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STATE OF MICHIGAN
IN THE CIRCUIT COURT FOR THE COUNTY OF MIDLAND

DOW CHEMICAL COMPANY,
Plaintiff,
-vs-
CONSUMERS POWER COMPANY,
Defendant.

No. 83-C022325

The Continued Deposition of EUGENE GALLAGHER,
taken before me, Glenn G. Miller, CSR-2596, Registered
Professional Reporter and Notary Public within and for the
County of Wayne, (acting in Washington D. C.) State of Michigan,
at 655 15th Street, Washington, D. C., on Thursday,
July 26, 1984.

APPEARANCES:

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(By James Goold, Esq.)

Appearing on behalf of the Plaintiff,

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6 Appearing on behalf/ of the Nuclear Regulatory Commission.

7 W I T N E S S I N D E X

8	Witness	Examined By	Page
9	EUGENE GALLAGHER	Mr. Goold	220

10 E X H I B I T I N D E X

11	Exhibit No.	Description	Page
12	PX NRC 58	Summary of July 18, 1979	273
13		meeting on soil deficiencies	
14		at the Midland Plant Site	
15	PX REC 235	Letter of 10-30-79 from	297
16		S. S. Afifi to R. B. Peck,	
17		Letter from Lester Rubenstein,	
18		NRC, to S. H. Howell, CPC, dated	
19		10-19-79 and supplemental	
20		10 CFR 50.54 requests	
21	PX NRC 59	Letter of 12-6-79 from Victor	302
22		Stello, NRC, to Stephen Howell,	
23		CPC, with attached document	
24		captioned Order Modifying	
		Construction Permits two	
		appendices	

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5	PX CPC 525	CPCO Discussion of NRC	311
6		Inspection Facts Resulting from	
7		the Investigation of the Diesel	
8		Generator Building Settlement,	
9		dated 3-9-79	
10	PX CPC 526	Consumers Power Document from	321
11		J. L. Corley/R. G. Wollney to	
12		B. W. Marguglio, 3-30-79, Subject:	
13		Midland Project-NRC Exit Meeting of	
14		March 29, 1979	
15	PX CPC 527	Three-page Handwritten Document	322
16	PX NRC 60	NRC Inspection Report 79-06,	324
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18	PX REC 236	Interoffice memorandum to S. Afifi,	326
19		dated 11-13-78, Subject: Job 7220	
20		Midland Project, Compaction Test	
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23	PX CPC 528	Oral Communication Record, dated	327
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1 Washington D. C.

2 Thursday, July 26, 1984

3 8:30 a. m.

4
5 EUGENE GALLAGHER

6 was thereupon called as a witness herein and, after
7 having been first duly sworn to tell the truth, the
8 whole truth and nothing but the truth, was examined
9 and testified as follows:

10 MR. GOOLD: For the record, this is the
11 resumption of the deposition of Mr. Eugene Gallagher of
12 the Nuclear Regulatory Commission.

13 EXAMINATION

14 BY MR. GOOLD:

15 Q Just by way of preliminary, Mr. Gallagher, since we've
16 adjourned for I guess nearly two weeks since the start of
17 your deposition, has there been anything that has come to
18 your mind since we adjourned your deposition that has just
19 occurred to you during the interim, something you care to
20 add to your deposition?

21 A No.

22 Q Over the course of your investigation concerning the soils
23 problems at Midland, can you estimate approximately how
24 many times you had conversations with Mr. Horn?

1 A Well, it's sort of a difficult question when you say
2 conversations. I think from September of 1978 through
3 March of 1979 it was one continuous conversation of sorts,
4 that is, we were in contact routinely, perhaps even
5 weekly, in the course of gathering information.

6 Q And just by way of background, did you have greater or
7 lessor contact with Bechtel personnel?

8 A We had lessor contact; however, we did have substantial
9 contact with them in the course of our investigation.

10 Q To help me get oriented in terms of how an investigation
11 such as yours is conducted, who is the primary conduit for
12 information to you, which person in which company?

13 A Primarily from Consumers Power and primarily through the
14 Quality Assurance organization, and in particular Mr.
15 Horn. On the Project Management side of the house it was
16 primarily Mr. Cooke and his staff.

17 Q Is that Mr. Thomas Cooke?

18 A That's correct.

19 Q Just so I'm clear, is it correct that the principle group
20 with which you had contact from the Consumers Power people
21 were the QA group rather than the Project Management
22 group?

23 A That's correct.

24 Q And apart from Mr. Horn who was the next most -- with whom

1 at Consumers Power did you have contact next most
2 frequently?

3 A At that time I believe it was Mr. Corley, his supervisor.

4 Q During the first day of your deposition we discussed a
5 list of the factors that you believe caused the soils
6 problems, then we also discussed whether people from
7 Consumers Power had indicated that they had concern about
8 those factors prior to the disclosure of the Diesel
9 Generator Building settlement problem. Do you remember
10 that generally?

11 A Yes.

12 Q And in that connection one point you mentioned was that
13 Mr. Horn told you that he had tried to get the soils work
14 stopped. Do you remember that generally?

15 A Yes.

16 Q And I just wanted to make sure that the record is clear as
17 to whether Mr. Horn indicated to you that he had been
18 trying before the disclosure of the Diesel Generator
19 Building soils problem to get the soils work stopped?

20 MR. DRIKER: I'll object to the question as
21 leading.

22 A That's correct. Mr. Horn had been the primary Quality
23 Assurance contact auditing soils work. He had, based on
24 my conversations with him and association with him, been

1 aware of the long history of repetitive deficiencies
2 throughout the installation of the soils activity, and it
3 was clear to me that he had made many efforts attempting
4 to get upper level management's attention to do something
5 more than just accept as is the work, which was the
6 routine resolution to the identified problems.

7 Q Did Mr. Horn --

8 MR. DRIKER: Excuse me a second. I'm having
9 a hard time hearing the witness.

10 THE WITNESS: Am I not speaking clearly?

11 MR. DRIKER: You're speaking clearly. It's
12 the size of the room and whatever.

13 BY MR. GOOLD:

14 Q Did Mr. Horn indicate anything further that you recall
15 regarding what the reaction of Consumers Power upper
16 management had been to his efforts?

17 MR. DRIKER: The question is leading.
18 Objection.

19 A He was not getting very much cooperation from his upper
20 level management. I got the distinct understanding that
21 he was doing everything but jumping up and down and
22 screaming to look we have a problem, we've had a
23 long-standing problem, we don't seem to be getting it
24 corrected, and as a fairly low level employee in the

1 Consumers management chain he just wasn't getting the
2 cooperation.

3 BY MR. GOOLD:

4 Q Did he indicate to you who were the people within
5 Consumers Power upper management who had not been
6 responsive to his requests?

7 A Corporate QA people, Mr. Marguglio and his associates.

8 Q At the time you conducted your investigation for the
9 preparation of report 78-20, did you form any view as to
10 whether people from Consumers Power were being cooperative
11 with you in your efforts?

12 MR. JENSEN: I wonder if we could clarify
13 that to particular people from Consumers Power.

14 BY MR. GOOLD:

15 Q Let's start with Mr. Horn.

16 A Yes.

17 Q How about Mr. Corley?

18 A Yes.

19 Q How about Mr. Cooke?

20 A It appeared to be.

21 Q Were those three people your primary contacts within
22 Consumers Power?

23 A Yes.

24 Q At the time you conducted your investigation for the

1 report 78-20 did you form any view as to whether they were
2 being truthful with you?

3 A Well, we expected them to be truthful given the
4 seriousness of our investigation. It appeared that they
5 were being truthful to us, that is, producing documents as
6 we needed them. There were occasions when certain
7 documents were extremely difficult to obtain and there did
8 seem to be a stonewalling in producing them. In
9 particular certain quality records dealing with the
10 qualification of compaction equipment in particular,
11 that's one case that I remember very clearly.

12 There were other documents that we did not
13 know existed and therefore were not "smart enough" to ask
14 specifically for and that prompted the NRC to issue a
15 50.54 F letter which requested in total any and all
16 documents relating to the soils work activity and in
17 particular a long list of documents which we included as
18 an attachment.

19 MR. GOOLD: I'm not going to object or make
20 a big fuss, but I just want the record to reflect the
21 witness is being counseled by his counsel and I'm always
22 troubled by that.

23 A I expect my counsel to counsel me.

24 BY MR. GOOLD:

1 Q During the examination that's the only problem, at least
2 where I group up that's not supposed to be, but let's go
3 ahead.

4 Based on the exhibits you've seen thus far
5 in the deposition, have your views regarding the
6 truthfulness of the Consumers Power people with whom
7 you've dealt been affected in any way?

8 A Yes.

9 Q In what way, sir?

10 A In bringing the information to our attention while we were
11 conducting the investigation that they were apparently
12 aware of based on the documents that you produced
13 previously.

14 Q Can you explain what you mean by the information?

15 A Well, in particular the entire circumstances surrounding
16 the pre-1978 discovery of the Diesel Generator Building
17 failure and the identification of the Administration
18 Building soils settlement problem and other borings that
19 had obviously been taken prior to 1978 that obviously
20 indicated poor material. That information was not brought
21 forward to us during our investigation.

22 Q I noticed in reviewing report 78-20, which was marked as
23 PX NRC 56, that one of the conclusions in the report was
24 that Consumers Power had reported the Diesel Generator

1 Building problem on a timely basis. Do you remember that
2 conclusion generally?

3 A Yes.

4 Q If you had seen the information which was provided to you
5 as exhibits in the course of the first session of your
6 deposition, would your conclusion be the same?

7 A. No.

8 Q During the course of your interviews of witnesses for the
9 preparation of report 78-20, did you learn whether the
10 witnesses had been given any instructions by Bechtel or
11 Consumers Power counsel?

12 MR. DRIKER: Maybe you better carve it up
13 and ask him whether he's talking about Consumers Power
14 employees or Bechtel employees. Your questions take in a
15 wide sweep when you ask the witness about people and he
16 responds about organizations and so on, and I think it
17 would help the record if I talked about individuals or at
18 least identified companies rather than simply talking
19 about an amorphous voice out there some place.

20 MR. GOOLD: I'm not sure you characterized
21 his testimony correctly, but, anyway, I'll follow up.

22 MR. DRIKER: Would you repeat the question?

23 (The requested portion of the

24 record was read back as follows:

1 "Q. During the course of your
2 interviews of witnesses for the
3 preparation of report 78-20, did
4 you learn whether the witnesses had
5 been given any instruction by Bechtel
6 or Consumers Power counsel?")

7 A Well, regarding the Bechtel people, we observed that they
8 were being briefed prior to our interviews. What they
9 were being briefed we don't know since we weren't there.
10 And they were being debriefed after the interviews and in
11 general were a little bit guarded.

12 BY MR. GOOLD:

13 Q When you say you learned that they had been briefed before
14 the interviews, did you learn who was doing the briefing?

15 A It was a law firm representing Bechtel. The law firm, I
16 don't remember its name, it was from Detroit, wanted to
17 actually be in the room when we interviewed them. That's
18 not our general practice of conducting investigation
19 interviews and were actually held up for at least the
20 better part of one day and possibly two days trying to
21 iron out that they would not be because, at least
22 initially, Bechtel's position was they would not produce
23 these people unless counsel was present. After we ironed
24 that out then counsel was not present and we went on with

1 our interviews. However, I recall Jerry Phillip, the
2 chief investigator, that he would ask whether or not they
3 had been counseled and the like.

4 Q Do you remember what the answers were?

5 A Yeah, they were briefed basically as to what we were going
6 to be asking in terms of other people. They were
7 compiling the questions obviously because of the
8 seriousness of the findings that we were about to make.

9 Q You've mentioned that a Detroit law firm for Bechtel was
10 involved in this connection. Was that firm Clark, Klein &
11 Beaumont?

12 A Sounds familiar but it's not clear in my mind.

13 Q How about Mr. Rob Brown?

14 A Again it sounds like a familiar name but it's not clear in
15 my mind.

16 Q Did you ever learn whether any of the Consumers Power
17 people you interviewed had been briefed by lawyers before
18 you interviewed them?

19 A I didn't know if they had.

20 Q Did you ever learn whether, or here of any instructions
21 given to Bechtel witnesses that they were to volunteer
22 nothing and if there was a problem it was up to the NRC to
23 find it out?

24 MR. DRIKER: I think that question is

1 leading.

2 BY MR. GOOLD:

3 Q Try to find out in words or in substance that those
4 instructions had been given to the Bechtel witnesses?

5 MR. DRIKER: I think that question is
6 leading as well.

7 A I recall that discussion being done by our chief
8 investigator and it was in general terms, answer the
9 questions, don't volunteer any information.

10 BY MR. GOOLD:

11 Q Did Consumers Power people you interviewed take a similar
12 approach?

13 A I don't know if they did.

14 Q Okay. Let me direct your attention for a moment back to
15 report 78-20, which is NRC Exhibit 56. Let me direct your
16 attention to pages four through six concerning the
17 identification and reporting of the Diesel Generator
18 Building settlement. First let me ask: Did you
19 participate in an interview of the Bechtel Chief of Survey
20 Parties?

21 A Yes.

22 Q And is that what is summarized beginning at the bottom of
23 page four and carrying over into the top of page five?

24 A Yes.

1 Q And was your interview with that individual the source for
2 the statement in the bottom paragraph of page four that
3 "Surveys to establish a baseline elevation for the DGB
4 were completed by Bechtel on May 9, 1978"?

5 A Yes.

6 Q And do you recall what that individual told you regarding
7 when unusual settlement at the Diesel Generator Building
8 was first noticed by him, first came to his knowledge?

9 A Well, according to the report, on page five, July 22nd,
10 data that the survey party had collected showed
11 differential settlement ranging from a quarter to one and
12 five-eighths inches. In that person's experience, as we
13 memorialized in that report, that was somewhat surprising
14 to him.

15 Q Did you learn whether anyone, and I'll ask it broadly at
16 first, working at the Diesel Generator Building had been
17 aware of settlement before the Bechtel survey group?

18 A Not that I'm aware of.

19 Q Okay. Was it your understanding that the chief of the
20 Bechtel survey function was the first to spot the
21 settlement?

22 A On the Diesel Generator Building?

23 Q On the Diesel Generator Building.

24 A That's what our report reads and it's correct to our

1 knowledge.

2 Q How was it that you came to interview the Bechtel Chief of
3 Survey Parties? Can you remember the process by which you
4 came to discuss the question of when settlement at the
5 building was identified with him?

6 A It was just a logical person to be speaking with to see
7 when they identified the initial settlement and to compare
8 that to when they reported it to us, which was in August.

9 Q Did anybody indicate to you whether or not settlement had
10 been noticed at the Diesel Generator Building by other
11 people before it came to the attention of the Bechtel
12 Chief of Survey Parties?

13 A No one.

14 Q Did you have an opportunity to determine whether
15 settlement at the Diesel Generator Building had come to
16 the attention of anyone prior to the Bechtel Chief of
17 Survey Parties?

18 A That was the whole object of this part of the
19 investigation, to determine whether or not -- to determine
20 when different parties knew of the settlement.

21 Q What I'm really trying to find out is whether you were
22 told the first person to know about the settlement was the
23 Bechtel Chief of Survey Parties?

24 A It appears to be reasonable to expect the survey party

1 would identify the settlement optically doing the survey,
2 collecting data and reporting it to other Bechtel people.

3 Q Did you ever learn whether workers involved in the
4 construction of the Diesel Generator Building had noticed
5 that something was wrong before then, before, that is, the
6 Bechtel Chief of Survey Parties became involved?

7 MR. DRIKER: Objection. The question is
8 leading.

9 A That question kind of jogs my memory a little bit. At
10 least someone indicated to us that -- someone indicated to
11 us, I don't recall who, that a worker had, I guess, felt
12 some, or settlement, or I guess using some sort of device,
13 pounding it into the ground, had noticed some soft
14 materials. I don't know if we recorded it in our report
15 or not. There was a lot of stories going on at the site
16 as to when and how people knew of the soils settlement.
17 The only one that we recorded was the survey team's
18 results.

19 BY MR. GOULD:

20 Q Do you recall approximately when you learned about this
21 experience of a worker?

22 A No, I don't.

23 Q Was it in the course of your investigation?

24 A Yes.

1 Q Do you recall who told you about that?

2 A I really don't.

3 Q Did you ever learn whether that worker had reported the

4 problem or his observations to higher-ups within either

5 Bechtel or Consumers Power?

6 A No, I didn't.

7 Q I'm just trying to find out the depth to which you pursued

8 this question or elected not to pursue it. Did you make

9 any requests to talk to that individual?

10 A No, we didn't.

11 Q Is there any other information you can give me as to how I

12 might identify that person?

13 A Not at this point.

14 Q Did you learn or become aware of a settlement monitoring

15 program being established in or about July 1978 at the

16 site?

17 A Yes.

18 Q And was it in connection with that settlement monitoring

19 program, to your understanding, that the Diesel Generator

20 Building problem was first observed?

21 A Actually, if I recall correctly, it was in the course of

22 setting elevations for the Diesel Generator Building that

23 they actually first observed some differential settlement.

24 The survey didn't close properly to align certain

1 elevations in the building. Then they did their survey
2 monitoring program to confirm that there was something
3 that wasn't closing properly. But it was in the context,
4 I understood, of building the Diesel Generator Building
5 that they observed some misalignment.

6 Q I understand. What I'm trying to find out is something
7 slightly different and that is whether at about this same
8 time a program was put in place to monitor settlement at a
9 number of structures on the site?

10 A That's correct.

11 Q And did anyone indicate to you why that program was put in
12 place as of then?

13 A No. Although, from what I understand, there was
14 commitments in the PSAR that Consumers would establish a
15 survey program on that site, when, I don't know. I don't
16 recall when that was supposed to be established.

17 Q I'd like to go over briefly the compaction requirements
18 that were set forth in the specifications in the PSAR and
19 so forth, briefly. First let me just ask you what your
20 understanding as a result of your investigation was as to
21 the compaction criterion for cohesive soils called for in
22 the PSAR. Let me invite you to take a look at page nine
23 and ten to refresh your recollection, if I may.

24 A That point is -- I believe I recall it very well. It was

1 95 percent of the so-called modified proctor standard.

2 Q And what proctor standard was actually used in the
3 construction or as a guide in the compaction of the fill
4 that was actually placed?

5 A Ninety-five percent of the so-called Bechtel modified
6 proctor, which is of a lower standard than the criteria.

7 Q We had covered in your previous session your background in
8 soils work and your experience at other nuclear plants as
9 well as at Ebasco. Had you ever heard of the Bechtel
10 modified proctor being used on any construction project?

11 A No.

12 Q Had you ever heard of a compaction standard lower than 95
13 percent of modified proctor being used on any nuclear
14 power plant for cohesive soils?

15 A No.

16 Q Okay. And based on your experience in reviewing the soils
17 problems at Midland, was the 95 percent of Bechtel
18 modified proctor actually followed in the fill that was
19 placed on the site?

20 MR. DRIKER: I would urge the witness to
21 speak of his own personal knowledge. I think that's what
22 Mr. Goold is seeking to adduce.

23 BY MR. GOOLD:

24 Q That's right, from your observation of the records, boring

1 records and all other test data.

2 A Based on the, in retrospect at least, the quality records
3 and the results of the borings, 95 percent of any standard
4 was not met. As Bechtel themselves concluded, they were
5 continuously erroneously selecting the wrong standard
6 thereby making all of the tests at least suspect and, in
7 retrospect, worthless.

8 Q You've mentioned the suspect nature of the soils tests.
9 Was that a subject that you discussed with Bechtel
10 personnel in your interviews for the preparation of report
11 78-20?

12 A Yes.

13 Q And do you recall the names of the individuals with whom
14 you raised that subject?

15 A Mostly the Quality Control people, Mr. Richardson, the
16 Project Engineer, Boos, a couple of field engineers who
17 ought to have been familiar with what the requirements
18 were.

19 Q Just for the record you mean Mr. Boos. Is that B-o-o-s?

20 A That's correct.

21 Q Did any of those individuals indicate to you whether or
22 not they had had concerns about the accuracy of the soils
23 tests prior to the disclosure of the Diesel Generator
24 Building problem?

1 MR. DRIKER: Objection to the leading
2 question.

3 A No, not that I recall.

4 BY MR. GOOLD:

5 Q After the Administration Building situation was disclosed
6 to you, you received a report, a copy of a report that had
7 been done reviewing the soils compaction tests that had
8 been done at the Administration Building, did you not?

9 A That's correct.

10 Q Do you recall what that report showed with respect to the
11 accuracy of the original tests that had been done at the
12 Administration Building?

13 A It concluded that they were erroneous.

14 Q After you received that report did you have any
15 conversations with Bechtel people about the conclusions
16 you've just summarized?

17 A I don't recall at this point whether we did or not.

18 Q How about with Consumers Power employees?

19 A Yes. We basically confronted them with the conclusion of
20 that report versus the extent of the problem.

21 Q Did you confront Mr. Horn with it?

22 A Yes.

23 Q And what did he say?

24 A Well, as our report 78-20, you know, identifies, there was

1 a long period of time where the compaction criteria, the
2 standards used for comparing the in-place compaction
3 results, there was total confusion for as long as almost a
4 year and a half, two years. So it was a subject that was,
5 you know, being dealt with for a long period of time.
6 They were trying to figure out, trying to get the Bechtel
7 engineering decision as to what in fact the criteria was
8 and how can they achieve the results.

9 Q Do you recall whether Mr. Horn gave you any specific
10 information regarding his reaction to, if any, to the
11 conclusions in the 1977 report regarding the specific
12 tests at the Administration Building?

13 A He agreed with them.

14 Q How about Mr. Cooke, did you discuss that with him?

15 A I don't believe so.

16 Q How about Mr. Marguglio?

17 A I don't recall if we did or not.

18 Q Did you ever discuss the Administration Building situation
19 with Mr. Keeley?

20 A Yes.

21 Q And, first of all, did he indicate to you whether he had
22 been aware of any settlement at the Administration
23 Building?

24 A I recall that his first reaction was that he was not aware

1 of it.

2 Q Did that surprise you?

3 A Yes.

4 Q Why?

5 A He was the Project Manager for the Midland Project. There

6 was a major claim between Bechtel and their subcontractor,

7 U. S. Testing, there was a major rework activity on a

8 structure in the plant and it surprised me very much that

9 the Project Manager for the owner would not be aware of

10 this sort of problem.

11 Q You've mentioned Mr. Keeley's initial statement to you.

12 He had not been aware of the administration building

13 problem. Did he ever modify that?

14 A I recall during the licensing hearings that he had

15 testified that he was aware of it.

16 Q Did he ever explain, to your knowledge, the discrepancy?

17 A I don't recall.

18 Q Did you ever make an attempt to determine at what level

19 within Consumers Power the Administration Building problem

20 was reported?

21 A No, we didn't. Keep in mind, I believe the highest level

22 that we went to in Consumers Power was Mr. Keeley, the

23 Project Manager.

24 Q Did you discuss the subject with Mr. Cooke? I don't

1 recall whether you indicated you had or not.

2 A I don't recall we did.

3 Q Did you ever learn that the problem, the Administration
4 Building problem, had come to the attention of the
5 Chairman of the Board of Consumers Power Company?

6 A No.

7 Q Would it surprise you if it had?

8 MR. DRIKER: I don't know how this witness
9 is competent to answer that question and what his level of
10 surprise would or would not be. I believe the question
11 calls for rank speculation and is a leading question, as
12 are most of the question you're asking, but I will object
13 to it on the basis it calls for absolute speculation.

14 A I really have no reaction if the Chairman would have known
15 about it or not.

16 BY MR. GOOLD:

17 Q If you learned that the Administration Building problem
18 had been reported to the Chairman of the Board of
19 Consumers Power, would that have any effect on your views
20 as to whether the problem should have been reported to the
21 NRC?

22 MR. DRIKER: I will object to the question
23 as both leading and calling for speculation.

24 A It would reenforce our views, as we had testified during

1 the licensing hearing, that it should have been and would
2 be consistent with that point.

3 BY MR. GOOLD:

4 Q How about if the problem had been reported to outside
5 directors of Consumers Power?

6 A Same.

7 Q And I'm happy to represent the testimony in this case so
8 far has been to that effect. That's my understanding.

9 MR. DRIKER: Wait one second, Brother Goold.
10 Since I have sat through the testimony of all of the
11 outside directors, you have grossly misstated the record.
12 If you are talking about whether there has been testimony
13 at some point in the long history of the Midland Plant the
14 soils problem was disclosed to the outside directors or to
15 the Director or to Chairman of the Board, indeed it was,
16 long after the years which you are attempting to suggest
17 to the witness that this knowledge was known to the
18 Chairman or the outside directors.

19 I very much resent and strongly object to
20 your wholly unfounded suggestion to the witness. I think
21 it is unprofessional, it is belied by the record in this
22 case and, frankly, it is beneath contempt to suggest to
23 this witness that there's anything in the record that
24 shows that. And if you have a citation to something in

1 this big long room with all these chairs and tables that
2 will support that statement, I suggest you put it in front
3 of witness right now and show him. That's a terrible
4 thing to say.

5 MR. GOOLD: Mr. Driker, I don't think
6 there's any room for personal insults of that kind in any
7 litigation. The record speaks for itself. We may have
8 different views as to what the testimony is, but I think
9 it is exceedingly out of place for you speak in those
10 terms. We will have the record available to both of us
11 and it will say whatever it says.

12 MR. DRIKER: I agree but I think it's
13 terrible for you to represent that there is something in
14 the record in this case that is absolutely not so. If you
15 have any support for that, I'll be happy to retract my
16 words in the middle of Lafayette Park at noon.

17 MR. GOOLD: I won't hold you to a separate
18 trip to Washington but we'll see what the record says. I
19 don't think it is at all appropriate for you to engage in
20 personal insults and I think that's very unfortunate and
21 misguided.

22 BY MR. GOOLD:

23 Q We've talked about compaction equipment and the
24 qualification of that generally. First let me ask what

1 was your understanding as to the lift thickness that was
2 being used that was used at the site in confined areas?

3 A I don't recall the specifics on that.

4 Q First to help clarify that let state by confined area I
5 mean areas not accessible to heavy motorized equipment.
6 Do you recall whether a 12 inch lift thickness was used in
7 confined areas?

8 A That sounds familiar.

9 Q Now we've covered, I think, the subject that at your
10 request an effort was made to qualify the compaction
11 equipment that had been used at the site. What did you
12 learn, if anything, as to the results of that effort with
13 respect to compaction of 12 inch lifts in confined areas?

14 A With the equipment they were using they weren't able to
15 achieve the desired results, they were unable to achieve
16 the desired results.

17 MR. DRIKER: I'm having a hard time hearing
18 the witness with that chatter back there. I wonder if you
19 could ask your personnel to please be quiet.

20 BY MR. GOOLD:

21 Q You've mentioned the equipment that was being used. What
22 was your understanding as to whether that was the
23 equipment that was used during the period from 1974
24 through 1977? Was it the same equipment?

1 A Some of it was. In particular, in the confined areas the
2 so-called pogo stick compaction device.

3 Q Did you learn what effect, if any, did the results of the
4 qualification test program have on lift thicknesses in
5 subsequent fill work, if you know?

6 A They substantially reduced the lift thickness to what was
7 previously used.

8 Q Let me direct your attention to Page 22 of PX NRC 56, and
9 to the second full paragraph which appears there. The
10 statement there appears, "According to U. S. Testing
11 personnel, it was observed during excavation of the fill
12 material that there were voids of one-quarter inch to two
13 inches or three inches within the fill, and these were
14 associated with large lumps of unbroken clay measuring up
15 to three feet in diameter."

16 First just so the record is clear, was this
17 information provided to you, in fact, by U. S. Testing
18 personnel?

19 A Yes.

20 Q And to what building at the site did this information
21 relate?

22 A The Administration Building.

23 Q Okay. And did this information relate to the fill that
24 was examined there in 1977 as a result of the settlement

1 Q Did anyone ever indicate to you that he had concluded the
2 fill at the Diesel Generator Building had received little
3 or no compaction?

4 MR. DRIKER: Objection, leading.

5 A That was not brought to our attention.

6 BY MR. GOOLD:

7 Q Would such a conclusion be consistent with your own
8 observations of the quality of the fill at the Diesel
9 Generator Building?

10 MR. DRIKER: Objection.

11 A Yes.

12 BY MR. GOOLD:

13 Q Let me direct your attention to Page 20 of report 78-20,
14 well, the discussion that begins at Page 17 under the
15 heading "Review of Nonconformance Reports Identified for
16 Plant Area Fill," then concludes at the very top of Page
17 20. The last paragraph in that section states, "This
18 failure to assure that the cause of conditions adverse to
19 quality are identified and that adequate corrective action
20 be taken to preclude repetition is considered an item of
21 noncompliance with 10 CFR 50, Appendix B, criterion XVI as
22 identified in Appendix A." Was that in fact your
23 conclusion?

24 A Yes.

1 Q And then did that conclusion survive the review process
2 for this report within the NRC?

3 A Yes.

4 Q Let me show you briefly a copy of what I believe to be the
5 pertinent Federal Register Section. Just to confirm that
6 this is the section you had in mind, for the record I'll
7 state I'm handing the witness a volume of 10 CFR, parts 0
8 to 199, page 475, which appears to be title ten, part 50,
9 Appendix B and includes a section headed Corrective Action
10 XVI. Let me read into the record what it states there.

11 Under that heading it states: "Measures
12 shall be established to assure that conditions adverse to
13 quality, such as failures, malfunctions, deficiencies,
14 deviations, defective material and equipment, and
15 nonconformances are properly identified and corrected. In
16 the case of significant conditions adverse to quality, the
17 measures shall assure that the cause of the condition is
18 determined and corrective action taken to preclude
19 repetition. The identification of the significant
20 condition adverse to quality, the cause of the condition,
21 and the corrective action taken shall be documented and
22 reported to appropriate levels of management." Is that the
23 portion of the Federal Register you had in mind, sir?

24 A Yes.

1 Q And did you in fact conclude, based on your review of the
2 nonconformance cited in pages 17, 18 and 19 of PX NRC 56,
3 that a significant condition adverse to quality was
4 indicated by those reports?

5 A Yes.

6 Q I'm sorry. And to your understanding what was the duty to
7 comply with 10 CFR 50, Appendix B, criterion XVI?

8 MR. DRIKER: Are you asking him to give you
9 a legal interpretation of this section?

10 MR. GOOLD: An understanding as an NRC
11 inspector with responsibility for civil engineering
12 matters.

13 A The licensee, Consumers Power Company, and all of their
14 contractors and subcontractors.

15 BY MR. GOOLD:

16 Q To whom did the NRC look for compliance?

17 A All of the above.

18 Q Would you turn to the section beginning on page 20 of your
19 report headed Review of Calculations of Settlement for
20 Plant Area, and let me direct your attention to page 21,
21 in particular the second full paragraph on that page, the
22 final sentence of which states, "This is considered an
23 item of noncompliance with 10 CFR 50, Appendix B,
24 criterion III as identified in Appendix A." Can you tell

1 me in general terms with what that criterion is concerned,
2 and you're welcome to look?

3 A Design control measures.

4 Q And what does, in general terms, does that provision
5 require with respect to design control?

6 A That measures be established that the design is carried
7 out systematically, correct, verified, checked.

8 Q And who does the NRC hold responsible for compliance with
9 that?

10 A The licensee and their subcontractors who are performing
11 design activities.

12 Q And in this case was Consumers Power the licensee?

13 A Yes.

14 Q And to whom does the NRC, to your knowledge, grant a
15 license, if any, for operation of a nuclear plant in the
16 case of the Midland Project, Bechtel or Consumers Power?

17 A Consumers Power Company.

18 Q And who had responsibility, to your knowledge, for
19 satisfying the NRC that the plant was licensable?

20 A Consumers Power Company.

21 Q Let me direct your attention to page 23 of the report
22 under the heading Review of Interface Between Diesel
23 Generator Building Foundation and Electrical Duct Banks.

24 MR. DRIKER: Before you get into a new

1 subject, can we just take a break for a minute.

2 MR. GOOLD: Fine.

3 (A brief recess was held during
4 the proceedings.)

5 BY MR. GOOLD:

6 Q It's been pointed out to me I may have referred to the
7 regulations just now as from the Federal Register. In
8 that case I misspoke and I was referring to the Code of
9 Federal Regulations. Does that affect your answer in any
10 way, Mr. Gallagher?

11 A No.

12 Q We were looking at a discussion that begins on page 23.
13 First, sir, could you summarize just in general terms what
14 problem, if any, was found with the electrical duct banks
15 at the Diesel Generator Building?

16 A Well, there was an interaction between the electrical duct
17 banks and the foundation of the Diesel Generator Building
18 whereby it was providing support to the structure that did
19 not allow it to move freely.

20 Q And did you determine whether that problem had any safety
21 implications for the Diesel Generator Building?

22 A Yes. In terms of the design, the Diesel Generator
23 Building was designed in a way and the foundation material
24 was expected to have some settlement. That being the

1. case, and the fact that the electrical duct banks were
2. enlarged to the point where they inhibited free movement
3. of the Diesel Generator Building they would have, and in
4. fact did in this case, induce a restraint that was not
5. accounted for in the design.

6. Q And what safety implication was there, if any, posed by
7. that restraint?

8. A It would not allow the building to behave as designed.

9. Q Did you conclude whether there was any safety implication
10. posed by the quality of the fill beneath the Diesel
11. Generator Building?

12. A Yes.

13. Q And what conclusion did you reach in that regard?

14. A It was inadequate support for the building itself.

15. Q What implication did that inadequate support have?

16. A Excessive settlement and differential settlement to the
17. point where it would not permit the building structurally
18. to behave as intended.

19. Q Okay. And can you explain how that translated into a
20. safety concern or implication?

21. A If the actual as-built foundation, electrical duct banks
22. and/or the building behaved differently at the actual
23. design, you then have a breakdown in the design control
24. and construction process. In this case all three were not

1 installed properly as designed and did in fact create
2 structural distress, in terms of foundation settlement and
3 in terms of structural cracking in the Diesel Generator
4 Building.

5 Q Your direct involvement with the Midland Project ended in
6 early 1981; is that correct?

7 A For the most part, except that in May of 1981 I did
8 participate in an on-site inspection.

9 Q Okay. By the time your direct involvement ceased, had you
10 received any information concerning the quality of the
11 fill beneath the Auxiliary Building?

12 A Yes.

13 Q And what in general terms did you learn about the fill
14 there?

15 A That it was inadequately compacted and did not provide
16 adequate support to the Auxiliary Building.

17 Q And did that have any safety implications for the plant?

18 A Yes.

19 Q And what were they?

20 A That, once again, the foundation would not behave as
21 designed and that the structure itself would not be
22 adequately supported by the foundation material.

23 Q And during the course of your involvement in the Midland
24 Project while you were with Region III, did you receive

1 any information concerning the quality of the fill at the
2 service water pump structure?
3 A Yes, same as Auxiliary Building and Diesel Generator
4 Building.
5 Q Same quality?
6 A Yes.
7 Q Same safety implications?
8 A That's correct.
9 Q How about with respect to the borated water storage tanks?
10 A Same.
11 Q Same quality?
12 A Yes.
13 Q Same safety implications?
14 A Yes.
15 Q Looking back at report 78-20, did you conclude that the
16 problem with the electrical duct bank was an item of
17 noncompliance with any portion of the Code of Federal
18 Regulations? Let me direct your attention to page 24 of
19 this report in particular.
20 A Yes, we did.
21 Q And what portion?
22 A 10 CFR 50, Appendix B, criterion 5, that being procedures,
23 instructions.
24 Q Can you explain what you mean by procedures and

1 instruction in that respect?

2 A Our investigation led us to conclude that there were
3 inadequate procedures and instructions in regard to
4 building the electrical duct banks which would allow the
5 building and electrical duct banks to perform as intended.

6 Q And to whom does the NRC look for compliance with 10 CFR,
7 Appendix B, criterion 5?

8 A Consumers Power and its contractors.

9 Q Let me direct your attention to the bottom of page 24,
10 bottom paragraph. It contains a quote, "Filling
11 operations should be performed under the continuous
12 technical supervision of a qualified soils engineer who
13 would perform in-place density tests in the compacted fill
14 to verify that all materials are placed and compacted in
15 accordance with the recommended criteria." Was that
16 statement part of any of the specifications or
17 requirements for the construction of the plant?

18 MR. DRIKER: I think had you read the full
19 sentence it would answer that question.

20 A Yes.

21 BY MR. GOOLD:

22 Q Was that part of the PSAR?

23 A And the Bechtel design criteria.

24 Q And to your knowledge was that requirement complied with

1 In the construction of the nuclear plant at Midland?

2 A No.

3 Q Did you discuss with Mr. Horn whether there had been

4 continuous technical supervision by a qualified soils

5 engineer of the placement and compaction of the fill?

6 A Yes.

7 Q What did he tell you about that?

8 A That it was not complied with.

9 Q Did he indicate whether he had been concerned about that?

10 A Yes.

11 Q What did he tell you?

12 A He was concerned there was not technical qualified

13 supervision of the work activities.

14 Q Did he indicate to you over what period of time he had

15 been so concerned?

16 A A long period of time, the entire work activity.

17 Q When, to your knowledge, did the work activity with

18 respect to soils begin?

19 A Some time in 1975.

20 Q And did it continue up until at least June of 1978?

21 A And beyond.

22 Q Based on your investigation, did you come to any

23 understanding as to how failures, how compaction tests

24 indicating failures were handled? Did you come to any

1 understanding regarding procedures that were used where U.
2 S. Testing reported a failure to meet proper compaction?

3 MR. DRIKER: Are you asking him of his own
4 personal knowledge?

5 MR. GOOLD: What he came to understand from
6 the work.

7 MR. DRIKER: I don't know what came to
8 understand means. I think if you're asking the witness
9 what his report concludes, that's one thing. If he's
10 asking did he have some knowledge that's not in his report --
11 came to understand is an awfully vague statement.

12 BY MR. GOOLD:

13 Q Did you learn what procedures, if any, there were with
14 respect to clearance of failing soils compaction tests?

15 A Yes.

16 Q What did you learn in that regard?

17 A Well, their procedure was to either accept the failing
18 test as is or to simply take another test using a
19 different standard which would then clear the test.

20 Q Can you explain what you mean by different standard?

21 A It's a little bit complicated to explain, but one compares
22 the in-place density on the site to the so-called
23 laboratory standard and according to the specification one
24 needs to get 95 percent of the maximum density per the

1 standard. Percent compaction, the equation is --
2 generally it is equal to the in-place density divided by
3 the maximum laboratory standard.

4 So if one changes the denominator, that
5 maximum laboratory standard, one can change the percent
6 compaction. If one lowers the maximum standard, they
7 increase the percent compaction and for the most part they
8 just manipulated changing the standard so that they would
9 clear the test. There were complicating factors because
10 of the randomness and variability of the soil and of the
11 laboratory standards, that one could choose any one of as
12 many as one hundred different laboratory standards and the
13 selection of those standards was by visual selection and
14 was not very well controlled.

15 Q You've mentioned that in instances the standards were
16 changed to clear a failing compaction test. Was a less
17 rigorous standard substituted for a more rigorous
18 standard, is that what the effect of changing the
19 denominator is?

20 A That's what the effect is, but the procedure was selecting
21 a different laboratory standard that was not compatible
22 with the material that was in fact being placed. Thereby,
23 as Bechtel themselves concluded, selecting erroneously the
24 laboratory standard.

1 Q Did that practice take a failing test and turn it into a
2 passing test?
3 A That's correct.
4 Q Did you consider that to be a proper practice?
5 A No.
6 Q Did you review any documents showing the substitution that
7 you've described?
8 A I don't recall.
9 Q Do you recall what your source of information for this
10 was?
11 A Specifically the individuals?
12 Q That's right.
13 A I don't recall.
14 Q Did this include the U. S. personnel?
15 A U. S. Testing, Bechtel field people.
16 Q Were you provided with copies of compacted fill density
17 reports that were generated as records of the U. S.
18 Testing tests at the time the work was going on?
19 A Yes, I believe so.
20 Q I'm referring to a form that's almost a piece of graph
21 paper that was called, I believe, a weekly compacted fill
22 density test report?
23 A I believe I recall that.
24 Q Did you learn of any procedure regarding clearance of

1 multiple failing tests by single passing tests?

2 A Yes.

3 Q What did you learn in that regard?

4 A Just what you said.

5 Q Did you learn whether tests from different locations were
6 used to clear failing tests at other locations?

7 A Yes.

8 Q What did you learn in that regard?

9 A That they did just that.

10 Q Did you see that on the compaction test sheets?

11 A Yes.

12 Q Was it obvious on the face of the sheets?

13 MR. DRIKER: I'm going to object to the
14 question as leading.

15 A It was not so obvious. If I remember correctly, the
16 coordinates of the passing tests did not coincide near the
17 failing tests.

18 BY MR. GOOLD:

19 Q How could you determine whether the coordinates matched?

20 A On the record, on the test record it gave the coordinates
21 and they were different.

22 Q So you could determine that just from the face of the
23 document, could you not?

24 MR. DRIKER: Objection, leading.

1 A Yes.

2 BY MR. GOOLD:

3 Q What would it take to determine whether the coordinates
4 didn't match?

5 A Comparison of the first test and the passing test, or the
6 first tests.

7 Q Did you need any information other than the sheets showing
8 the locations to reach that conclusion?

9 A Quality records indicated that.

10 Q Did it require any specialized knowledge to determine that
11 the coordinates for failing tests didn't match a passing
12 test?

13 MR. DRIKER: Objection, leading.

14 A I don't know if it did require any special knowledge.
15 It's just simple comparison.

16 BY MR. GOOLD:

17 Q Let's go on. When we broke last session I believe we had
18 been discussing a December 4, 1978 meeting, in connection
19 with which I had shown you PX BEC 106, which I'd also note
20 for the record that the copy I had included handwritten
21 notations which were mine, not any one of the parties. Do
22 you recall that we had just begun or gotten into that
23 subject when we broke, just in general terms?

24 A Yes.

1 Q At that meeting a presentation was made by or on behalf of
2 Consumers Power regarding the preloading of the Diesel
3 Generator Building?

4 A I'm sorry.

5 Q Do you recall that a presentation was made at the meeting
6 with respect to the preloading of the Diesel Generator
7 Building?

8 A Yes.

9 Q And what was the thrust of that presentation by the
10 Consumers Power people?

11 A It was really a status or a summary report by Consumers to
12 the NRC geotechnical group as to their proposal to remedy
13 the Diesel Generator Building settlement problem.

14 Q And the proposal at that time was to preload the building,
15 was it not?

16 A That's correct.

17 Q As of then had the preload been put on?

18 A I don't believe so, no.

19 Q Do you recall who spoke with respect to the preload of the
20 Diesel Generator Building? Let me invite you to look over
21 the attendee list on this document and see if that helps.

22 A Well, certainly Mr. Afifi had things to say, their
23 consultants, Dr. Peck also spoke of that procedure.

24 Q At the meeting was approval by the NRC staff present

1 sought with respect to the preloading of the Diesel
2 Generator Building?

3 A Yes.

4 Q And was approval granted by the NRC staff?

5 A No.

6 Q We may have covered this previously but let me, so the
7 record is clear, what position did the NRC staff take with
8 respect to any decision to proceed with the preload?

9 A That whatever they did was at their own risk.

10 Q And why did the NRC staff -- did you concur in that
11 position?

12 A No.

13 Q What was your view?

14 A My view was that they shouldn't proceed until they
15 establish some agreement as to what in fact could be done
16 to remedy the problem.

17 Q Who took the position on behalf of the NRC staff that
18 Consumers proceed?

19 MR. JENSEN: I would object to this question
20 and I would object to this question as interfering with
21 the deliberative process privilege. If you're asking
22 about the internal discussions among NRC personnel about
23 that, I think that's different from you're asking him what
24 he saw and what he concluded on the basis of what he saw.

1 BY MR. GOOLD:

2 Q I'm sorry. Let me focus on the discussion at the meeting,
3 because I assume that gets around the problem.

4 MR. JENSEN: Discuss' at the public
5 meeting?

6 MR. GOOLD: That's right.

7 BY MR. GOOLD:

8 Q At the public meeting do you recall who spoke on behalf of
9 NRC with the position that Consumers could proceed at its
10 own risk?

11 A Two parties, Project Manager Mr. Darl Hood and the
12 geotechnical branch chief Lyman Heller.

13 Q And was the reason for their position explained at the
14 meeting?

15 A The reason for which, the position that they can proceed
16 at the their own risk?

17 Q That any prelead would be at Consumers Power own risk.

18 A Well, at that time they expressed concern that they did
19 not have sufficient data that this would be a satisfactory
20 resolution.

21 Q And did anyone from Consumers Power or Bechtel respond to
22 that?

23 A They acknowledged it and proceeded on to do as they saw
24 fit.

1 Q Do you happen to recall who spoke in particular in
2 acknowledging?

3 A If I remember correctly, Mr. Keeley as the Project Manager
4 was the spokesperson for Consumers at that time.

5 Q From your participation in the meeting did you develop any
6 view as to whether Consumers Power was attempting to
7 persuade the NRC staff to accept the preload?

8 MR. DRIKER: Objection to the question as
9 leading and calls for speculation.

10 A Let me correct something. Looking at the attendees, Mr.
11 Keeley was not present. I believe it was Mr. Cooke, the
12 site superintendent, who was chief spokesman at that time
13 for that particular meeting.

14 BY MR. GOOLD:

15 Q From your attendance at the meeting did you get the
16 impression they were trying to persuade you, Mr. Gallagher
17 first, to accept the preload as a solution?

18 MR. DRIKER: Objection to the question.

19 MR. JENSEN: What criteria would you be
20 thinking of, in terms of his impressions he might have
21 gained from the meeting? The question seems rather vague.

22 MR. GOOLD: It's a difficult thing to
23 develop.

24 A They were not trying to persuade me. The meeting was

1 directed toward the NRR people who were responsible for
2 deciding what criteria the plant would proceed with.

3 BY MR. COOLD:

4 Q Could you identify who you mean by NRR staff?

5 A Mr. Heller and at that time Dan Gillen.

6 Q Well, let me ask it this way. At the meeting was approval
7 by the NRR people present requested by Consumers Power?

8 A Yes.

9 Q And approval was not granted?

10 A That's correct.

11 Q Do you recall whether you were advised that a follow-up
12 meeting was planned by Bechtel and Consumers Power to
13 discuss other safety structures to which the NRC personnel
14 present were not invited?

15 A I don't recall.

16 Q Was there any discussion at the meeting, if you recall,
17 regarding a private meeting of Bechtel and Consumers Power
18 people to be held after the December 4th session to
19 discuss problems at other buildings?

20 A I don't know.

21 Q You don't recall either way?

22 A That's correct.

23 Q Okay. Had you made any request by this time to be kept
24 informed regarding information as it was gathered

1 concerning other buildings?

2 A Yes.

3 Q What had you requested?

4 A We set the tone of our entire investigation as just that.
5 From day one we explained what our purpose was and
6 recognizing that Consumers and Bechtel was proceeding with
7 their own study of the situation that there would be a
8 cooperation in disclosing to us as events were known, as
9 to the extent and cause of the settlement problems. We
10 set that purpose in motion from day one.

11 Q If Bechtel and Consumers Power had decided to have a
12 meeting to discuss potential problems at other buildings,
13 would you expect to have been invited based on the
14 guidance you communicated to Consumers Power people?

15 MR. DRIKER: Objection. The question is
16 leading.

17 A When you say expect, we expect a lot of things from
18 licensees, you know, I mean generally, however, we don't
19 participate in every internal company meeting on any
20 subject for that matter. However, the results of that
21 meeting, if they were pertinent to our investigation, yes,
22 we would have expected to have disclosure of relevant
23 information that would affect our own investigation.

24 BY MR. GOOLD:

1 Q At the December 4 meeting do you recall whether you
2 received any information as to whether there was concern
3 regarding other Category 1 structures at the site, with
4 reference to soils problems in particular?

5 MR. DRIKER: Objection, leading.

6 BY MR. GOOLD:

7 Q At the December 4, 1978 meeting.

8 MR. JENSEN: By "you" you're referring to
9 Mr. Gallagher?

10 MR. GOOLD: Right.

11 A I don't recall if there was any other structures discussed
12 at that point other than the results of their soils
13 monitoring program, which included other structures other
14 than the Diesel Generator Building.

15 MR. DRIKER: Excuse me, Jim. Mr. Gallagher,
16 I don't want to interrupt Mr. Goold when he's framing his
17 question. I don't want to intrude on his question but
18 you're jumping into the answer too quickly and you're not
19 leaving me a window at the end of his question and the
20 beginning of your answer if I have an objection. I'd like
21 you to let Mr. Goold finish his question so the reporter
22 can get the objection then your full answer, if you don't
23 mind.

24 THE WITNESS: Okay.

1 MR. DRIKER: Thank you.

2 BY MR. GOOLD:

3 Q Do you recall whether there was any discussion at the
4 December 4 meeting concerning temperature corrections for
5 settlement monitoring devices at the Diesel Generator
6 Building?

7 A I don't recall.

8 Q Did you receive any information subsequently on that
9 subject from Consumers Power?

10 A I don't recall.

11 Q When did you learn that a surcharge or preload had been
12 put on the Diesel Generator Building?

13 A I would have to go back and look at some reports that I
14 believe I identified when that took place. I don't recall
15 offhand.

16 Q To your knowledge, had any approval by the NRC, including
17 NRR, been given for the placing of the preload prior to
18 the time it was actually put on?

19 A My understanding was that the NRC never gave any approval
20 for the actual preload.

21 Q Let me show you a document, which has already been marked
22 as PX PEC, that's for Peck, 5. First let me ask whether
23 you recall attending a July 1979 meeting in Bethesda,
24 Maryland at which a presentation was made concerning the,

1 among other things, the preload at the Diesel Generator
2 Building?

3 A Yes, I do.

4 Q And do you recall whether Dr. Peck made a presentation at
5 the meeting?

6 A Yes.

7 Q Okay And what was the thrust of that presentation with
8 respect to the surcharge?

9 A I don't recall specifically.

10 Q Do you recall whether Dr. Peck spoke in favor of the
11 surcharge?

12 A Based on my recollection he was a proponent of it and in
13 fact recommended it to Consumers.

14 Q This PX Peck 5 has been identified by Dr. Peck as a
15 summary of his comments delivered to the NRC at the July
16 1979 meeting, and let me direct your attention to page
17 two. Let me ask you to read it over generally first, page
18 two in particular, and carrying over into page three.

19 A Yes.

20 Q Okay. Is this exhibit consistent with your recollection
21 of the substance of Dr. Peck's presentation?

22 MR. DRIKER: I'm going to object to the
23 question, Mr. Goold. This exhibit is eight pages long.
24 You've asked the witness to look at page two and now

1 you're asking him to characterize whether this is
2 consistent with a meeting that took place five years ago.
3 I think at least you ought to invite the witness to read
4 the document from beginning to end before asking him to
5 characterize.

6 A At least page two and part of page three that I read is
7 consistent with what Dr. Peck was proposing and
8 recommending to Consumers.

9 BY MR. GOULD:

10 Q Was Dr. Peck, to your knowledge, also recommending the
11 surcharge to the NRC?

12 A Yes.

13 Q Was approval of the surcharge requested at the July 1970
14 meeting?

15 A Yes.

16 Q Was it granted?

17 A No.

18 Q Do you recall any mention of a need for temperature
19 corrections in the settlement measuring devices at the
20 Diesel Generator Building?

21 A I don't recall.

22 Q At this time?

23 A At that time either. That type of information would be
24 more important to the geotechnical reviewers of NRR than

1 myself.

2 Q That would be Mr. Heller?

3 A And at that time I believe Mr. Kane.

4 Q Okay. Is Mr. Kane with NRR?

5 A Yes.

6 Q Did you say anything at this meeting?

7 A I don't believe so.

8 Q Did there come a time when the seismic criteria for the

9 Midland Plant were changed with respect to any structures

10 there?

11 A That's really out of my jurisdiction.

12 Q Did you have any involvement in the consideration or

13 reconsideration of seismic criteria?

14 A No.

15 Q Did you receive any information concerning the fact that

16 consideration was being given to adjustment of seismic

17 criteria at the NRC? Were you in the flow of information

18 concerning that subject at all?

19 A You know, peripherally, only hearing about discussions of

20 seismic criteria, but that was really beyond my scope of

21 work at that time.

22 Q Did you ever learn whether the changes in seismic criteria

23 were limited to any particular portions of the plant?

24 A I have to answer the same. It was beyond my scope of

1 work.

2 MR. GOOLD: Off the record.

3 (A brief discussion was held
4 off the record.)

5 BY MR. GOOLD:

6 Q Let me show you a document, which I'll ask the reporter to
7 mark as PX NRC 58.

8 (Deposition Exhibit No. PX NRC 58,
9 Summary of July 18, 1979 meeting on
10 soil deficiencies at the Midland Plant
11 Site, was marked for identification.)

12 BY MR. GOOLD:

13 Q Take a minute or as much time as you'd like to review it.
14 First, I'll focus on the first couple of pages, pages one
15 through three. Let's focus first on pages one through
16 three and the attached enclosure of this document, sir.

17 A It's Mr. Darl Hood's, who was Project Manager, meeting
18 notes or a summary of a July 18th meeting.

19 Q Did you receive a copy of this at or about the date
20 indicated?

21 A Yes.

22 Q Were you part of the regular circulation list for
23 documents such as this?

24 A Yes.

1 Q And you've referred to this as Mr. Hood's meeting notes.
2 Of what meeting are these notes?
3 A July 18th meeting on soil deficiencies.
4 Q Is it the same meeting that's reflected also in PX Peck 5
5 to which we just referred?
6 A Yes.
7 Q Let me direct your attention to the top of page two, first
8 paragraph. Let me first ask whether -- prior to the July
9 1979 meeting concerning the preload of the Diesel
10 Generator Building, had the NRC staff attempted to secure
11 from Consumers Power information concerning the
12 suitability of that proposed action?
13 A Yes.
14 Q And had Consumers Power responded to those requests?
15 A Which request?
16 Q Well, first let me back up a second. By what means had
17 the NRC staff requested information?
18 A Formally through a 50.54 F mechanism in the regulations.
19 Q And to your knowledge had satisfactory replies been
20 received?
21 A There was a lot of 50.54 F questions. With regard to
22 which one in particular?
23 Q Let's talk about suitability of the, or information needed
24 for acceptance of the Diesel Generator Building surcharge.

1 MR. JENSEN: I'd like to ask for a little
2 clarification about the word satisfactory. You're asking
3 more than just were replies received.

4 BY MR. GOOLD:

5 Q Satisfactory for purposes of resulting in approval of that
6 action.

7 MR. DRIKER: Could you maybe restate the
8 question?

9 MR. GOOLD: That's probably a good idea.

10 BY MR. GOOLD:

11 Q Had you participated in the framing of and submission of
12 10 CFR 50.54 requests to Consumers Power?

13 A Some of them.

14 Q Did you participate in the preparation of any of the
15 requests concerned with the surcharging of the Diesel
16 Generator Building?

17 A Not the surcharge, no.

18 Q What area of involvement did you have in particular?

19 A More in the Quality Assurance aspects of it, of the causes
20 and corrective action that Consumers would take as a
21 result of their and NRR findings.

22 MR. DRIKER: Did you say more?

23 THE WITNESS: More in the.

24 BY MR. GOOLD:

1 Q Looking at the first paragraph on page two, does that
2 summarize in substance the position the NRC communicated
3 to Consumers Power at the July 1979 meeting with respect
4 to acceptance of the surcharge for the Diesel Generator
5 Building?

6 A Yes.

7 Q Do you recall what reaction, if any, came from the
8 Consumers Power people at the meeting to these comments?

9 A Well, the NRR geotechnical reviewers were attempting to
10 secure some criteria that Consumers and Bechtel would use
11 in establishing an acceptable surcharge program, if that's
12 what they were going to use and in fact did use, prior to
13 them doing the surcharge rather than, as Bechtel and their
14 consultants and Consumers were proposing, a criteria to be
15 established at some later point in time based on the
16 results of the experiment, if you will.

17 Q You've used the term experiment. What are you referring
18 to in particular?

19 A The preload or surcharge program.

20 Q And what reaction, if any, was communicated to that
21 position, was communicated by Dr. Peck at the meeting if
22 you recall?

23 A Well, as his meeting notes state, that he was prepared to
24 evaluate the results and was confident that they would

1 provide satisfactory results to him.

2 Q Was any proof supplied other than in support of that
3 proposition, to your knowledge, other than Dr. Peck's
4 say-so?

5 A No.

6 Q I may have covered this the other day but I'll be brief.
7 Did you make any recommendations, yourself, to Consumers
8 Power to the desirability as to proceeding with the
9 surcharge?

10 A Well, I recall an exit meeting or debriefing meeting at
11 the Midland site during one of my early visits that I at
12 least voiced my opinion at that point in time that it was
13 going to be extremely difficult to sell to the NRC that
14 this preload concept would be acceptable. And at that
15 early point in time, given the stage of construction on
16 the Diesel Generator Building at some 25 percent complete,
17 actually at least gave my own professional suggestion,
18 perhaps not the NRC's, that it would be more prudent to
19 remove the building and recompact the soil satisfactorily
20 and get on with building the building correctly.

21 Q Do you recall who was present for Consumers Power at this
22 meeting, at this discussion?

23 A Pretty much the routine site management people that
24 Consumers would have at an NRC exit meeting, Project

1 Manager, Quality Assurance people, field people.

2 MR. DRIKER: Excuse me for interrupting at
3 this point, but I want to be sure I understand. Is your
4 testimony factual as to who was there or are you just kind
5 of assuming based on a course of conduct who might have
6 been there, as to what your answer is?

7 THE WITNESS: As to as far as who is there,
8 that's correct.

9 MR. DRIKER: Are you just kind of saying I
10 don't know but generally this group of people was usually
11 there and I don't remember who?

12 A Certainly I recall Mr. Miller being there, Mr. Cooke, Mr.
13 Keeley, Mr. Marguglio, Mr. Horn being there and others of
14 their staff.

15 BY MR. GOULD:

16 Q Did you make any comments concerning whether any lice and
17 problems might result from the use of a surcharge?

18 A Yes.

19 Q What did you say?

20 A I expressed my opinion at that time that knowing how the
21 NRC licensing activity is conducted that it would be
22 extremely difficult to get an affirmative response from
23 those individuals on this course of action, especially
24 prior to actually starting the activity.

1 Q Just so the record is clear, when you refer to individuals
2 to whom are you referring?

3 A In the NRC?

4 Q In the NRC. Are you referring to the Atomic Safety
5 Licensing Board Group or to the NRC?

6 A To NRC, in particular NRR and more in particular the
7 geotechnical engineering branch or structural engineering
8 branch.

9 Q Did you also discuss whether there would be any potential
10 problems with respect to licensing proceedings concerning
11 the plant such as ASLB proceedings?

12 MR. DRIKER: Objection, leading.

13 A Well, in general terms I expressed my opinion that it
14 would be, as I believe I stated there, a licensing
15 nightmare for them. I didn't realize I would be such a
16 profit in that respect.

17 BY MR. GOOLD:

18 Q In your experience did it in fact prove to be a licensing
19 nightmare?

20 A And some.

21 MR. DRIKER: Objection.

22 BY MR. GOOLD:

23 Q Did any of the people from Consumers Power who were
24 present give any reaction to your comments?

1 A None, nor did I ask for a reaction.

2 Q In your view, was it prudent for Consumers Power under the
3 circumstances that existed in late 1978 to have proceeded
4 with the surcharge?

5 MR. DRIKER: I will object to the question.
6 There's no foundation laid that this witness is an expert
7 in the area. I'm not sure what area you claim his
8 expertise to seek an answer to that question, but whatever
9 it is, with all due respect to Mr. Gallagher, I don't
10 think his expertise in giving that opinion has been
11 established. There's no foundation laid and it's a
12 leading question

13 MR. JENSEN: Also with regard to Consumers
14 Power, I think it would be better to specify an individual
15 if you're talking in terms of prudence.

16 MR. GOOLD: I'm trying to find out what Mr.
17 Gallagher's view was as to whether it was prudent under
18 the circumstances for Consumers Power to have proceeded
19 with the surcharge as it did. We have the objection
20 stated for the record and now I'm just trying to find out
21 what Mr. Gallagher's answer is.

22 A It was my opinion then and it remains my opinion now it
23 was not prudent, as I expressed to them on various
24 occasions during site visits.

1 BY MR. GOOLD:

2 Q Subsequent to the initial discussion at which you raised
3 the subject to which you just referred, do you recall any
4 later instances in which a reaction was conveyed to you by
5 the Consumers Power people?

6 A Reaction to what?

7 Q To your comments concerning the surcharge. How did they
8 respond, if at all?

9 A I don't believe they responded at all.

10 Q How did they deal with those comments, was it a
11 stonewalling?

12 MR. DRIKER: I object to that question, Mr.
13 Goold.

14 BY MR. GOOLD:

15 Q What was the sense you got how they dealt with your
16 comments?

17 MR. DRIKER: I object to that. If the
18 witness testified somebody did not respond, I don't know
19 how he can get a sense of what somebody believes other
20 than by that person telling him or writing to him. You
21 haven't asked him if they had written to him. Maybe if
22 you want to ask that question, okay, but I don't know how
23 he can judge a sense from anything other than
24 communication.

1 BY MR. GOOLD:

2 Q I think if Consumers Power personnel made a practice of
3 remaining absolutely silent during such a discussion, that
4 would tell us one thing, for example. I'm trying to find
5 out if it was your sense they were evading your comments
6 or purposely not responding to your comments.

7 MR. JENSEN: Speaking in terms of Consumers
8 Power I think that's too vague. I think we need to talk
9 in terms of individuals.

10 MR. DRIKER: Yeah.

11 BY MR. GOOLD:

12 Q We've established there were discussions at which you made
13 these comments and I'm trying to find out anything that
14 you recall about the responses you received. I'll be
15 happy to follow up with the individuals, but first let's
16 find out what the witness recalls regarding the words that
17 were used or any other clues you received as to the
18 reaction you were getting.

19 A There were absolutely no responses. They acknowledged
20 hearing me. They were sitting there, I was speaking, they
21 heard. There was no response positively or negatively.

22 Q Who do you recall as present during these discussions?

23 A I mentioned those names before.

24 Q Same people as before, in general?

1 A Yes.

2 Q Let's go back to PX NRC 58. We've discussed pages one
3 through three and the enclosure list. Can you identify
4 the attachment which bears pages serial numbers 91201904,
5 which is a blank page, then the text resumes on 91201905
6 and continues through page 91201941.

7 A You want me characterize what this is?

8 Q Yes.

9 A This, on the page 23-1, is the reframing of a question
10 that the NRC asked via 50.54 F. It's question number 23.
11 We had previously asked question number one, which I had
12 participated in developing, which in general terms, I
13 don't have it in front of me but I recall it requested
14 Consumers to respond with the identification of the
15 causes, their identification of the causes and what
16 corrective actions they proposed to take to preclude
17 Quality Assurance failures to occur in the future in this
18 and other activities.

19 Question number one -- and Consumers'
20 response to question number one I recall was not
21 acceptable. It did not provide us with the answer that we
22 had requested and as a result we were necessitated asking
23 question number 23, and subparagraph one being more
24 succinct in what exactly we were looking for. And

1 starting on page 23-2 is Consumers' response to that
2 question number 23.

3 Q What in general terms were you looking for in posing
4 question 23?

5 A We were looking to have Consumers themselves identify for
6 their own benefit the actual causes of Quality Assurance
7 deficiencies with regard to the soils work and other
8 activities so that we would assure ourselves that they had
9 taken -- they had identified and would be implementing
10 corrective actions to preclude similar deficiencies from
11 occurring.

12 Q And are the pages attached to this letter copies of the
13 responses Consumers Power gave to the NRC with respect to
14 question 23?

15 A Yes.

16 Q And did you receive these at or about the dates indicated?

17 A What date?

18 Q Unfortunately they have dates such as --

19 A It look like November 1979.

20 MR. DRIKER: Why do you say unfortunately?

21 MR. GOOLD: Well, they're different dates
22 because they were updated over time. I'll get to it in a
23 moment, Mr. Driker.

24 BY MR. GOOLD:

1 Q Did you receive copies of Consumers Power responses as
2 they were submitted, to question 23, as they were
3 submitted to the NRC?
4 A Yes.
5 Q And over the course, over the period of time from November
6 1979 through February 1981 were revisions made from time
7 to time in Consumers Power responses to question 23?
8 A Um-ha.
9 Q Did you also receive those as they came to the NRC?
10 A Yes.
11 Q Okay. With that in mind, can you identify the document
12 which is attached to PX NRC 58 running from -- it's marked
13 in the bottom middle of the page as number as 23-1 through
14 23-35?
15 A Yes.
16 Q And what is it?
17 A Identify the document?
18 Q Yes.
19 A Responses to question 23.
20 Q And does this include updates or revisions as submitted by
21 Consumers Power over the course of the period I've
22 mentioned?
23 A Yes.
24 Q What was the practice with respect to situations where a

1 particular page was supplemented or revised?

2 A I'm not sure I understand the question.

3 Q What I'm trying to find out is whether a running copy was
4 kept in which updated pages would be inserted?

5 A There were periodic updates to many of the questions that
6 were being asked via 50.54 F and they would identify those
7 pages that they had made revisions to and submit them.

8 Q Was it practice to substitute the revised pages for
9 previously submitted pages?

10 MR. DRIKER: At the NRC?

11 BY MR. GOOLD:

12 Q At the NRC.

13 A I don't recall how we administered the revisions.

14 Q What I'm just trying to get at is, it's just a
15 housekeeping kind of detail, is that you look at the
16 numbering at the bottom of the page and you'll see the
17 first page of this document is 23-1 and that sequence of
18 numbers continues all the way up to, without break, up to
19 23-35. Then you'll also see a little further over on the
20 right of the bottom of the page various revision numbers
21 and dates beneath those. Can you explain what those
22 represent?

23 A Revisions to their responses, or part of their responses,
24 and they were inserted into the package.

1 Q Okay. Now who submitted the responses to question 23 to
2 the NRC?

3 A Consumers Power.

4 Q To your knowledge, were these submissions made under any
5 kind of oath or requirement as to the certification, as to
6 their truth?

7 A As I remember correctly, 50.54 F is submitted under
8 certification by a company official.

9 Q Let me direct your attention to page 23-3. There are
10 subparagraphs A through E in the bottom of that page above
11 which says, "Essentially, this documentation pointed out
12 that the most probable causes of the settlement were as
13 follows:" then there's two subparagraphs beneath that. Do
14 you see that portion of the document?

15 A No. Where is that?

16 Q 23-3. There's a paragraph which begins, "The 13
17 deficiencies" then the final sentence of that paragraph
18 refers to "the most probable causes of the settlement were
19 as follows:" then beneath that subparagraph A states, "In
20 some cases, lift thickness exceed the capability of the
21 equipment being used." Do you see that sentence?

22 A Yes.

23 Q In our discussion for the first part of your deposition I
24 believe you indicated that lack of control over lift

1 thickness was, in your judgment, also one of the
2 contributing causes to the soils settlement problem?

3 A That's correct.

4 Q And just so the record is clear, did you discuss that
5 factor with Mr. Horn in the course of your conversations
6 with him?

7 A Yes.

8 Q And was this one of the factors that he indicated to you
9 had been of concern to him prior to the disclosure of the
10 Diesel Generator Building problem?

11 A Yes.

12 Q Let's look down at the next subparagraph, subparagraph D,
13 where another of the "most probable causes of the
14 settlement" is referred to as "Reliance on soil test
15 results, or on the the evaluation of the test results."

16 And just so the record is clear, was this a subject you
17 also discussed with Mr. Horn?

18 A Yes.

19 Q And did he indicate to you that this had been a source of
20 concern to him during the time the soils work was being
21 placed prior to the disclosure of the Diesel Generator
22 Building problem?

23 MR. DRIKER: Objection, leading.

24 A Yes.

1 BY MR. COOLD:

2 Q Then a statement appears at the bottom of this page,
3 "Therefore, deficiencies most closely associated with
4 these two probable causes would bear the most significant
5 contribution to settlement." Did you agree with that?

6 A Can you point out where exactly that is?

7 Q The very bottom. What I'm asking is whether you agreed
8 that reliance on soil test results or lift thickness, as
9 referred to in more detail in paragraph A and B on this
10 page, constituted the most significant contribution to
11 settlement?

12 A The question is?

13 Q Whether you agreed with that.

14 A I agree that they were contributing factors. I disagree
15 being the most significant contribution.

16 Q What did you believe was the most significant contribution
17 to the existence of the soils problem?

18 A That they did not have a qualified geotechnical engineer
19 supervising the work activity.

20 Q Looking back at subparagraph A where the statement
21 appears, "In some cases, lift thickness exceed the
22 capability of the equipment being used", based on your
23 investigation of the Midland Project do you agree with
24 that statement?

1 A Yes.
2 Q How about the statement in paragraph B that, "Reliance on
3 soil test results, or on the evaluation of the test
4 results, provided common mode failure mechanism", did you
5 agree with that?

6 A Yes.

7 Q Let me direct your attention next to page 23-23. Under
8 the heading "Deficiency Description: Inadequate soil
9 moisture testing" there's a paragraph labeled Discussion.
10 Do you see that paragraph?

11 A Yes.

12 Q It states in the first two sentences, "Prior to 1978,
13 moisture control content was controlled by tests performed
14 after compaction. Few or no tests were performed on the
15 fill during compaction, as required by specification
16 77220-C-210, Section 12.6." Is that statement consistent
17 with your own observations regarding how the fill was
18 placed at Midland and tested?

19 A The second sentence is.

20 Q How about the first sentence?

21 A Well, the first sentence really doesn't make too much
22 sense to me. One does not control moisture content after
23 compaction.

24 MR. DRIKER: I think it says by tests

1 performed after compaction.

2 BY MR. GOOLD:

3 Q That's true, but does that change your answer?

4 A It doesn't make sense to me.

5 Q Can you explain why?

6 A One does not control moisture content by tests.

7 Q How does one control moisture content?

8 A You -- well, you do tests but you control the moisture --
9 you cannot control the moisture after compaction. I mean,
10 it's compacted with a certain moisture content and it
11 gives you the results per that content. One takes tests
12 before or during the compaction effort.

13 Q Is it too late after compaction?

14 A Yes, academic.

15 Q Let's go back to page two of the first portion of this
16 exhibit, the meeting notes. Let me direct your attention
17 to the next to last paragraph, which the first two
18 sentences state, "Bechtel reported (item 7 of the
19 presentations) the results of its investigations into the
20 cause of insufficient compaction of the plant area fill,
21 and identified five causes to be considered to be the most
22 probable. The applicant noted its agreement with the
23 Bechtel findings." Do you remember such a discussion
24 taking place in substance at the July 1979 meeting?

1 A Yes.
2 Q Do you remember who at Consumers Power indicated agreement
3 with the Bechtel findings?

4 A I don't know.

5 Q Do you recall whether Mr. Keeley was present? Hang on
6 just a second. Do you recall whether Mr. Keeley checked
7 with Mr. Horn before giving any discussion on this
8 subject?

9 MR. DRIKER: What kind of question is that?

10 A If I remember correctly, Mr. Horn gave the presentation of
11 the most probable causes, if I remember correctly. There
12 were view graphs that identified the possible causes and
13 then the most probable causes. I believe Mr. Horn gave
14 the presentation, if I'm not mistaken.

15 BY MR. GOOLD:

16 Q Okay. According to this document five causes were
17 indicated to be considered the most probable. I recognize
18 this is a difficult question, but do you recall what those
19 were?

20 A A couple of them. As they characterized them, lift
21 thickness, moisture control, qualification of equipment
22 and two others, which I don't remember what they
23 determined. There is a meeting notes or view graphs that
24 laid all that out.

1 Q I'm sorry. I just don't have it in the form it was
2 produced, at least in this one. Let me direct your
3 attention next to page 23-26. Under the heading Incorrect
4 Soils Test Results there's a Discussion paragraph there
5 which commences, "A review of soils test reports indicates
6 that some test reports contained errors and
7 inconsistencies in data." Is that consistent with your
8 own investigation of the soils problems at the Midland
9 Plant?

10 A I don't recall. I would have to go back and look if it's
11 consistent or not.

12 Q Are you familiar with a term zero air voids curve?

13 A Yes.

14 Q I realize this may be a difficult technical question, but
15 can you explain what it means?

16 A Well, it's just a curve that is basically above the
17 optimum moisture and maximum density curve, which
18 identifies through tests what moisture and density one
19 needs in order to have zero air voids.

20 Q You worked as a soils testing technician, did you not, at
21 one point in your career?

22 A One summer I believe, yes.

23 Q Do you recall whether you did any work with zero air voids
24 curves during that employment?

1 A We plotted moisture density curves and those other curves.

2 Q Okay. You referred to the other curves. Are you
3 referring to zero air voids curves?

4 A Um-ha.

5 Q Did you have any occasion in your work as an inspector at
6 Region III to look at compaction test records from other
7 nuclear projects?

8 A Yes.

9 Q Did you have an occasion to examine proctor curves and
10 zero air voids curves from other nuclear projects?

11 A Yes.

12 MR. DRIKER: Excuse me. I think it's
13 helpful before you answer the question to let him get the
14 whole question out.

15 THE WITNESS: When he pauses I presume he
16 finishes so I answer the question.

17 MR. DRIKER: There's then a modification of
18 his question by the last phrase and the way it's going to
19 come out in the transcript, usually the reporter is going
20 to report the whole question then your answer, even though
21 your answer may have come in the middle of the question.
22 So I urge you to wait until the whole question is out
23 until you begin your answer.

24 BY MR. GOOLD:

1 Q Did you observe whether zero air voids curves were being
2 plotted in connection with compaction tests at other
3 nuclear power plants?
4 A I don't recall at this point in time without going back
5 and looking. It's a routine item that's plotted on
6 moisture density curves.
7 Q Did you ever learn whether zero air voids curves were
8 plotted on Midland moisture density testing during the
9 period from 1974 through 1977?
10 A Yes.
11 Q What did you learn in that respect?
12 A That they were plotted.
13 Q I'll have to find the document. Do you recall whether
14 Bechtel prepared a report in 1979 concerning U. S.
15 Testing's, the accuracy of U. S. Testing's soils tests?
16 A I don't recall that document.
17 Q Do you recall seeing any plot done in 1979 of where U. S.
18 Testing soils tests fell on zero air voids curve?
19 A Yes.
20 Q And what did that indicate with respect, if you recall, to
21 where the soils tests results fell on the zero air voids
22 curve?
23 A They were above the zero air voids curve.
24 Q Let me direct your attention to page 23-32 of this

1 document, and under the heading Deficiencies Description,
2 "Inadequate corrective action for repetitive nonconforming
3 conditions", there's a Discussion paragraph which states,
4 "There were nonconformances reported which are considered
5 to be repetitive." Then it lists a number of
6 nonconformance reports. Did Mr. Horn indicate to you
7 whether he believed that the nonconformance reports quoted
8 here were in fact repetitive?

9 MR. DRIKER: Objection, leading.

10 A Yes.

11 BY MR. GOOLD:

12 Q Do you recall whether Consumers Power disputed this
13 conclusion, the conclusion that there were inadequate
14 corrective action for repetitive nonconforming conditions?

15 A At one point in time they did.

16 Q Do you recall approximately when that was in the process
17 of your involvement at Midland?

18 A It was a meeting in Glen Ellyn where we first identified
19 our findings at which time Mr. Howell was chairing that
20 meeting. I don't recall the date. Some time in March of
21 1979 perhaps.

22 Q And did you have any discussion on the subject
23 subsequently with Mr. Horn?

24 A Sure.

1 Q And what did he tell you regarding whether he believed
2 that the nonconformances were repetitive?

3 A He agreed with our findings.

4 Q Let me show you a document, which I'll ask the reporter to
5 mark as PX Bechtel 235.

6 (Deposition Exhibit No. PX DEC 235,
7 Letter of 10-30-79 from S. S. Afifi
8 to R. D. Peck, Letter from Lester
9 Rubenstein, NRC, to S. H. Howell,
10 CPC, dated 10-19-79 and supplemental
11 10 CFR 50.54 requests, was marked
12 for identification.)

13 BY MR. GOOLD:

14 Q The first page of this document is a letter from a Mr.
15 Afifi of Bechtel to Dr. Peck. I'm going to ask you about
16 the subsequent pages of this exhibit, which begin with a
17 letter from Mr. Lester Rubenstein of the NRC to Mr.
18 Howell, apparently dated in November of 1979, following
19 which there are a series of supplemental 10 CFR 50.54
20 requests.

21 Let me ask you to direct your attention in
22 particular to the supplemental 10 CFR 50.54 pages 91701887
23 through 891. Did you participate in the preparation of
24 these requests?

1 A Not these.

2 Q Let me let me focus you in particular on paragraph 35, or

3 request 35. Did you participate in the preparation of

4 this request?

5 A I don't recall. I don't believe I did.

6 Q Do you recall whether you saw this before it went out?

7 A I really don't.

8 Q Okay. Did you ever learn whether Consumers Power was

9 objecting to taking additional borings in the fill at the

10 Diesel Generator Building?

11 A Yes.

12 Q Do you recall approximately when that came up?

13 A It was the meeting which I referred to last, which was in

14 Glen Ellyn, some time in March.

15 Q 1979?

16 A 1979, where based on our findings it was the NRC's

17 position that certainly the balance of the plant needed to

18 be investigated further to see to what extent in fact poor

19 material had been placed and what the effect was on the

20 structures.

21 Q What was the response at this meeting?

22 A That it was generally localized to the Diesel Generator

23 Building and that there was no need to go beyond that.

24 Q And did the NRC staff take any action subsequently to

1 require testing of the fill at other portions of the
2 plant?

3 A Yes.

4 Q And what was that?

5 We required them to take additional borings in the
6 Auxiliary Building, borated water storage tank and
7 actually drill through foundation mats.

8 Q Did you ever learn that Consumers Power was opposed to the
9 taking of any additional soils borings in the fill that
10 had been preloaded at the Diesel Generator Building?

11 MR. DRIKER: Objection, leading, it's also
12 vague as to time.

13 A I don't recall exactly when but they did object to taking
14 additional borings on the basis that the surcharge and the
15 soils settlement monitoring program in conjunction with
16 that surcharge was adequate, and I believe they stated
17 that it would be of no relevant information.

18 BY MR. GOOLD:

19 Q Did you consider the soils borings to be taken in the fill
20 at the Diesel Generator Building that had been preloaded,
21 been preloaded, to have been relevant information?

22 MR. DRIKER: Objection, leading, no
23 foundation.

24 A Yes.

1 BY MR. GOOLD:

2 Q Why is that?

3 A Seems reasonable to see what changes of characteristics
4 the soils had undergone via the surcharge.

5 Q You've mentioned in your answer that there was discussion,
6 in your previous answers, that there was discussion
7 regarding whether borings should be taken at other
8 portions of the plant and I believe you mentioned
9 Consumers Power's position was the problem was localized?

10 A At that particular point, in March of 1979 when we had a
11 meeting with them on our findings, that that was it, yeah.

12 Q Do you recall whether there was any discussion in the
13 March 1979 meeting regarding the Auxiliary Building in
14 particular?

15 A Yes.

16 Q And what was Consumers Power's position with respect to
17 whether borings should be taken at the Auxiliary Building?

18 A I recall they were not receptive to going much beyond the
19 Diesel Generator Building at that point in time.

20 Q Do you have any recollection as to what justification, if
21 any, for that position was provided at the meeting?

22 A No.

23 Q Subsequent to the March 1979 meeting did you ever learn
24 that the surcharge at the Diesel Generator Building had

1 been removed?

2 A Prior to the March 1979?

3 Q No. Subsequent to the March 1979 meeting was the

4 surcharge at the Diesel Generator Building removed?

5 A Subsequent to?

6 Q Yes.

7 A At some point in time it was. .

8 Q To your knowledge, was any NRC approval given for the

9 removal of the surcharge?

10 A No.

11 Q Were you consulted by Consumers Power before the surcharge

12 was removed?

13 A No.

14 Q Do you know if anyone at the NRC was?

15 A I'm not aware of any.

16 Q Was there any licensing problem that resulted from the

17 removal of the surcharge?

18 A Yes.

19 Q What was that?

20 A From what I understand, the NRR reviewers did not believe

21 that it was left on long enough.

22 Q Just so the record is clear, the NRR reviewers are Mr.

23 Heller and Mr. Kane; is that correct?

24 A Primarily Joe Kane.

1 Q Now, did you ever learn how much time Mr. Kane was
2 spending on the Midland Project during this period?

3 MR. JENSEN: I think we're getting very
4 close to the process of NRC personnel with the question.
5 If the witness can give an answer, I won't object to it.

6 MR. GOOLD: I'm just trying to find out out
7 if he was spending a lot of time on the project.

8 A I don't know what percentage but it was fairly substantial
9 since it consumed a lot of NRC staff time.

10 BY MR. GOOLD:

11 Q Did you ever learn why Consumers Power did not consult the
12 NRC before removing the surcharge?

13 A No.

14 Q Let me show you'll a document, which I'll ask the reporter
15 to mark as PX NRC 59?

16 (Deposition Exhibit No. PX NRC 59,
17 Letter of 12-6-79 from Victor Stallo,
18 NRC, to Stephen Howell, CPC, with
19 attached document captioned Order
20 Modifying Construction Permits and
21 two appendices, was marked for
22 identification.)

23 BY MR. GOOLD:

24 Q For the record, I'll state that this is a copy of a

1 document produced by Consumers Power from its files, as
2 indicated by the receipt stamp and various initials marked
3 on it as apparent recipients. But it also purports to be
4 a letter dated December 6, 1979 from Mr. Victor Stello to
5 Mr. Stephen Howell of Consumers Power and attached to it
6 is a document captioned Order Modifying Construction
7 Permits and two appendices.

8 Can you identify this document, Mr.
9 Gallagher?

10 A It's the December 6, 1979 Order Modifying Construction
11 Permits at the Midland Plant.

12 Q Why was this Order issued?

13 A It was part of the NRC enforcement action that was being
14 taken as a result of the investigation into the soils
15 settlement problems.

16 Q We've covered the December 4, 1978 meeting at which
17 comments were made concerning acceptance criteria for the
18 Diesel Generator Building as well as 10 CFR 50.54 requests
19 issued in the instance of PX BEC 235 in November,
20 apparently of 1979. Did Consumers Power responses to NRC
21 requests for information play any role in the issuance, in
22 the decision to issue this Order?

23 MR. DRIKER: Would you repeat the question,
24 please?

1 MR. JENSEN: I don't know whether we
2 established any basis for how Gene Gallagher would know
3 about a document authored by Victor Stello.

4 BY MR. GOOLD:

5 Q Let me focus on the Order itself, whether you played any
6 role in the issuance of this Order, Mr. Gallagher?

7 A Yes.

8 Q What was that?

9 A I was primarily the author in a major part.

10 Q Of which documents in particular, sir?

11 A The enclosure, starting on page five of the enclosure, the
12 first enclosure identifying those activities which should
13 be stopped and the Appendix A entirely.

14 Q Let me make sure I understand what you're referring to
15 before Appendix A. The Order Modifying Construction
16 Permits itself?

17 A That's correct.

18 Q The text of that Order?

19 A Separate from the legal citations.

20 Q Did you believe it was necessary for the NRC to issue such
21 an Order?

22 A Definitely.

23 Q Why?

24 A To stop them from doing any further work until the issue

1 was completely resolved.

2 Q That's what I'm trying to get at, is what issue?

3 A The issue of proceeding and doing work, remedial work
4 prior to really resolving entirely the causes, what
5 corrective actions need to be taken to preclude further
6 deficiencies from occurring and also the suitability of the
7 remedies that they were proposing. My recommendation had
8 been to issue an Order similar to this well in advance of
9 December, back in March of 1979.

10 Q What precipitated the decision to issue this Order in
11 December 1979, what brought the issue to a head?

12 A I don't recall. I think it was just the long process that
13 it took to getting all of the parties in the NRC to be in
14 agreement with issuing the Order, the enforcement people,
15 the management, the regional parties.

16 Q Was there any problem with unavailability of NRC personnel
17 concerned with Midland at this time, and that is 1979,
18 leading to the issuance of this Order because of Three
19 Mile Island?

20 A Yes.

21 Q What problem, if any, was there?

22 A Well, our findings were published in early March of 1979.
23 Very shortly thereafter the Three Mile Island accident
24 occurred and diverted considerable resources within the

1 NRC from other plant issues.

2 Q How about with respect to geotechnical issues?

3 A No.

4 Q No problem?

5 A More the management and enforcement staff.

6 Q Let me direct your attention to the first page of the

7 Order Modifying Construction Permits, bottom paragraph.

8 The statement there appears, second sentence, "This

9 investigation revealed a breakdown in quality assurance"

10 and goes on with specifics. Was that your conclusion?

11 A Yes.

12 Q Did you ever discuss with Mr. Horn whether he agreed that

13 there had been a breakdown in quality assurance?

14 A Yes.

15 Q What did he say?

16 A He agreed.

17 Q Do you recall when you had such discussions?

18 A Not specifically.

19 Q I'm trying to find out if you can put a specific timeframe

20 on this.

21 A No, I can't.

22 MR. DRIKER: For purposes of the record, Mr.

23 Gould, this copy of the letter, an Order from the NRC, I

24 do not believe is from Consumers Power's files because all

1 of our documents have the prefix nine. I don't know if
2 this is from the Bechtel file since it has a Bechtel
3 receipt stamp on it.

4 MR. GOOLD: I think you're right. This
5 would be from Mr. Peck's files, I believe, because of the
6 P.

7 BY MR. GOOLD:

8 Q Let me direct your attention to page two of the Order.
9 There's a reference there to, in the first full paragraph,
10 a statement begins, second sentence, "In addition, as
11 described in Appendix B to this Order, a material false
12 statement was made in the FSAR in that the FSAR falsely
13 stated that 'All fill and backfill were placed according
14 to Table 2.5-9.' This statement is material in that this
15 portion of the FSAR would have been found unacceptable
16 without further Staff analysis and questions if the Staff
17 had known that Category 1 structures had been placed in
18 fact on random fill rather than controlled compacted
19 cohesive fill as stated in the FSAR." Was that your
20 conclusion, sir?

21 A In part.

22 Q Can you explain what was meant by the term random fill?

23 A I can only give you the definition that Consumers and
24 Bechtel themselves defined it as.

1 Q Okay.

2 A "Any fill free of organic material."

3 Q And you've used the term, the Order uses the term
4 controlled compacted cohesive fill in the final line of
5 that paragraph. What was your understanding as to what
6 that meant?

7 A Just what it really states. It's self-explanatory.
8 Controlled in that there was controls in placing and
9 compacting the fill and testing the fill; cohesive in that
10 it was a clay material.

11 Q You've mentioned that you were given a definition of
12 random fill by Bechtel and Consumers Power people. Were
13 you also told by anyone from Bechtel or Consumers Power
14 that random fill was in fact used in place of controlled
15 compacted cohesive fill?

16 A It was shown on the drawings.

17 Q What do you mean by the drawings?

18 A The drawings that identify the material that was to be
19 placed. It was identified as random fill.

20 Q Okay. And you considered the difference between
21 controlled compacted cohesive fill and random fill to be a
22 material false statement?

23 A Myself and the people from the MRR geotechnical
24 engineering branch.

1 Q Let me ask why you reached that conclusion, why -- did you
2 conclude there was a material difference between
3 controlled --

4 MR. DRIKER: The question before this
5 question, would you read it back, what Mr. Gould said? I
6 thought he said that you considered the difference between
7 random fill and cohesive compacted fill as a material
8 false statement. I don't think that's the witness'
9 testimony.

10 (The requested portion of the
11 record was read back as follows:
12 "Q. Okay. And you considered the
13 difference between controlled
14 compacted fill and random fill to
15 be a material false statement?")

16 BY MR. GOULD:

17 Q Why did you share that conclusion?

18 A The reasons were as follows: One, it was not controlled,
19 two, it was not adequately compacted to the requirements
20 that were stated in the FSAR and, three, it was not
21 cohesive material. There were many other types of
22 materials, as the word random suggests, used.

23 Q Did you believe that the failure to control the content of
24 the fill had any contributing role in the soils problems?

1 A Yes.

2 Q Why? What I'm trying to find out is, what is bad about

3 failing to control the content of the fill in your

4 judgment?

5 A If one doesn't know at every point in time the material

6 that one is using, then you're likely to get into the

7 problem that we now have at Midland without the controls

8 that they had in place or that they did not have in place.

9 Q Let me direct your attention to page four of the Order. A

10 sentence there appears, "We have concluded that the

11 quality assurance deficiencies involving the settlement of

12 the Diesel Generator Building and soils activities at the

13 Midland site, the false statement in the FSAR and the

14 unresolved safety issue concerning the adequacy of the

15 remedial action to correct the deficiencies in the soil

16 construction under and around safety-related structures

17 and systems are adequate bases to refuse to grant a

18 construction permit and that, therefore, suspension of

19 certain activities under Construction Permits No. CPPR-81

20 and No. CPPR-82 is warranted until the related safety

21 issues are resolved." Do you see that language, sir?

22 A Yes.

23 Q Did you agree with that?

24 A Absolutely.

1 Q If you had known that the fill at the site was being
2 placed -- if you had come to the site and done the same
3 investigation in substance in 1977 that you did beginning
4 in August of 1978, would you have come to the same
5 conclusion?

6 MR. BRIKER: Objection, leading, calls for
7 speculation.

8 THE WITNESS: Can I answer that?

9 MR. JENSEN: If you feel you can give an
10 answer to that.

11 A Yes.

12 MR. GOOLD: Why don't we take a break here.

13 (A brief recess was held during
14 the proceedings.)

15 BY MR. GOOLD:

16 Q Let me show you a document, which I'll ask the reporter to
17 mark as CPC 525.

18 (Deposition Exhibit No. CPC 525,
19 CPCO Discussion of NRC Inspection
20 Facts Resulting from the Investigation
21 of the Diesel Generator Building
22 Settlement, dated 3-9-79, was marked
23 for Identification.)

24 BY MR. GOOLD:

1 Q Take as much time as you'd like to look through it. . I
2 first want to ask if you can identify this as a copy of a
3 document submitted by Consumers Power to the NRC and
4 received by you at or about the dates indicated. It's a
5 thick one.

6 A Yeah, I recall it.

7 Q Can you identify for the record what it was, to your
8 understanding, what this document represented to your
9 understanding?

10 A It's Consumers Power Company's response to the findings
11 that we made at a March 5th, 1979 meeting.

12 Q First of all, were those in the nature of a response to
13 report 78-20?

14 A I don't believe 78-20 was issued as of yet at this point
15 in time. It was a response to what would generally be
16 included in 78-20 but it was more a response to what we
17 called our preliminary findings as of March 5th.

18 Q Let me direct your attention to attachment number one on
19 this document, which begins on page 91701133.

20 A All right.

21 Q And continuing through to page, the last three digits are
22 148. And that comprises attachment one to this exhibit,
23 does it not? What is attachment one?

24 A Attachment one is the, as entitled, Presentation of

1 Investigation Findings of the Settlement of the Diesel
2 Generator Building and Plant Area Fill, dated February 23,
3 1979.

4 Q Did you prepare those investigation findings?

5 A Entirely.

6 Q And what relation did the investigation findings have to
7 report 78-20?

8 A They are -- they parallel, in many respects, the
9 discussion that's contained in 78-20.

10 Q And were your investigation findings prepared under the
11 same ground rules as report 78-20? By that I mean, did
12 you prepare these in the performance of your duties as an
13 NRC employee?

14 A Yes.

15 Q Did you prepare these as an official NRC document?

16 A Yes.

17 Q Were these issued as a public document to Consumers Power?

18 A Yes.

19 Q And in preparing the investigation findings what was the
20 purpose, what was your purpose in preparing these
21 investigations findings?

22 A To expeditiously present to Consumers and Bechtel the
23 results of our investigation at that point in time rather
24 than wait for the formal report, which ended up being

1 78-20, to be issued later on down the road.

2 Q And when you prepared the investigation findings did you

3 have any understanding as to whether Consumers Power would

4 be given an opportunity to respond to those findings?

5 A These in this document?

6 Q Yes.

7 A Yes. We encouraged that they respond.

8 Q And did Consumers Power do so?

9 A Yes.

10 Q Did they prepare any documents embodying a response?

11 A Yes.

12 Q What is that?

13 A Attachment number two to this document.

14 Q And was attachment number two submitted to the NRC on or

15 about March 9, 1979?

16 A Yes.

17 Q And what was your understanding as to what Consumers

18 Power's -- what role did Consumers Power's response play

19 in the regulatory process?

20 A With regard to what?

21 Q First let's focus on report 78-20. I'm trying to find out

22 what the framework is. You've issued a summary of your

23 findings as attachment one to this document; is that

24 correct?

1 A Yes.

2 Q You encouraged Consumers Power to respond; is that

3 correct?

4 A That's correct.

5 Q Why did you do that?

6 A Because I think it's just a matter of conducting our

7 business. We make findings, we look for a response to

8 those findings.

9 Q And that response is attachment two to the document?

10 A That's correct.

11 Q Did you ever learn who was the principle draftsman, if

12 there was such a person, of the Consumers Power response?

13 A I don't recall. It was transmitted under the submittal of

14 Consumers Power.

15 Q Let me direct your attention to page, well, the last three

16 digits in the serial number are 156. Focussing on the

17 second paragraph up from the bottom, which begins, "From

18 August 1, 1977 to the cessation of fill operation with the

19 onset of the winter 1977-1978 season, there was a change."

20 MR. DRIKER: Before you go further, may I

21 assume the margin handwritten notation is yours?

22 MR. GOOLD: Does it say proper engineering?

23 MR. DRIKER: That's what it says.

24 MR. GOOLD: Okay, that's mine.

1 BY MR. GOOLD:

2 Q What I'd like to know is whether you ever learned why such
3 a change was made?

4 A No.

5 Q Let me direct your attention to the page where the last
6 three digits are 161. That page and the previous one bear
7 the heading NRC Preliminary Finding Number 8. Did you go
8 over this submission by Consumers Power at or about the
9 time it came in?

10 A Yes.

11 Q Under the heading NRC Preliminary Finding 8 there's the
12 discussion which appears on page 91701160 and the next
13 page and the statement then appears, just before the
14 heading Conclusions on page two of wo, page 91701161,
15 that "Each use-as-is disposition was evaluated by CPGCo to
16 insure that the dispositioning was consistent with quality
17 assurance program requirements." Do you see that?

18 A Um-ha.

19 Q Did you have any reaction to that when you read it?

20 A I don't recall that I did.

21 Q Look under the heading Conclusion, subparagraph B.
22 There's a statement, "Except for NCR 199, the corrective
23 action process was implemented." Do you know what that
24 reference to NCR 199 was about?

1 A No, not offhand.

2 Q Was a meeting held with anyone from Bechtel or Consumers
3 Power to go over this in which you participated?

4 A I don't recall at this point whether there was.

5 Q Let me direct your attention to page 91701190. First let
6 me ask you to turn to the previous page, which identifies
7 the question responded to there. Do you see the reference
8 to NRC question "What is the condition of the soils under
9 all other plant areas of the site"?

10 A Where is that?

11 Q Very top of the page.

12 A Okay.

13 Q Did you review this portion of the document -- I'm sorry.
14 Let me state this is attachment three to the exhibit?

15 A That's correct.

16 MR. DRIKER: What is the Bates Number?

17 BY MR. GOOLD:

18 Q Let's go back to page 91701189, which is a document marked
19 as attachment three, "Preliminary March 5, 1979 Consumers
20 Power Company response to NRC question on the condition of
21 soils under all other plant areas". What I'd like to know
22 is whether you received a copy of attachment three to this
23 exhibit at or about the same time?

24 A Yes.

1 Q And did you review it?

2 A I don't recall specifically. It was submitted to us and

3 we were pursuing all submittals.

4 Q Let me direct your attention finally to page 91701190,

5 bottom paragraph, the discussion of the Auxiliary

6 Building. Take a moment to read that if you will.

7 A Um-ha.

8 Q Did you find that response satisfactory?

9 A I don't think we made a determination whether it was

10 satisfactory or unsatisfactory at that time.

11 Q This document was issued in March, is dated March 5, 1979.

12 Subsequently a request was made for Consumers Power to

13 take borings at the Auxiliary Building; is that correct?

14 A That's correct.

15 Q Did you participate in any deliberations regarding whether

16 the request should be made for additional borings at the

17 Auxiliary Building?

18 A Yes.

19 Q Did you believe those borings were needed?

20 A I believe I convinced the people that they were needed.

21 Q Did you ever discuss with anyone from Consumers Power this

22 response, that is the response on page 91701190,

23 concerning the Auxiliary Building?

24 A No.

1 Q Did you ever ask why borings were being taken on Category
2 1 structures elsewhere on the site but not at the
3 Auxiliary Building?

4 A I don't recall.

5 Q Having looked at this I'm trying to find out if you can
6 recall any justification given, to your knowledge, by
7 Consumers Power regarding why borings had not been taken
8 or at least disclosed to the NRC through March 1979 at the
9 Auxiliary Building?

10 MR. DRIKER: You've asked quite a few
11 different questions in there. First you asked if they had
12 been taken, then you asked if they had been disclosed.

13 MR. GOOLD: Read the question back.

14 (The requested portion of the
15 record was read back as follows:
16 "Q. Having looked at this I'm trying
17 to find out if you can recall any
18 justification given, to your knowledge,
19 by Consumers Power regarding why
20 borings had not been taken or at least
21 disclosed to the NRC through March 1979
22 at the Auxiliary Building?")

23 MR. DRIKER: Just before you answer the
24 question, Mr. Gallagher, I again urge you to speak on

1 personal knowledge and not to surmise or guess. And it's
2 not clear to me from Mr. Goold's question when he is
3 talking about, what period of time he's asking you to
4 respond as of, and if you want an opportunity to review
5 this document to refresh your recollection, which is about
6 30 pages long, I would urge you to do that rather than
7 just hazard a guess on something like that.

8 A Up to this point in time?

9 BY MR. GOOLD:

10 Q That's right, up to this point in time.

11 A Consumers was of the contention that the soils settlement
12 problem was localized, confined to the Diesel Generator
13 Building, and even when we conducted the meeting of March
14 5th the NRC's -- based on the comments that Consumers was
15 making to the NRC we, I certainly, didn't even believe
16 that they thought there was any problem. We kept
17 scratching our heads almost in jest to the point where,
18 you know, we haven't convinced Consumers there's a problem
19 at all as of yet. And that was what triggered our NRC's
20 investigating for the borings to be taken beyond the
21 Diesel Generator Building and them responding to 50.54 F
22 questions, like the one, question number one and number
23 23. Until they recognized and acknowledged that they had
24 problems, identified those problems and recommended

1 corrective actions not much more was going to be done.
2 Q And subsequently the borings you requested were in fact
3 taken at the Auxiliary Building, were they not?
4 A Throughout the site.
5 Q And what did the borings show with respect to the fill at
6 the Auxiliary Building?
7 A The same material that's underneath the Diesel Generator
8 Building.
9 Q Let me show you a document, which I'll ask the reporter to
10 mark as PX CPC 526.
11 (Deposition Exhibit No. PX CPC 526,
12 Consumers Power Document from J. L.
13 Corley/R. G. Wollney to E. W.
14 Marguglio, 3-30-79, Subject:
15 Midland Project-NRC Exit Meeting of
16 March 29, 1979, was marked for
17 identification.)
18 BY MR. GOULD:
19 Q This is a Consumers Power document and I'd first like to
20 know if you recall having an exit meeting at the Midland
21 site on or about March 28-29, 1979?
22 A Yes.
23 Q What is an exit meeting by the way?
24 A Just a departure meeting that the NRC personnel brief or

1 debrief with the licensee as to what our findings were.
2 Q At the March 28-29 exit meeting, March 29 exit meeting
3 rather, do you recall making a statement in substance as
4 indicated in the bottom paragraph of this page?
5 A Yes.
6 Q Why did you suggest a "joint venture" to determine
7 possible causes of the settlement problem?
8 A Because up to that point in time it was my understanding
9 that they were not working jointly towards the common
10 objective of finding out what the problems were and how
11 they would identify corrective actions if needed.
12 Q You've used the term "them" in that answer.
13 A Consumers and Dechtel.
14 Q What was the problem, if you know?
15 A The problem was the soils settlement problem which was
16 straining relations between the two companies.
17 Q That's all on that.

18 Let me show you a document, which I'll ask
19 the reporter to mark as PX CPC 527.

20 (Deposition Exhibit No. PX CPC 527,
21 Three-page handwritten document,
22 was marked for identification.)

23 BY MR. GOOLD:

24 Q This is a handwritten document, which I'll represent at

1 least to be Mr. Horn's handwriting, I believe. I'm
2 interested in particular on the final page of this
3 document. First let me ask this: Did you interview a Mr.
4 Betts from Bechtel?
5 A I believe we did.
6 Q Do you recall what his position was?
7 A Not at this point.
8 Q Do you recall whether he was a civil engineer?
9 A Yes, he was.
10 Q Was he involved in the soils work?
11 A He was a field engineer.
12 Q Did you ask Mr. Betts about the difference between the
13 modified proctor and the Bechtel modified proctor
14 compaction standards?
15 A Yes.
16 Q Did Mr. Betts give you any explanation as to, first, which
17 standard was actually used in the placement of the fill?
18 A It's not clear at this time.
19 Q Did Mr. Betts confirm that the Bechtel modified proctor
20 was used by the field engineering staff at the site?
21 A I believe that was his position at that time.
22 Q Let me direct your attention to about halfway down the
23 page where the notation appears, "Strange, D1557 -vs- BNP"
24 and the next line states, "Money-more costly." First let

1 me ask whether you recall at least having looked at this
2 document that's the subject of the D1557 compaction
3 standard versus Bechtel modified proctor that came up in
4 your interview of Mr. Betts?

5 A Yes.

6 Q And do you recall what explanation, if any, he gave as to
7 why the Bechtel modified proctor was used?

8 A I really don't.

9 Q Do you recall being told in substance that a decision had
10 been made to use a less costly compaction standard?

11 A I really don't recall.

12 MR. DRIKER: Objection, leading question.

13 BY MR. GOOLD:

14 Q Let me show you a document, which I'll ask the reporter to
15 mark as PX NRC 60.

16 (Deposition Exhibit No. PX NRC 60,
17 NRC Inspection Report 79-06, dated
18 April 9, 1979, was marked for
19 identification.)

20 BY MR. GOOLD:

21 Q Can you identify this document?

22 A It's an NRC Inspection Report 79-06.

23 Q Did you play any role in the preparation of this exhibit?

24 A I wrote it.

1 Q Did you write in particular the Inspection Report which
2 appears beginning on page 90517760?
3 A Yes.
4 Q And did you also prepare this report like the others in
5 the performance of your official duties as an NRC
6 employee?
7 A Yes.
8 Q Let me direct your attention to page six of the Inspection
9 Report, under the heading CPCo Investigation of Possible
10 Causes of the Plant Area Fill Settlement. Beneath that
11 there's a series of subparagraphs, A through M. Do you
12 see those?
13 A Yes.
14 Q Do you recall what your source was for the information
15 stated in those subparagraphs?
16 A Don Horn.
17 Q How did he communicate it to you?
18 A I believe he gave me a sheet with that list on it.
19 Q Let me direct your attention to subparagraph L, the
20 reference there to inspection procedures after March 1977.
21 Do you see that, sir?
22 A Yes.
23 Q Do you recall what that was all about?
24 A No, I don't. I was merely reporting what Consumers had

1 given me as a list of possible causes.

2 Q Let me show you a document, which I'll ask the reporter to
3 mark as PX BEC 236.

4 (Deposition Exhibit No. PX BEC 236,
5 Interoffice Memorandum to S. Afifi,
6 dated 11-13-78, Subject: Job 7220
7 Midland Project, Compaction Test
8 Section, Midland Units 1 and 2,
9 Midland, Michigan, was marked
10 for identification.)

11 BY MR. GOOLD:

12 Q Let me first ask this. You've described your request for
13 compaction equipment qualification reports. Do you recall
14 when you first, approximately when you first made a
15 request for that information?

16 A Some time in 1978.

17 Q Okay. Can you take a look at this document, PX BEC 236,
18 and tell me if you received a copy of this on or about the
19 date indicated, November 1978?

20 A I don't recall. It does not look familiar.

21 Q Okay. Did you ever learn that tests of compaction
22 equipment had been done in November 1978 which indicated
23 that, "Based on the results of this test, heavier
24 equipment would help increase the percent compaction and

1 that the clays should be compacted in lifts less than
2 eight inches in loose thickness"?

3 A Yes.

4 Q Were you ever informed in substance that a compaction test
5 had been done in November 1978 with the conclusion as I've
6 indicated?

7 A I don't recall.

8 Q Let me show you a document, which I will ask the reporter
9 to mark as PX CPC 528.

10 (Deposition Exhibit No. CPC 528,
11 Oral Communications Record,
12 dated 5-12-80 and 5-13-80, was
13 marked for identification.)

14 BY MR. GOOLD:

15 Q This is a document produced by Consumers Power and appears
16 to be -- is headed an Oral Communications Record, dated
17 5-12-80 and 5-13-80. And I'd like to see if this
18 refreshes your recollection as to during what times you
19 were requesting reports on compaction equipment from
20 Consumers Power.

21 A For about a year and a half.

22 Q Let me direct your attention to page two of this document.
23 A statement there appears, "Mr. Gallagher wondered how we
24 could have been placing soils since last summer if a

1 qualification report had not been reviewed and approved by
2 Quality." Did you make a statement in substance as
3 indicated there?

4 A Yes.

5 Q Did you ever get a response from Consumers Power?

6 A I don't believe so.

7 C Well, it's just about noon, according to my watch anyway.
8 I'd suggest this is a convenient time to adjourn for the
9 day, given Mr. Gallagher's commitment, and we'll resume
10 tomorrow morning.

11 (At 12:00 noon, the deposition
12 was adjourned.)
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