indicates to me that the last date that is
10 reported here, which is at the bottom of page 12, is April 15, 1980.
11 I ask you to look and see if you agree with that statement. At the
12 bottom of page 12, there's an item, April 15, 1980. That's the
13 most current date I can find. I'd ask you if you can find a more
14 current date than that?

15 A I believe I've found an August letter.

16 (Discussion held off record.)

17 Q Dr. Afifi, can I ask you what is the date of the most
18 current document that you found?

19 A Apart from this comment I just made, it was April 15.

20 Q Okay. You did find an item with the date, August 10, '80,
21 but there was some discussion among us that possibly that is an
22 incorrect date, since all the other dates on that page are 1979,
23 and it's on a page which is indicated as Revision Seven, May, '80.
24 Would you agree that the date August 10, 1980, is possibly
25 incorrect?

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1 (Discussion held off the record.)

2 Q The question was whether that date was possibly incorrect?

3 A Yes. It's in conflict with the revision date.

4 Q Now, to your knowledge, is that document complete through

5 April 15, 1980?

6 A I don't know.

7 Q Do you know who's responsible for keeping that document

8 current?

9 A To the best of my recollection, after the N.R.C. request

10 was made, the lead responsibility for keeping the information was

11 Project Engineering.

12 Q Do you know who within Project Engineering?

13 A I do not recall who undertook the tests.

14 Q To you knowledge, since June 30, 1980 up to the present

15 day, Bechtel has had no meetings with its consultants concerning

16 the Midland soil problem, did you say that?

17 Since June 30, 1980 has Bechtel had any meetings with its

18 consultants concerning the Midland soil problem?

19 A I didn't say that.

20 Q Okay. Have you had any?

21 A Since June?

22 Q June 30, 1980?

23 If you wish, you can limit your answer to meetings other

24 than meetings which were held with the N.R.C. You can exclude

25

1 meetings where the N.R.C. attended.

2 A I recall one meeting with Dr. Davison that must have
3 happened before sometime within that frame work, but I'm not sure
4 of the precise date.

5 Q Did anybody keep notes of that meeting?

6 A I don't recall. I don't believe that notes have been
7 made for the meetings.

8 Q Who would do that? Who would keep notes of the meeting or
9 have them typed up?

10 A That meeting was in between -- in that particular case, it
11 would be a joint responsibility, and that particular meeting would
12 be prepared by Geotech (PHON.), that particular meeting.

13 Q That's your organization?

14 A Yes.

15 Q Who would do that, someone in your organization?

16 A Yes. I believe it was the responsibility of Mr. Chan.

17 Q In the last four months, in any meeting between Bechtel
18 and Consumers, did any one suggest that the borings requested by the
19 staff be supplied or be completed?

20 A I would like to, before I answer this question, you
21 reminded me of something else.

22 We had discussed -- we had met with Dr. Hendron (PHON.),
23 prior to meeting with N.R.C., the day before we met with N.R.C. at
24 the job.

25 Q Oh, I see.

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1 A And, during the week, we met twice in discussions prior to
2 meeting with N.R.C. That meeting escaped my mind.

3 Q Fine. Thank you.

4 Were any of your other consultants at that meeting, besides
5 Dr. Hendron?

6 A No.

7 Q Do you remember the question that I asked you?

8 A No.

9 Q The question is, in any meetings between Bechtel and
10 Consumers within the last four months, did any one suggest that the
11 borings requested by the staff be supplied?

12 I'll say it again. The meetings between Bechtel and
13 Consumers for the last four months --

14 (Discussion held off the record.)

15 A Sir, I recall suggesting a compromise. I felt would
16 provide the staff with additional information and would not lead to
17 confusion.

18 Q Can you tell me what compromise that was that you
19 suggested?

20 A With respect to the meetings I attended, I did not see a
21 reason for the borings with standard penetration tests. I saw a
22 concern on the part of the staff during the meeting in Washington,
23 in connection with the possible bearing capacity computations, and
24 I felt that could be resolved by taking samples.

25 Q Your answer was in terms of the diesel generator building?

1 A I was limiting my discussion to the diesel generator
2 building.

3 Q Is that the extent of the suggestions that you made?

4 A To the best of my recollection, that was the best of the --
5 the extent of the suggestion I made with respect to the diesel
6 generator building.

7 Q Did you make any other suggestions for possible
8 compromises?

9 A For that building?

10 Q For any of the other buildings?

11 A Yes.

12 Q Would you say what they are?

13 A I suggested that perhaps we, since the staff was concerned
14 about both the service water structure and the auxillary building,
15 that we simply take the borings in connection with the extended
16 parameters that were required. But, I did not feel that the settle-
17 ment aspects would benefit from the borings.

18 Q Have you completed your recollection of any suggestions or
19 compromises you may have made?

20 A I recall only one more source for information, that was
21 the dikes, is that correct?

22 The request was directed to the diesel building and,
23 service water structure, the auxillary buildings, and the dikes.
24 These are the four items. If that is correct, the suggestion on the

25

1 dikes that I presented in the discussion was as a result of a
2 conversation with my supervisor and included taking test pits
3 along the outer side of the dikes, farther away from the water at
4 different elevations and taking density tests and samples to
5 satisfy the staff's concerns on the basis of that.

6 Q Have you now exhausted your memory with respect to any
7 suggestions that you may have made at that meeting to satisfy
8 staff's request?

9 A I exhausted my memory as to what I thought the compromises
10 would be entered to taking care of the staff's concerns.

11 Q Did you make any other suggestions at that meeting?

12 A I don't recall any more.

13 Q Do you recall the date of that meeting?

14 A No, sir. It was shortly after we came from Washington.

15 Q Did anybody take notes at that meeting?

16 A I'm not sure there were any official notes, but I talked
17 to Mr. -- I'm not sure that any official notes were taken.

18 Q Is there any plans for anybody to summarize or type up
19 notes for that meeting?

20 A I'm not -- I don't believe so.

21 Q Is that your usual practice at a meeting like that, to have
22 somebody summarize the meeting or not?

23 A When it is an aspect of a strong recommendation on my part
24 that I say that I believe it has to be done, I would normally
25 document my request. In this particular case, I felt that from an

1 engineering standpoint and from the standpoint of taking care of
2 the staff's concerns, I would convey my views to the project, and
3 that would be what I felt was the extent of it.

4 Q In other words, you did not, in this instance, document
5 your suggestions?

6 A No, sir. I did not.

7 Q This is an aside, but in your documents that you gave to
8 the staff to look at, I don't think you gave us any hand written
9 notes, is that correct, any notes that you yourself had written?

10 A I don't usually keep notes.

11 Q When you reviewed your document to see what you would
12 provide the staff, you did not find any hand written notes?

13 A That is correct. This file that you saw is not my personal
14 file, it's a file that is kept by the soils group.

15 Q Did you have a personal file concerning the Midland soils
16 problem?

17 A No.

18 Q Did any one ask at that meeting disagree with your
19 suggestions?

20 Did anybody disagree with them?

21 (Discussion held off record.)

22 (Record read back.)

23 A I just would like for clarification, did I say that this
24 meeting was included Bechtel and Consumers, this first meeting?

25 Q That's my understanding.

1 A I believe that the very first time there was no Consumer's
2 people present. At the very initial, there was only Bechtel
3 people present.

4 Q The meeting you're talking about, is a Bechtel meeting?

5 A Yes.

6 Q Okay. Let me ask you the question again. Did any one at
7 that meeting disagree with your suggestion?

8 A No, sir.

9 Q Did any one at the meeting agree with your suggestion; did
10 any one else agree besides yourself?

11 A Mr. Weidner (PHON.) is the person that took my
12 recommendation and indicated he would convey those to Consumers,
13 and I do not recall how they were conveyed, the mechanism or when.

14 Q Have your suggestions been carried out?

15 A No, sir.

16 Q Do you know why?

17 A I believe that the reason is that, whether I technically
18 strongly felt was needed, or whether I have attempted to compromise.

19 Q Did any one ask you that?

20 A I don't believe I was specifically asked that, but in the
21 back of my mind, I believe it probably is the reason why.

22 Q Let me make sure that I understand your statement. What
23 you indicated was that it is your belief that your suggestion was
24 not followed because of a thought that came more from your desire to
25 compromise than from your technical judgments, is that what you said

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1 A If I was to expand a bit on this, I personally did not
2 initiate the request, and left on my own, I would not initiate that
3 request. I did not initiate the request for borings, and I,
4 without discussions with outsiders, would not have initiated it
5 either.

6 Q Let me ask you the question. Was your suggestion, did
7 your suggestion arise more from your desire to compromise or more
8 from your technical judgment?

9 A I believe it is very difficult to separate the two, very
10 difficult.

11 Q Fine, sir. That's a perfectly acceptable answer. You
12 conveyed this to Mr. Weidner?

13 A Yes.

14 Q And, is he with Consumers Power?

15 A No; with Bechtel.

16 Q Did he convey that to Consumers Power?

17 A I believe that this was conveyed to Consumers Power by
18 telephone in my presence. Whether it was the same day or another
19 day, that was conveyed, yes.

20 Q Now, in the organization, I wanted to know the relation-
21 ship between you and Mr. Weidner. Does Mr. Weidner report to you?

22 A No, sir. Mr. Weidner is a manager of engineering, and he
23 the technical services manager has a line directed to him in the
24 organization chart.

25 Q What I want to get at is this. When you made your

1 suggestions concerning a compromise that you had discussed, were
2 you speaking for Bechtel. Did you have the authority to speak for
3 Bechtel?

4 A No, sir. I was speaking for the soils people.

5 Q Within the particular area that you were addressing, you
6 didn't have to ask any one else at Bechtel, you didn't have to
7 consult with any one else at Bechtel concerning your decision, did
8 you?

9 A Well, I have consulted with Mr. Ferris regarding the dikes.

10 Q With respect to the compromise which you have described,
11 did you discuss that with Mr. Ferris?

12 A I don't recall if I discussed the other portions of the
13 compromise. I do recall the dikes.

14 Q And, you discussed that with Mr. Ferris prior to the time
15 you made your suggestions?

16 A Yes, sir.

17 Q Do you have any more knowledge about why your suggestions
18 were not agreed to, other than what you've already indicated. You
19 indicated that you had a feeling that you thought they were based
20 more on your feelings to compromise other than on your professional
21 judgment. But, have you seen or heard anything that would bear on
22 that subject?

23 A No, sir.

24 Q The decision not to comply with your suggestion was made by
25 Consumers Power, is that correct?

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1 A Sir, I do not know who made the decision.

2 Q But, to your knowledge, Mr. Weidner conveyed that infor-
3 mation to Consumers Power?

4 A Yes, sir.

5 Q Mr. Weidner did not in any way change your suggestions,
6 did He?

7 A No, sir.

8 Q Do you know who at Consumers Power he conveyed that infor-
9 mation to?

10 A If I recall correctly, I believe it was Mr. Keeley.

11 Q Do you know what month this meeting was in?

12 A The only thing I recall, it was very shortly after I
13 returned from Washington, after we met with the staff in Washington
14 D.C.

15 Q What date was that?

16 July 30th, possibly?

17 A The meeting was in July, 30, or a few days after that.

18 Q To your recollection, sometimes in early August?

19 A Yes, sir.

20 Q Was there any further discussions within Bechtel of your
21 suggestions?

22 A I don't know.

23 Q Are you aware of any discussion concerning your suggestion
24 between Bechtel and Consumers Power that you have not related to
25 us?

1 A Yes. There was one more meeting after that. It included
2 both Bechtel and Consumers, and the same thoughts were discussed,
3 the same.

4 Q Did you make the same suggestions again?

5 A Yes.

6 Q Did any one at that meeting agree with your suggestions?

7 A I believe Mr. Weidner did not disagree with my suggestions.

8 Q Did any one at the meeting disagree with your suggestions?

9 A No. It was -- the matter was discussed, and there was
10 no conclusion at the end.

11 Q Approximately, what was the date of this second meeting?

12 A I don't recall. It was. It was after the first one. It
13 was a matter of a few days. --

14 Q To your recollection, within a month?

15 A Yes.

16 Q Can you tell us who was there? How many people were there,
17 approximately?

18 A Only four or five people.

19 Q Can you name them?

20 A Myself, Mr. Weidner, Mr. Keeley, Mr. -- I'm not sure if Mr.
21 Wanzack was present or not.

22 Q You indicated there was no resolution at that meeting.
23 What was the next time, to your knowledge, that your suggestions
24 were considered by either Bechtel or Consumers?

25 A I do not know.

1 Q Do you know that your suggestions were not accepted and
2 acted upon?

3 Let's strike that. Were your suggestions accepted?

4 A I don't believe they were.

5 Q And, do you know why, other than any statements you have
6 made this morning, do you have any other knowledge as to why your
7 suggestions were not accepted?

8 (Record read back.)

9 A No, sir.

10 Q Did you attend any other meetings where your suggestions
11 were discussed?

12 A I don't recall any other meetings.

13 Q Do you know any one else in Bechtel, besides yourself and
14 Mr. Weidner, who did not disagree with your suggestions?

15 A I did, I believed at some point, advised Mr. Ferris, and he
16 did not disagree with me.

17 Q Did Bechtel ever plan, since the start of construction, to
18 take record samples of fill placed in the cooling pond dikes?

19 A I don't know.

20 Q Would you consider it normal procedure for Bechtel to take
21 record samples in the construction of water retention structures?

22 (Record read back.)

23 MR. FARNELL: You're talking in general now?

24 MR. PATON: Yes.

25 MR. FARNELL: Not with relation to Midland?

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1 MR. PATON: That's correct.

2 MR. FARNELL: Any point in time?

3 MR. PATON: Well, it's a generic question, is it considered
4 normal procedure for Bechtel to take record samples in the
5 construction of water retention structures?

6 MR. FARNELL: Normal procedures, when, 1910, 1940?

7 Q (By Mr. Paton, continuing): Yes; anytime after 1970?

8 A I don't know that for sure, sir.

9 Q Is that your statement, that you don't consider the
10 answer to that question to be within the scope of your professional
11 knowledge?

12 A I have not been involved in many Bechtel dams to be able
13 to tell you that as first hand knowledge.

14 Q Okay. Let me strike Bechtel, and ask you is it normal
15 engineering procedure to take record samples in the construction of
16 water retention structures?

17 MR. FARNELL: Same time?

18 Q (By Mr. Paton, continuing): Yes; after 1970.

19 A I'm troubled by the word, normal. Can you explain that a
20 little bit?

21 Q I will say, generally accepted engineering practice?

22 A By generally accepted, does that mean, if I can ask, in
23 every case?

24 Q I have to rely on your, sir. You're the expert. I'm not
25 sure. If you don't understand that expression, then I'll go on to

1 the next question.

2 The question is, is it generally accepted engineering
3 practice to take record samples in the construction of water
4 retention structures?

5 A I'm told that in many projects, it is not.

6 Q Do you know whether it was done with respect to the
7 cooling pond dikes at the Midland facility?

8 A I don't believe so.

9 Q Do you know why it was not done?

10 A I don't know.

11 Q And, you don't know whether Bechtel ever planned to do
12 that?

13 A I don't know that for sure.

14 Q Do you recall whether you ever discussed with Mr. Ferris
15 the subject of taking record samples for the cooling pond dikes in
16 Midland?

17 A Yes.

18 Q You did. Could you tell us what those discussions
19 consisted of?

20 A That was after some time in the past year or two. The
21 most recent time probably was at the time of the question that was
22 raised by the N.R.C. in connection with dikes.

23 Q What was the discussion?

24 A The discussion was if record samples were taken of the
25 dikes that the N.R.C. was -- the question would have had the answer

1 without having to resort to doing the borings.

2 Q Did Mr. Ferris indicate at that time he thought those
3 record samples should have been taken?

4 A I don't believe he used those words specifically.

5 Q Did he indicate in any way if he thought they should have
6 been taken?

7 A I believe the answer to the first question carries the
8 implication if the data was available, the question would not have
9 been there. I think that partially, but not necessarily partially,
10 but in a way answers your second question.

11 Q You're saying come out and positively use the words, they
12 should have been taken?

13 A Yes; but I do not recall those words.

14 Q But, you get some inference of that from his remark, is
15 that what you're indicating?

16 A Yes.

17 Q Have you related to us your recollections of all of that
18 conversation? Do you remember anything else that was said between
19 you with respect to the cooling pond dikes in that conversation?

20 A I don't recall any more.

21 Q Did you have any other conversations with him with respect
22 to the cooling pond dikes?

23 A Yes.

24 Q Could you tell us what was the subject of that conversation
25 or conversations?

1 A As another possible compromise, it was suggested that two
2 borings be drilled in the southwest corner of the dike, and another
3 alternative to get samples and get some tests.

4 Q Whose suggestion was that, yours or Mr. Ferris?

5 A Mr. Ferris made that as a possible compromise.

6 Q Do you know why he picked the southwest corner?

7 A Sometime ago, there was a reported settlement of one and a
8 half inches that was discussed in that area, and there were also
9 statements that that may have been an error in surveying. It wasn't
10 really, definite that there was settlement, and there were never
11 settlement of any significant amount noted after that. So, we
12 felt that if we could take the borings at this location, that might
13 satisfy the staff.

14 Q Have you participated in any discussions at Bechtel, Ann
15 Arbor, regarding fixes to possible over-stressing of conduits and
16 pipes?

17 A I don't recall having been involved in such.

18 Q Dr. Afifi, I'm going to refer you to Volume Four of the
19 responses to N.R.C. requests regarding land fill, and I refer you
20 to the second page of meeting notes. This is under tab 93, meeting
21 notes dated October 25, 1979, attendees, the first one listed is
22 S.S. Afifi. I'm reading to you from the middle of paragraph three
23 on the second page, it's entitled, Piping and Duct Banks. A state-
24 ment, the pipe stress group has not determined whether or not the
25 existing stresses in the pipes generally exceed the allowable period

1 V. Dar (PHON.) said that, in general, the pipe stresses for straight
2 pipes don't exceed the allowable, but the stresses at elbows and
3 bends do. Let me show you that, and ask you if you recall that?

4 The question is, do you recall that discussion?

5 A Sir, I do not specifically recall the statements you just
6 read, but in reading the following statements by Mr. Weidner, Mr.
7 Weidner said we had already suggested to cut the pipe at certain
8 points to check stresses, and that reminds me that I have heard
9 that statement before in a meeting including Masters Hendron and
10 Ferris. I recall that particular matter. I do not recall the others

11 Q Dr. Afifi, can you tell me who in the Bechtel organization
12 at Ann Arbor is responsible to address possible over-stressing in
13 pipes and conduits? Who's responsibility is that?

14 A I'm not sure who is in charge of that topic. Project
15 Engineering would be.

16 (Discussion held off the record.)

17 Q Can you tell me what organization that is?

18 A This is, I would interpret that to be under the Chief
19 Design Engineer from that organization.

20 Q Would you continue to look at that tab 93, second page,
21 item three, the second sentence. Would you read the second
22 sentence, please, for the record, out loud?

23 A The absolute movement of the G.Z.D. profile are in question
24 because the reference elevations used were questionable.

25 Q That's the expression, sir. Can you tell me what that

1 means, the reference elevation used were questionable. Do you
2 understand what that means?

3 MR. FARNELL: He didn't write the document. He can't
4 state what it means.

5 Q (By Mr. Paton, continuing): I understand.

6 Do you understand what that means?

7 A I'm not certain.

8 Q Do you know what plan Bechtel has for sections of pipe where
9 allowable stresses are shown to have been exceeded?

10 I'll ask another question. Are there sections of pipe
11 where allowable stresses are exceeded?

12 A I don't know.

13 Q Do you know whether Mr. Dar ever stated that?

14 A From that sentence here, I would -- that says, Mr. Dar
15 said that. Based on Mr. Dar's statement on that date, one would
16 conclude if Mr. Dar was correct, at the elbows, the stresses were
17 exceeded, from that sentence. I have no first hand knowledge of
18 any of the analysis.

19 Q Do you know what Bechtel plans to do in response to Mr.
20 Dar's statement?

21 A No, sir.

22 MR. PATON: That's the conclusion of the staff's
23 participation in the deposition today.

24 MR. FARNELL: By that, do you mean to say that you have
25 more questions to ask Mr. Afifi?

1 MR. PATON: That is a matter that we will consider.

2 MR. FARNELL: Mr. Afifi is here. It is 11:05, and he's
3 here. He's ready to answer any more questions if you have them.

4 MR. PATON: I'm sure that the staff witnesses would have
5 been glad to respond to additional questions from you if you had
6 had them when you terminated the deposition.

7 MR. FARNELL: At eight o'clock at night; we certainly
8 terminated, and continued.

9 MR. PATON: Well, then this deposition is continued.

10 MR. FARNELL: That's your deal.

11 MR. PATON: That is correct.

12 MR. FARNELL: I just object to the fact that we're willing
13 to continue onwards today with the depositions.

14 MR. PATON: I object to the fact that Consumers seems to
15 believe that each of their depositions continues indefinitely, but
16 the staff's, for some reason, seem to have to terminate immediately
17 at the end of the particular day's deposition.

18 MR. FARNELL: We don't say, at the end of a day's
19 deposition. We say, these are day to day and keep going until you
20 exhaust the time. You haven't exhausted the time here.

21 (Whereupon, at 11:07 a.m., the taking of the deposition
22 concluded.)

23 * * *

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This is to certify that the attached proceedings before the

in the matter of: CONSUMERS POWER COMPANY
(Midland Plant, Units 1 and 2)

Date of Proceeding: October 31, 1980

Docket Number: 50-329 OL, 50-330 OL, 50-329 OM, 50-330

Place of Proceeding: Ann arbor, Michigan

were held as herein appears, and that this is the original
transcript thereof for the file of the Commission.

Susan Beale

Official Reporter (Typed)

Official Reporter (Signature)