

NUCLEAR REGULATORY COMMISSION

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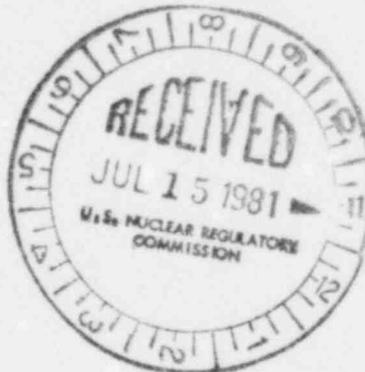
ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:

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

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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CONSUMERS POWER COMPANY :
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Midland Plant, Units 1 and 2 :
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DOCKET NOS: 50-329 OL & OM
50-330 OL & OM

Midland County Courthouse
301 West Main Street
Midland, Michigan

Tuesday, July 7, 1981

Evidentiary hearing in the above-entitled
matter was convened, pursuant to notice, at 9:45 a.m.

BEFORE:

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

FRED COWAN, Member

RALPH DECKER, Member

1 APPEARANCES:

2 On behalf of the Applicant, Consumers Power Company:

3 MICHAEL MILLER, Esq.,

4 RON ZAMARIN, Esq.,

5 JOANNE BLOOM, Esq.,

6 ALLEN FARNELL, Esq.,

7 Isham, Lincoln & Beale,
8 Chicago, Illinois

9 JIM BRUNNER, Esq.,

10 Legal Department, Consumers Power Company

11 212 W. Michigan,

12 Jackson, Michigan 49201

13 On behalf of Mapleton Intervenors:

14 WENDELL H. MARSHALL

15 Appearing pro se:

16 BARBARA STAMIRIS

17 On behalf of the Regulatory Staff:

18 WILLIAM PATON, Esq.,

19 ELLEN BROWN, Esq.,

20 JAMES THESSIN, Esq.,

21 Office of Executive Legal Director,

22 United States Nuclear Regulatory Commission,

23 Washington, D. C.

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C O N T E N T S

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WITNESS:

DIRECT CROSS REDIRECT RECROSS EXAMINATION

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Limited Appearance Statement By Patrick Pace - 1021

Limited Appearance Statement By Terry Miller - 1023

Limited Appearance Statement by Sharon Warren - 1026

AFTERNOON SESSION - Page 1080

Darl S. Hood

By Ms. Brown 1093

By Ms. Stamiris 1107

By Mr. Marshall 1132

By Mr. Farnell 1133

By Ms. Brown 1153

1133

By Ms. Stamiris 1153

By Mr. Marshall 1157

By Mr. Farnell 1158

Gilbert S. Keeley

By Mr. Farnell 1160

P R O C E E D I N G S

(9:45 a.m.)

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3 CHAIRMAN BECHHOEFER: Good morning, ladies and
4 gentlemen.

5 This is the commencement of the evidentiary
6 hearing in the proceeding which deals with two things; the
7 operating license proceeding for the Midland Nuclear Plant, and
8 also the proceeding involving the question of soil settlement
9 and the order of modification of licenses issued by the Staff
10 in December of 1979.

11 I will introduce the Licensing Board which will
12 conduct this proceeding.

13 On my left is Mr. Ralph Decker, who is a semi-
14 retired nuclear engineer; and on my right is Dr. Fred Cowan,
15 who is also semi-retired and used to be head of the Health
16 Physics Division in Brookhaven National Laboratory.

17 My name is Charles Bechhoefer. I'm an
18 attorney. I serve with the Licensing Board panel of the
19 Nuclear Regulatory Commission.

20 For the benefit of the reporters and other people
21 here, I would like each of the parties to introduce themselves.
22 I will go from--we usually don't start with the Staff, but I'll
23 go from left to right, anyway. NRC Staff?

24 MS. BROWN: My name is Ellen Brown. I'm an
25 attorney for the NRC Staff. With me is William Paton. Also

1 for the NRC Staff is James Thessin, T-h-e-s-s-i-n.

2 MR. MARSHALL: I'm Wendell H. Marshall, President
3 of Mapleton Intervenors, and I'm appearing pro se.

4 MS. SINCLAIR: I'm Mary Sinclair, and I'm
5 appearing here as a citizen participating in these hearings.
6 I'm a citizen of Midland. I live two miles from the Midland
7 Nuclear Plant.

8 MS. STAMIRIS: I'm Barbara Stamiris. I'm an
9 intervenor representing myself.

10 CHAIRMAN BECHNOEFER: Mr. Miller?

11 MR. MILLER: My name is Michael Miller. I'm
12 one of the attorneys for Consumers Power Company, from the law
13 firm Isham, Lincoln & Beale in Chicago.

14 With me is Mr. Ron Zamarin, Mr. Allen Farnell
15 and Ms. F oom, from our office; and Mr. Jim Brunner, from
16 Consumers Power Company Legal Staff.

17 CHAIRMAN BECHHOEFER: Normally we would begin with
18 some preliminary matters, and we have a number of preliminary
19 matters we wish to discuss; but we think, in view of the fairly
20 limited size of the room, we would like to start with limited
21 appearance statements. Also, prior to that, the parties could
22 make opening statements. Then after we're through with that,
23 we could start to discuss some of what normally would be
24 preliminary matters.

25 For the opening statements of the parties, we

1 would begin with either Licensee or Applicant, depending on
2 which proceeding. Consumers Power Company is the Applicant in
3 the operating license proceeding, and the Licensee in the
4 modification proceeding. We normally will call them "Applicant."

5 MR. MILLER: Thank you, Judge Bechhoefer.

6 This is, as you pointed out, the first increment
7 of the evidentiary hearing to consider the issues arising from
8 the soil placement activities at the Midland site. In this
9 first evidentiary session, Consumers Power Company plans to
10 present four pieces of evidence. They are: the testimony of
11 Mr. James Cook, Vice President, Projects, Engineering and
12 Construction for Consumers Power Company; testimony of Mr.
13 Gilbert Keeley, Project Manager for the Midland Project, and
14 the person who has been primarily responsible for resolution
15 of the soils issues that we are here to discuss; and Mr. Ben
16 Marguglio, who is the Director of Quality Assurance for
17 Consumers Power Company.

18 In addition we also, jointly with the Staff,
19 sponsor a stipulation on quality assurance, which was entered
20 into in an effort to resolve certain issues regarding quality
21 assurance as they relate to this proceeding. I'll come back to
22 that a little bit later in my opening statement.

23 This proceeding arose from the following sequence
24 of events:

25 In July, 1978, abnormal settlement of the diesel

1 generator building was detected by quality assurance personnel
2 at the Midland site.

3 Shortly thereafter, in August of 1978, the
4 matter was reported to the Nuclear Regulatory Commission
5 informally, and construction on the diesel generator building
6 was temporarily halted. The Company determined to make
7 thorough and conscientious examination of the causes of the
8 settlement, and to that end hired, through Bechtel, the
9 architect-constructor, the preeminent experts in soil mechanics
10 in the country. These men, Dr. Peck and Dr. Hendron, will
11 testify at later evidentiary sessions. In any event, they
12 were consulted at a very early stage when the problem arose,
13 and have consulted with the Company continuously since then.

14 At that time period--that is, the early fall of
15 1978--the first report to the NRC in a formal fashion was
16 submitted, pursuant to 10 CFR 50.55(e). At that point in time,
17 the Company, together with its consultants, was considering
18 a number of options involving correction of the diesel generator
19 building settlement.

20 The two primary options that were considered were
21 to remove the structure, which was then approximately 55
22 percent complete, excavate the fill material that apparently
23 had been improperly compacted, replace the fill and rebuild
24 the diesel generator building; or to preload with sand the
25 existing structure, and thereby consolidating the fill material

1 under the diesel generator building.

2 After a thorough consideration of these two
3 options and the recommendations of consultants, the Company
4 determined to follow the consultants' advice and preload the
5 diesel generator building.

6 At all times during this process, the NRC
7 Staff was kept fully apprised of the deliberations of the
8 Company in these options, and the timing of when these
9 activities involving the diesel generator building would
10 take place.

11 In March, 1979, the NRC Staff issued certain
12 written questions to the Company, pursuant to 10 CFR 50.54(f).
13 Shortly thereafter, the preload of the diesel generator
14 building took place, and the investigation of soils placement
15 activities expanded beyond the vicinity of the diesel
16 generator building to other structures that were located on
17 the fill, and it was determined shortly thereafter that the
18 fill material at other portions of the site also showed
19 indications of improper compaction and, therefore, remedial
20 action was indicated for such structures as the service water
21 pump structure and portions of the auxiliary building.

22 In the summer of 1979, approximately a year
23 after the settlement of the diesel generator building was
24 first detected, meetings were held with the Nuclear Regulatory
25 Commission Staff. At that point, no one on the Staff's side

1 indicated or expressed disapproval of the remedial work insofar
2 as the diesel generator building preload program was concerned,
3 and in accordance with recommendations of the consultants, the
4 preload was removed from the diesel generator building in
5 August of 1979.

6 There were further 50.54(f) questions submitted
7 by the Staff. In some cases, notably with respect to questions
8 directed to quality assurance programs and implementation in
9 connection with soils, answers were submitted; and with
10 respect to other questions, answers were pending when, on
11 December 6, 1979, the NRC Staff issued the order which has led
12 to this evidentiary hearing.

13 The December 6, 1979 order, which ordered the
14 Company to halt remedial work unless a hearing was requested,
15 was based on three separate grounds:

16 First, the order asserted that there was a lack
17 of information submitted by Consumers Power Company on the
18 acceptance criteria for remedial work;

19 Second, it was asserted that there was a material
20 false statement in the FSAR; and

21 Third, that there were quality assurance
22 deficiencies leading to an alleged quality assurance breakdown
23 with respect to soils placement activity.

24 Within the time permitted in the order, Consumers
25 Power Company asked for a hearing to resolve these issues and,

1 although the Company has been entitled to do so under the terms
2 of the order, it has not undertaken, since December 6, 1979,
3 any remedial work with respect to soil placement activities
4 without NRC Staff concurrence.

5 Now, after the notice of hearing was published
6 there were interventions by Ms. Stamiris and others which
7 raised additional issues such as managerial attitude and the
8 adequacy of the remedial work that was proposed by the
9 Company.

10 The hearing process and discovery attendant
11 to that hearing process took place during much of 1979 and
12 1980. During that time period, however, the licensing review
13 which had been begun by the NRC Staff of the remedial work,
14 continued, and the Company continued, itself, to consider
15 additional options with respect to remedial work for
16 structures other than the diesel generator building.

17 Mr. Cook's testimony will disclose that early
18 this year the Company determined to change certain remedial
19 work that was planned in order to provide additional margin
20 with respect to the adequacy of remedial fixes.

21 At the same time, continuous changes and
22 improvements in the management structure with respect to the
23 project, and the quality assurance program were implemented.
24 Just a few examples:

25 In March of 1980, the Midland project was totally

1 reorganized. In effect, a corporate officer of Consumers Power
2 Company, Mr. Cook, was placed in charge of the combined
3 Consumers Power Company/Bechtel/Babcock & Wilcox efforts with
4 respect to completing the project. That is, there was hands-on
5 responsibility for the project with the corporate officer.

6 Mr. Keeley was assigned full-time the resolution
7 of soils-related issues. He was and is the project manager,
8 and his appointment to this position signifies the great
9 interest which the Company is devoting to resolution of this
10 issue.

11 As Mr. Marguglio will testify, there were
12 continued improvements and changes in the quality assurance
13 organization.

14 These issues which are addressed by the testi-
15 mony of Mr. Cook, Mr. Keeley and Mr. Marguglio, go basically
16 to the issues which are raised by Contentions 1, 2 and 3,
17 which were originally propounded by Ms. Stamiris, and which
18 were accepted, with some modification, by the Licensing Board
19 in its October 24th, 1980 prehearing conference order.

20 We address, I believe, all aspects of the
21 contentions except insofar as the contentions deal with the
22 technical justification for the remedial measures that have
23 either been undertaken in connection with the diesel generator
24 building preload, or which are planned with respect to other
25 structures. Those will be addressed by other witnesses, and

1 will, I believe, be the subject of later further evidentiary
2 hearings in this matter.

3 In addition, Mr. Marguglio's testimony on
4 quality assurance, which is attached to the Company's latest
5 response to the 50.54(f) Question 23, provides detailed facts
6 regarding changes in the quality assurance organization
7 program and implementation, as it both relates to soils
8 placement issues and as it has general applicability to
9 quality assurance of the project. This testimony of Mr.
10 Marguglio gives some substance--fleshes out, if you will--
11 Paragraph 3 of the stipulation which the Company has entered
12 into with the NRC Staff. That, as I said, is the fourth
13 piece of evidence which is sponsored by Consumers Power
14 Company at this time.

15 The purpose of the stipulation at this time is
16 to eliminate and resolve disputes between the Staff and the
17 Company on two hotly contested issues. First, was there a
18 basis for the December 6, 1979, order insofar as the identified
19 deficiencies in the quality assurance program were concerned;
20 and, secondly, is there reasonable assurance that the quality
21 assurance program will be appropriately implemented in the
22 future with respect to soil placement construction activities?

23 The dispute between the Staff and the Company
24 with respect to the basis for the December 6, 1979, order was
25 a very real one. I think that was demonstrated by the summary

1 disposition papers that were filed by the Staff, and to which
2 we have responded.

3 (Continued on next page.)
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1 MR. MILLER: The stipulation is an effort to
2 put that dispute behind us and to focus on the quality assurance
3 implementation and program for the future.

4 We believe it is reasonable and should be
5 accepted by the Board, and we expect to have an opportunity
6 to address that more fully later on.

7 The testimony of Mr. Cook, Mr. Keeley and Mr.
8 Marguglio has not addressed each and every instance which has
9 been identified by Ms. Stamiris in answers to interrogatories.
10 Some are addressed; some are not. We encourage the Board
11 to ask questions of our witnesses on some of those matters;
12 and, of course, to the extent that there are disputed facts
13 with respect to individual instances identified in those
14 answers to interrogatories, if necessary, we would expect to
15 file rebuttal evidence going to those matters.

16 Thank you very much.

17 CHAIRMAN BECHHOEFER: Ms. Stamiris.

18 MS. STAMIRIS: Thank you.

19 A year ago I began this process of intervening,
20 not knowing what it was all about or what lie ahead.

21 I was concerned about the settlement of the diesel
22 generator building, but I soon realized that much more was
23 involved.

24 The settlement problems extended to the whole
25 plant area fill soils, which had been improperly placed and

E2L2

1 compacted.

2 Consumers' preliminary report to the NRC in
3 March of 1979 identified the structures located on the fill
4 and, reading from this report, the "Seismic Category 1 affected
5 structures"--and these are the safety essential structures--
6 include the auxiliary building, service water pump structure,
7 retaining wall, borated water tanks, diesel fuel oil tank,
8 Category 1 pipe and electrical duct and the diesel generator
9 building.

10 Of the Seismic Category 2 there are 11 more
11 buildings. I won't read them all. Those are the non-safety
12 buildings that are also located on the plant area fill.

13 As extensive and serious as the soil settlement
14 problems are, however, they are really only the symptoms
15 of a much deeper problem, which is how and why errors of such
16 magnitude could occur. These are the quality assurance
17 issues and attitudes about plant construction which not only
18 permitted, but indeed caused the soil settlement deficiencies
19 to occur.

20 A major factor behind these problems has been
21 the tremendous and unusual time and financial pressures under
22 which this plant has been built. These economic pressures
23 are three-fold:

24 One, the spiraling inflationary and regulatory
25 costs to which all nuclear plants are subject.

E2L3

1 Two, those associated with the 1984 Dow steam
2 contract deadline and, three, one of the least known, but
3 perhaps most pressing considerations, is the Michigan Public
4 Service Commission's policy which states that, "Not until a
5 plant is deemed used and useful in its basic purpose can its
6 construction costs be passed on to the ratepayers."

7 Even Consumers President, John Selby, has
8 referred to this as the Catch-22 about Midland, for whether they
9 see it as a sound investment or not, timely completion of the
10 Midland plant has become a do or die situation for Consumers.
11 These kinds of pressures and a quality assurance program that
12 the NRC has characterized as "minimally acceptable" in the past,
13 have led to a series of major problems over the life of the
14 plant.

15 Looking at the six basic safety systems built
16 into every nuclear plant, serious problems have been identified
17 in five of the six systems over the years.

18 First is the emergency core cooling system,
19 which has experienced wiring errors and related component
20 cooling water system errors in 1980.

21 Second is the reactor containment systems,
22 which have had rebar embedment errors in 1975; the reactor
23 vessel itself in Unit 1 was identified in 1978 as one of 12 B
24 and W reactors manufactured with defective welds,
25

1 which will shorten its lifespan, and in 1979 and '80 it
2 experienced 8 anchor bolt failures. These are not to mention
3 the generic problems that also affect the Midland plant, and
4 they involve situations we are familiar with like Three
5 Mile Island, Crystal River, where they had feed water problems;
6 and, most recently, the Rancho Seco incident of overcooling.

7 These all affect B and W reactors, although they
8 can't be considered quality assurance problems in the same sense
9 as the site-specific ones.

10 The third system is the control room filtration
11 systems, and they have had problems in 1980 with the work done
12 by Zack.

13 The fourth is the ultimate heat sinks, which
14 have been questioned as a part of this soil settlement proceeding
15 as a part of the inner cooling pond.

16 The fifth is the hydrogen control system, the
17 one that hasn't had problems; and, lastly, the redundant
18 on-site power systems, which brings us back to the problem
19 of the diesel generator building.

20 One other problem that could not be considered
21 as serious as these, but is nonetheless significant for other
22 reasons, is the settlement of the administration building,
23 which occurred in 1977.

24 When the footings of this non-safety building
25 settled, Consumers elected to remove and replace the faulty

E2L5

1 subsoil to ensure the building's stability. Then on the
2 basis of only two soil borings taken outside the immediate
3 area, Consumers concluded it was an isolated problem, and a
4 few months later began the construction of the neighboring
5 diesel generator building.

6 Since the diesel generator building was only
7 in its initial stages, which I understood was closer to 20
8 percent when its settlement was first noted in 1978, it seems
9 that removal and replacement of its faulty fill would have
10 been the conservative choice for this safety-essential building,
11 but instead Consumers chose to preload the structure with
12 37,000 tons of sand in an effort to consolidate its subsoil,
13 despite the stresses this would induce on the underground
14 piping systems.

15 In defending the choice of the preload or sur-
16 charge over the removal and replacement option to the NRC
17 in 1979, Consumers said--and this is a direct quote--"Preloading
18 was the least costly feasible alternative for corrective
19 action. Also construction of the structure can continue while
20 the surcharge load is being applied. Thus, this alternative
21 will minimize the impact on the construction schedule."

22 The NRC didn't give their approval of this plan;
23 but, nevertheless, allowed Consumers to proceed at their own
24 risk.

25 Now, with the diesel generator building complete,

E3L6

1 full and fair evaluation of its subsoils by the NRC is
2 practically impossible.

3 One of the other safety structures which I
4 mentioned, that is located on the faulty fill soils, is the
5 borated water storage tank. It is significant because in 1978
6 and 1979 with the extent of the soils problems that had
7 been identified, only the ring foundation for the tanks was
8 completed, but rather than replace the soils, Consumers again
9 decided to go ahead and erect the tanks, proceeding again at
10 their own risk.

11 In 1981 the tank foundation cracked, and
12 Consumers has now proposed a remedial scheme for support which
13 the NRC is in the process of evaluating, and just a couple of
14 days ago--I have a letter from Consumers referring to this
15 problem at the borated water storage tanks, and I will read
16 from the last paragraph.

17 COTTON In conclusion, it seems that--now, this is
18 not their words yet. Now, despite or perhaps because of the
19 lack of NRC concurrence, this is what Consumers has to say
20 about the borated water storage tanks, "Further, as stated
21 in our May 5th through 7th, 1981 meeting, we do not feel
22 that this borated water storage tank problem is soils related.
23 For these reasons and to the importance of maintaining our
24 schedule, we will begin surcharging the valve pits on July 6,
25 1981."

1 These are called "Proceed-at-your-own-risk"
2 policies by Consumers; but, of course, the risk is ours, for
3 whether we are speaking of the astronomical financial costs
4 or the even more important safety costs, it is we the public
5 who will pay the ultimate price for this nuclear plant and its
6 soil settlement errors.

7 CHAIRMAN BECHHOEFER: Ms. Sinclair.

8 MS. SINCLAIR: Yes.

9 When the problems of the poorly compacted soil
10 under portions of the Midland n-plants and cooling pond, with
11 its resulting adverse impacts on the buildings and structures,
12 first became known, I was impressed with the care and vigor
13 with which the Nuclear Regulatory Commission was pursuing the
14 remedial action. The December 6, 1979, order to halt construc-
15 tion pending determination of the adequacy of Consumers Power
16 Company's remedial efforts was a part of that careful approach.
17 That attitude persisted for some time.

18 However, in the past few months this attitude
19 had changed to one of giving the highest priority to expeditious
20 resolution of all points of litigation rather than emphasizing
21 careful resolution of the construction problems involved. In
22 the process, decisions are being made that violate the NRC's
23 own rules.

24 Certain determinations have already been made
25 about disposing of the quality control issues that, in my view,

E2L8

1 should have been the substance of this hearing.

2 It seems that we will go through much the same
3 scenario that we had at the show cause hearing on quality
4 control in 1974, with much the same conclusions. As a partial
5 explanation, I have been advised by the Staff that at the
6 insistence of the Reagan Administration, Congressman Thomas
7 Beville, head of the Appropriations Sub-Committee, is requiring
8 a speed-up of licensing and monthly reports on progress because
9 of the financial burden on utilities that resulted from delays
10 in licensing due to the TMI accident and the necessary
11 evaluations which that accident required.

12 I contend that this speeding-up of licensing
13 where there are serious safety and quality control issues to be
14 resolved is a criminal act against the American public.

15 I intend to send a copy of this statement to
16 President Reagan and Congressman Beville, as well as my own
17 Contressman and Senators.

18 In 1974, the quality control hearings--the first
19 of its kind in the country--came about because Consumers Power
20 Company did not keep their promise to improve quality control
21 that it made to the Appeal Board who affirmed the construction
22 license in 1972 only on that condition.

23 After inspection reports showed that no improve-
24 ment had been made, the angry Appeal Board wrote a sharply
25 worded letter (November 26, 1973) to the Director of Licensing,

1 saying, "What we have here is a pattern of repeated,
2 flagrant, significant QA violations of a non-routine character,
3 coupled with an unredeemed promise of reformation."

4 In those hearings, with intervenors having no
5 counsel or expert witnesses, a series of witnesses for the appli-
6 cant trouped by essentially unchallenged before an acquiescent
7 licensing Board to state how competent they were. The Board
8 bought their assertions and promises. Since then, the major
9 quality control issue, improper soil compaction, the subject
10 of these proceedings, developed. Such results are the
11 inevitable consequence of a regulatory process that is manipu-
12 lated and controlled by those supposedly being regulated.

13 We find ourselves in the same situation today.
14 The same biting indictment that the Appeal Board leveled
15 against Consumers Power Company and Bechtel Corporation in
16 1973 could be made today.

17 We also see the Staff ready to go through
18 another meaningless hearing as they did in 1973 on the basis
19 of another set of promises by Consumers Power Company.

20 The Appeal Board made a further observation in
21 their letter to the Director of Licensing in 1973. They said,
22 "But there remains the unresolved question as to whether
23 the same or equally serious QA shortcomings may be infecting
24 other aspects of the construction work. It is difficult to
25 understand how any construction activity can be allowed to

E2L10

1 proceed until that question is settled."

2 Well, that question was never settled. The
3 meaningless, unchallenged hearing made sure of that.

4 That very important question continues to hang
5 over this whole project to this day.

6 This hearing could well have been an instrument
7 by which the real causes of the soil compaction failures were
8 identified, and we might finally have arrived at what procedures,
9 changes in personnel, management responsibilities, and communica-
10 tions would improve QA for the whole project.

11 Mr. James Keppler, Director of NRC's Region III,
12 has already seen these various factors as the problem and that
13 it rests on Consumers Power Company's management as a whole.

14 For example, when he was deposed for this
15 hearing, James Keppler said, "I told Consumers Power Company
16 representatives that if their operation at Palisades didn't
17 begin to show some measurable improvement, that I would not
18 recommend issuance of the operating license at Midland, if,
19 and when, this project is built."

20 Keppler further states, "I viewed the problems
21 at Palisades as not strictly site oriented--but related to
22 issues broader in the sense of procedural controls, communications
23 controls, quality of people, and so forth."

24 Therefore, he has already indicated that these
25 root QA problems are management problems that apply as much to

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1 the breakdowns in construction and the operation of Palisades
2 as they do to the QA problems at the Midland site.

3 Yet, after five days of announced inspection
4 in May, Mr. Keppler is ready to give his judgment of
5 "reasonable assurance" that better quality control performance
6 will take place in the future.

7 And thus, the opportunity to identify through
8 this hearing process those key issues that improve both
9 operation of Palisades and construction at Midland is lost.

10 Governor Babbit of Arizona and a member of the
11 Kemeny Commission, made a point of the fact that it should be
12 recognized that some utilities are just not capable of properly
13 building and operating a nuclear plant.

14 Consumers Power Company has demonstrated their
15 ineptness both here and at Palisades, and it's time the NRC
16 set up criteria for telling a utility to shape up or get out of
17 the nuclear business.

18 All of these quality control problems are a heavy
19 burden for the ratepayers. The NRC has yet to order a heavy
20 financial penalty for poor quality control in construction of
21 a nuclear plant against the utility and architect-engineer.
22 This is the only way that management attitudes might possibly be
23 sharpened on these problems during construction.

24 Meantime, the financial penalty that the rate-
25 payers and the people, industry, and businesses of this area

1 will suffer as a result of the quality control problems that
2 are already literally set in concrete at the Midland plants can
3 be severe indeed.

4 The aftermath of the Three Mile Island-2 accident
5 tells us that.

6 Given the history of quality control problems here
7 at Midland, the inadequate manner in which they have been
8 resolved in the past and how they are now being approached in
9 this hearing, I believe these hearings are a waste of time and
10 of ratepayers' and taxpayers' money. All the simplistic
11 conclusions are already predictable.

12 I am also concerned about how the NRC staff
13 and this Board are going about public review of the Three
14 Mile Island-related issues. These n-plants are of Babcock and
15 Wilcox design, the same as the Three Mile Island-2 plant, and
16 it is now known that there are inherent weaknesses in the Babcock
17 and Wilcox design. Given these facts, it would seem that
18 ample opportunity for a most careful public review of these
19 weaknesses and how they have been or will be corrected or
20 compensated for, would be a central obligation of the NRC.

21 Since the operating license notice of hearing
22 was posted a year before Three Mile Island and at least five
23 years before completion of the plant was expected, none of
24 these issues were incorporated as contentions in the proceedings.
25 It would seem that the NRC and this Board would provide a greater

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1 opportunity for airing these issues than placing the burden
2 of proof on a citizen--as they have asked me--to prove that
3 there are, or may be, unresolved Three Mile Island issues and
4 to set them forth with specificity by July 31, 1981 of this
5 year, as Judge echhoefer ruled in his order dated June 5, 1981.

6 Meantime, the Staff states it will take until
7 July 28, 1982, to file their Safety Evaluation Report and that
8 there will be no opportunity for public comment after that, I
9 consider this the most narrow, restrictive and repressive
10 view possible on these serious issues.

11 I further question whether this Board had the
12 jurisdiction to make this decision. The NRC staff in their
13 response to Mapleton intervenors' request for suspension of
14 construction activities, dated June 22, 1981, specifically
15 states that the Licensing Board's jurisdiction extends only to
16 soil settlement matters. The Three Mile Island-related issues
17 involve the entire plant, and it should be the Operating
18 Licensing Board that should be ruling on this, in my opinion.

19 While the Staff claims that all the relevant
20 documents on which Three Mile Island-related contentions can be
21 filed are currently in the public domain, the fact is that many
22 of the most critically important issues have not been resolved
23 yet.

24 In the March, '81 issue of "Nuclear News", Dr.
25 Thomas Pigford, head of the nuclear engineering department at

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1 the University of California at Berkeley, and a member of the
2 Kemeny Commission that made the President's study of the
3 Three Mile Island-accident, states that there is little promise
4 of timely resolution of the need and means of coping with
5 greater quantities of hydrogen from zirconium oxidation. Also
6 he states the serious problem of the performance of reactor
7 cores under degraded cooling conditions remains unresolved.
8 He further states: "Even more disturbing is the evidence that
9 the NRC shows little recognition of fundamental flaws in its
10 approach to reactor safety."

11 And there is other evidence in the literature
12 that some of the fundamental flaws of the Three Mile Island design
13 and accident have not been even identified properly.

14 M. M. McQueen of Fluid Components, Inc.,
15 Canoga, California, writes in the May issue of "Nuclear News",
16 which is an industry publication, "I am dismayed at the lack
17 of attention given by various authors to the poor instrumenta-
18 tion at Three Mile Island confused the operator with ambiguous,
19 conflicting, and downright false information; but, this factor
20 about Three Mile Island has been largely overlooked by the
21 various studies, authors, and the like. Worse, we have blamed
22 the operators as being poorly trained because they believed
23 and reacted to the instruments they had been conditioned and
24 trained to use."

25 (Continued on next page.)

1 In spite of this continuing debate on serious
2 Three Mile Island issues, the Staff, in their response dated
3 May 14, 1981, already prejudged any effort I might make to draft
4 Three Mile Island-related contentions in the brief time
5 allowed, with the following statement:

6 "Should an intervenor wait until the SER is
7 issued (estimated issuance date summer 1982) to file
8 new contentions on the basis of the 'TMI Action Plan
9 Requirements' (published November 1980), the Staff
10 submits that an intervenor probably could not show a
11 demonstrated good cause for this late filing. In
12 fact, the Staff questions whether good cause could
13 be demonstrated should an Intervenor file a TMI-
14 related contention tomorrow."

15 This is really an arrogant presumption on the
16 part of the Staff. Citizens have made a significant contribu-
17 tion to safety here. We anticipated a number of the safety
18 problems that Three Mile Island experienced, that the Staff did
19 not.

20 At the Three Mile Island accident, Harold Denton,
21 NRC's Director of Regulation, stood before the nation's TV
22 cameras and said the hydrogen formation was a completely new
23 and unforeseen phenomenon; and Joseph Hendrie, then and now
24 Chairman of the NRC and the only engineer on the Commission,
25 publicly speculated that the hydrogen in the reactor might

2 1 explode and release radioactivity to the countryside. And
2 the media was blamed for overreacting.

3 Yet, here, we citizens had taken notice of the
4 memo the Advisory Committee on Reactor Safeguards had sent to
5 the Atomic Energy Commission back in 1969, stating that under
6 certain conditions, hydrogen would form over the reactor core
7 and some means of handling it should be found. A hydrogen
8 recombiner was installed in the Midland N-plants, and was
9 there before Three Mile Island. Three other safety systems
10 identified as necessary since Three Mile Island that will now
11 have to be retrofitted in all other reactors were also already
12 in place here at the time of Three Mile Island.

13 There are other ways in which the intervention
14 of citizens in nuclear plant licensing has made a substantial
15 contribution.

16 It is only citizens and independent scientists--
17 not the AEC or the NRC or the nuclear industry or politicians--
18 who have raised to meaningful public policy level discussions
19 of very important questions on nuclear power development such
20 as the long-term effects of low-level radiation, the questions
21 on the adequacy of radiation standards, decommissioning, and
22 the nuclear waste disposal and transportation problems.
23 Neither the utilities, the nuclear industry or the NRC pursued
24 what the public impact of these issues would be with any of the
25 vigor necessary considering their serious nature.

1 Citizens and ratepayers here will bear the risk
2 of these nuclear plants, and they are also paying the salaries
3 of every person in an official capacity here, as well as for
4 the whole regulatory process. The Kemeny and Rogovin reports
5 advocated increased public participation and funding of
6 lawyers and expert witnesses for intervenors.

7 Yet, what we are faced with in this hearing and
8 in the new modified rules of practice posted last month in
9 the Federal Register, is more obstruction and repression of
10 our efforts to provide meaningful public review through
11 whatever means of our own we have.

12 I do not believe I can continue to lend my
13 presence to this phase of this proceeding and let it be said
14 that citizens had their day in court because that is not
15 what is happening here or in any other NRC licensing proceeding
16 today. There is no fair representation of the public. There
17 is no meaningful confrontation of the real issues in nuclear
18 power development.

19 Thank you.

20 (Applause.)

21 CHAIRMAN BECHHOEFER: Please withhold applause.

22 I might also point out that Chairman Hendrie's
23 term as Chairman of the Commission expired June 30th, and he
24 is retired and has been replaced by Dr. Nunzio J. Palladino,
25 of Penn State.

1 Mr. Marshall?

2 MR. MARSHALL: Thank you very much. I wish the
3 record to show I'm speaking extemporaneously when I'm not
4 reading from a book. The book's name is Environmental
5 Protection Agency General Counsel Opinions, Volumes I and II,
6 Environmental Law Publishing Service.

7 Speaking extemporaneously, it is the position
8 taken from these books that, from its inception, the NRC
9 hasn't had jurisdiction over this particular soil matter, but
10 the EPA has had it right from the start.

11 It seems to indicate, by the man who was
12 present and helped write the law, Senator Muskie, that that
13 is the case, and confirmed by the Attorney General of the
14 United States, Civiletti. And there has been no Attorney
15 General opinion since that time, so I think and feel that
16 that must be prevailing.

17 That's contained in the book. For instance,
18 in the questions and answers, Clean Air and Treatment Act,
19 EPA-NRC Standards governing the uranium fuel cycle.... Well,
20 that's not exactly what I wanted to get at here. There's
21 something here in the back, too. I think I have it right here.
22 I'll read it. It says that-- This is "Jurisdiction," dated
23 January 31, 1979, of General Counsel's opinions, and it has
24 to do with the waste in wetlands. Now, understand, the
25 Tittabawassee River is a navigable stream and included in the

1 waters of the United States, in the interpretation. So what
2 we have here is a question relating to the fill material:

3 "The materials used for the primary purpose
4 of replacing an aquatic area with dry land, or of
5 changing the bottom elevation of water property--"

6 Now, this, of course, is adjacent to a navigable stream, and
7 it's a floodplain--which the parcel of land upon which this
8 is situated, this construction, is a floodplain. Therefore,
9 the NRC has jurisdiction, without question, above the land,
10 and also jurisdiction over the conduct of the construction
11 and how it operates, and so forth. But in the land itself,
12 the fee simple interest, that land--and it's in here-- Mr.
13 Civiletti has stated perfectly clear enough that-- Let me see
14 if I can read what he says here:

15 "A recent opinion of the Attorney General
16 concerning the administrative authority to determine
17 jurisdiction under Section 404, supports an inter-
18 pretation of Attorney General Civiletti to Clifford
19 Alexander, September 5, 1979, noting the Admini-
20 strator's rule under Section 101(b) in the dual
21 role of EPA and, of course, under Section 404, that
22 a jurisdictional decision by the Courts would
23 necessarily affect parts of the program administered
24 by the EPA. The Attorney General concluded that
25 the EPA, and not the Courts, had the authority to

1 determine the jurisdictional reaches of waters of
2 the United States."

3 And this is in general argument to take in the
4 Tittabawassee River. Well, that opinion involved the term
5 "waters of the United States," in quotations, which appears
6 in the general provisions of that section, 502(7), and the
7 term "fill" appears only in Section 404 and related parts of
8 Section 208. In each case, the interpretation of the term
9 clearly impacts other programs under the Act. In fact, in the
10 instant situation, an interpretation by the Courts could
11 conceivably even affect the applicability of the Resource
12 Conservation and Recovery Act, which is also on EPA hands,
13 with the exclusion of solid waste, those industrial discharges
14 which are point sources subject to writs under Section 402 of
15 the Federal Water Pollution Control Act.

16 So, anyway, it says, "...point sources meet
17 the basic definition of fill." And it is clearly permitted
18 by Congress to no other agency than the EPA to make such
19 determinations.

20 Now, we have here also in one of these pages,
21 speaking to this same question, Senator Muskie. Well, here
22 we have, January 31, 1979, of General Counsel Opinions, one
23 1972 legislative history, where it says:

24 "Thus, Congress retained a separate program
25 for dredged and fill materials for administrative

1 reasons, but make it clear that such administrative
2 interest did not override the Administrator's
3 responsibility for environmental concerns. While
4 Congress clearly did not anticipate the specific
5 question addressed by this opinion, the general view
6 concerning the 404 program are consistent with my
7 conclusion that the Administrator may properly
8 determine the primary purpose test."

9 Now, over here we have, on May 17, 1979, in
10 General Counsel Opinions, Section 502(7) in the book, that
11 the term "navigable waters" means the waters of the United
12 States, including the territorial seas. That's the definition.
13 So the Tittabawassee River is incorporated in that definition.
14 And, as I say, a floodplain lies adjacent; that is, this parcel
15 of land of the Applicant lies adjacent to the navigable waters
16 of the Tittabawassee and, therefore, comes within the meaning
17 of this Act and within the meaning of the interpretation of
18 the Attorney General of the United States, which hasn't been
19 changed by anyone since I've researched it, and found there
20 hasn't been anything further.

21 We have here, under August 1, 1979, where
22 federal regulatory action is circumscribed by extensive
23 procedures, including public participation, for evaluating
24 environmental issues. It is taken by the agency with recognized
25 environmental expertise. Formal adherence to the NEPA

1 requirements is not required unless Congress has specifically
2 so directed. So it's still with EPA.

3 This is dated August 1, 1979, and I wanted to
4 explain that this appears as deleted in your copies that I
5 served you, but you can get that from Section--from the
6 Freedom of Information Act--because I used that magic pencil
7 which you fellows use, and it didn't come out so pretty good
8 on the photocopies. Anyway, you can get it from the Freedom
9 of Information Act, and specifically it's EPA in that section.
10 And if you raise a question of public interest, they'll give
11 it to you free.

12 Now, it says--dated August 1, 1979:

13 "Courts have construed environmental issues
14 broadly. For example, EPA has been held to be
15 exempt from NEPA where statute required the
16 Administrator to determine that the action is
17 essential to public interest or public health
18 involved. The Administrator's action in canceling
19 the regulation of pesticides similarly has been
20 held exempt from NEPA."

21 Now, there again we have it again, that it's
22 absolutely within the jurisdiction of the Environmental
23 Protection Agency, and not the NRC, in the soil itself. But
24 above the soil, everything-- And what I'm saying, I believe, is
25 this: That if we have an expert such as Darl Hood, for NRC,

1 that he should be reporting to the EPA. At least they should
2 be consulted, and should have at the hearing a man represent-
3 ing them in that regard. I don't think that the NRC should
4 have a short-order restaurant here. That's what I'm saying,
5 regardless. They give the order, go back and cook it, and
6 then come back and eat it themselves. I think that the
7 Congress of the United States delegated authority over this
8 particular subject matter, this portion of it, to the Environ-
9 mental Protection Agency, and that they are held responsible
10 by the people of the United States and the Congress, to
11 exercise that authority that's been conferred upon them. And
12 this hasn't happened.

13 Now, why it hasn't happened, I don't know.
14 But I know that I have the latest thing, up to 1980, in the
15 last issues here, and I get it just as fast as it comes down
16 from Washington--and sometimes even faster.

17 So that's what-- All I'm saying is that the
18 Mapleton Intervenors challenge the authority, ever since
19 they've been at it, as to jurisdiction over the subject and
20 the subject matter as it pertains to the fill and all the
21 groundwork underneath that soil and those structures. Whatever
22 happens above that, that's NRC's and Mr. Paton's department,
23 as far as Mapleton Intervenors are concerned.

24 That's all we have to say.

25 CHAIRMAN BECHHOEFER: When we get around to

1 talking about some of the preliminary matters, we are going to
2 mention the jurisdictional question.

3 Mr. Paton or Ms. Brown?

4 MS. BROWN: The hearing arises out of an
5 order issued by the Nuclear Regulatory Commission Staff against
6 Consumers Power Company more than one and a half years ago.
7 The order which was issued on December 6, 1979, modified the
8 Midland construction permits by prohibiting further soils
9 construction and physical implementation of the proposed
10 remedial actions.

11 The reasons for this order were threefold:

12 First, quality assurance deficiencies involved
13 in the settlement of the diesel generator building and soil
14 activities at the Midland site;

15 Second, the material false statement in the
16 Final Safety Analysis Report; and

17 Three, numerous unresolved safety issues
18 associated with remedial actions proposed to correct the soil
19 deficiencies under and around safety-related structures.

20 Because Consumers Power Company requested a
21 hearing, the order modifying the construction permit did not
22 go into effect immediately; also, it is not in effect today.

23 Consumers, however, has voluntarily agreed to
24 comply with the provisions in the order, with the exception
25 of Consumers' recent decision, with which the Staff has

1 concurred, to proceed with the installation of several backup
2 interceptor wells.

3 By way of background, I would briefly recount
4 the significant events that both preceded and prompted the
5 issuance of this order.

6 First, in July of 1978, less than six months
7 after the start of construction of the diesel generator
8 building, Consumers observed that there was excessive
9 settlement of that structure. Indeed, the settlement values
10 at that time were approaching the total settlement values for
11 the 40-year life of the building. This excessive settlement
12 was reported orally to the NRC resident inspector at the
13 end of July.

14 Late in September of that year, Consumers filed
15 with the NRC a written notification pursuant to Regulation
16 50.55(e), of a significant deficiency in construction; namely,
17 excessive settlement of that diesel generator building.

end 3

18 (Continued on next page.)
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1 MS. BROWN: An investigation by the NRC office
2 of Inspection and Enforcement followed. The conclusions of
3 that investigation were that, one, there was an adequate
4 control and supervision of the plant fill.

5 Two, corrective action regarding non-conformances
6 was inadequate.

7 Three, construction specifications and design
8 bases were not followed.

9 Four, the interface between design, organiza-
10 tion and construction was inadequate.

11 Five, the final safety analysis report contained
12 inconsistent, incorrect unsupported statements.

13 In January of 1979, Consumers began placing a
14 20-foot sand surcharge on the diesel generator building area.
15 This remedial action proceeded with the knowledge of the
16 NRC Staff; however, without its expressed approval or
17 concurrence.

18 The surcharge was removed in August when
19 Consumers' experts determined that secondary consolidation
20 had been reached.

21 In the spring of 1979, at the urging of the
22 NRC Staff, Consumers took soil borings at the Midland site.
23 The results of those borings showed that the fill material
24 beneath several additional structures was also inadequate.

25 On the basis of these results, Consumers proposed

1 remedial measures for these other structures.

2 In March of 1979, the NRC Staff issued the
3 initial 50.54F request for information concerning the adequacy
4 of the plant fill, the quality assurance program and the
5 determination and justification of acceptance criteria for
6 the various remedial measures already taken and proposed to be
7 taken by Consumers.

8 While Consumers did respond to the 50.54F
9 request, most of their responses were found incomplete and
10 inadequate, herefore necessitating the issuance of follow-up
11 requests for information.

12 Suffice it to say, that as of December 6th,
13 1979, when the order was issued, there were numerous unresolved
14 safety issues associated with the proposed remedial measures.

15 In general terms, the Staff was not satisfied
16 that the designs for the proposed remedial actions were
17 sufficiently conservative.

18 As a result of 50.54F requests, follow-up
19 requests and other communications between itself and the
20 Staff, Consumers has gradually changed the proposed fixes to
21 take into account the safety concerns raised by the Staff.

22 Indeed, within the past six months, Consumers
23 has changed fixes for two of the major structures affected by
24 the inadequate fill.

25 For example, the fix originally proposed by

1 Consumers for the service water pump structure involved
2 placing piles and corbels beneath the cantilevered portion
3 of that structure. The Staff did not have reasonable assurance
4 that the piles and corbels would adequately support that
5 cantilevered portion and, therefore, in November of 1980,
6 proposed several interrogatories with respect to that design.

7 In March of this year, in response to interroga-
8 tories, Consumers informed the Staff that it had decided
9 to drop the pile and corbel design, and now proceeded with a
10 more conservative fix, specifically a continuous wall footing
11 which will extend to the glacial till level.

12 In fact, as recently as May of this year,
13 Consumers abandoned its originally proposed fix to the auxiliary
14 building electrical penetration area, which was to place
15 caissons under that area, and instead they have decided to
16 proceed with a more conservative fix which involves removing
17 the bad fill and replacing it with a mass of concrete.

18 The NRC Staff has welcomed these changes since
19 they have addressed the Staff's original concerns.

20 The Staff is currently in the process of either
21 waiting for more specific information on certain fixes, or
22 reviewing for approval information already received on other
23 fixes.

24 Ordinarily in an enforcement proceeding such as
25 this, the Staff would proceed first with its presentation of

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1 testimony on the basis of the order; however, because the
2 Staff and Consumers are currently in the process of negotiating
3 stipulations and because a proposed stipulation on the issue
4 of quality assurance has already been filed, the Staff has
5 decided to postpone presentation of its case in support of the
6 order, and instead would proceed with its testimony on
7 quality assurance and management attitudes in response to
8 Intervenor Barbara Stamiris' contentions one, two and three.

9 In addition to addressing Mrs. Stamiris'
10 contentions in the following two weeks of hearing, Consumers
11 and the Staff requested a ruling from the Licensing Board on
12 the proposed quality assurance stipulation, and the Staff
13 will also present testimony in support of the last paragraph
14 of that proposed stipulation.

15 This stipulation, which was filed by Consumers
16 and the Staff on June 8th, consists of three paragraphs.

17 The first two relate to the enforcement aspect
18 of the case; that is, in Paragraph 1, Consumers admits that
19 prior to December 1979, there were certain enumerated quality
20 assurance deficiencies associated with soil construction
21 activities.

22 Then in Paragraph 2, Consumers agrees not to
23 contest the Staff's conclusion that these enumerated quality
24 assurance deficiencies constituted a breakdown in quality
25 assurance and an adequate basis for the issuance of the order.

1 Because Consumers has submitted to the jurisdiction
2 diction of this Licensing Board with respect to the quality
3 assurance breakdown prior to December 1979, it is not necessary
4 for the parties to present testimony in support of that issue.

5 Paragraph 3 of the stipulation, however, is a
6 different matter. That paragraph addresses the present quality
7 assurance situation at Midland, and specifically stipulates
8 that the NRC has reasonable assurance that quality assurance
9 and quality control programs will be appropriately implemented
10 with respect to future scils construction activities.

11 Because that paragraph involves a health and
12 safety finding, which the Board cannot delegate to the Staff
13 itself, but rather must independently make, Mr. Keppler,
14 the Director of Region III, will present testimony with
15 respect to NRC's appraisal of Consumers' quality assurance
16 performance.

17 Paragraph 3 of the stipulation also stipulates
18 that the quality assurance program satisfies all requisite
19 NRC criteria. This statement was included at the urging
20 of Consumers. It must be noted, however, that the docketed
21 quality assurance program is not at issue in this proceeding.
22 The Staff has never alleged that the quality assurance program
23 was inadequate. It has been the implementation of that
24 program that the Staff has found deficient.

25 Nevertheless, Mr. Gilray, a quality assur. be

1 engineer with the NRC, will appear with Mr. Keppler to provide
2 testimony in support of Paragraph 3.

3 If this proposed stipulation is accepted by
4 the Board, the Staff maintains that it has satisfied its
5 burden of going forward with evidence sufficient to require
6 reasonable minds to inquire further.

7 With respect to Mrs. Stamiris' contentions,
8 the Staff plans on introducing testimony on the following:

9 In general terms, Contention 1 alleges that
10 Consumers has a less than complete and candid dedication to
11 providing information to the NRC. The contention then
12 specifies examples in support of its thesis.

13 Staff witnesses will address all of Contention
14 1, with the exception of 1-D. That includes the ix supple-
15 mental examples that Mrs. Stamiris phrased in an April 20,
16 1981 pleading. The parties have agreed to postpone presenting
17 testimony on 1-D because that subpart deals with matters that
18 are currently the subject of stipulation discussions.

19 Parts of Contention 2 will also be addressed.
20 Contention 2 alleges that Consumers' time and financial
21 pressures have adversely affected resolution of the soils
22 settlement problem.

23 Staff witnesses will address only 2-A, C and D
24 during this portion of the hearing. Contention 2-B and the
25 12 supplemental examples will be addressed either at a hearing

1 later this summer or in the fall.

2 Contention 3 alleges failure to implement
3 Consumers' quality assurance program. That contention will be
4 addressed in full by Staff witnesses during this portion of
5 the hearing.

6 The balance of Mrs. Stamiris' contentions
7 and Mrs. Sinclair's and Mr. Marshall's operating license
8 contention will be addressed at a later session of this pro-
9 ceeding.

10 In closing, I would like to inform the Board
11 that before Consumers proceeds with presenting its witnesses,
12 the Staff is prepared to offer Darl Hood's testimony, which
13 responds to the Licensing Board's concern with respect to
14 construction. This testimony, which was recently updated,
15 addresses the installation of back-up interceptor wells and
16 the surcharging of the two valve pits adjacent to the borated
17 water storage tanks.

18 That concludes the Staff's opening statement.

19 CHAIRMAN BECHHOEFER: Next we will proceed to
20 limited appearance statements, but I think we will take about a
21 15-minute break before we do that.

22 MR. PACE: Excuse me. There are two of us who
23 are here from Bay City, and we have very short personal limited
24 statements. Could we make them before you break so we could
25 attend to our other business?

1 COTTON MR. MARSHALL: They are from 20 miles away.

2 CHAIRMAN BECHHOEFER: It is only 15 minutes,
3 of course.

4 MR. MARSHALL: They want to get in and out.

5 CHAIRMAN BECHHOEFER: Yes. If nobody else
6 objects, the two individuals--probably the easiest thing is
7 to come up to the table where the microphone is.

8 I might say, limited appearance statements are
9 normally limited to approximately five minutes apiece. They
10 are not evidence, as such, but if they raise problems within
11 the scope of this proceeding, which we believe should be
12 addressed, we may ask the parties to proceed to address them.

13 Identify yourself and your address, and if
14 you are representing an organization, let us know.

15 LIMITED APPEARANCE STATEMENT

16 BY PATRICK PACE:

17 MR. PACE: My name is Patrick Pace. I represent
18 my family, basically. I live at 1004 North Sheridan in Bay
19 City.

20 I really would like to ask a couple of questions
21 of Mr. Cowan and Mr. Decker.

22 I was educated as an engineer. I believe we
23 share some of the ideas about analyzing data.

24 I think that the history of the construction of
25 this plant, which began with an estimated expenditure of about

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1 \$235 million and has gone to over three billion, represents a
2 unique phenomena, and as you gentlemen know, the more you can
3 study something and the more you know about it, the better
4 job you can do when you are attempting to complete your task.

5 Recently the Attorney General of the State of
6 Michigan has filed a brief with the Public Service Commission,
7 and some of the testimony that that brief relates to says,
8 basically, that the Bechtel Corporation, which is constructing
9 this plant, originally estimated the completion dates so far
10 in the future that Consumers could not meet the provisions
11 of the Dow contract.

12 I suggest to you that the information or the
13 proposition under discussion at this hearing is very much
14 involved in timely scheduling of the completion of the plant
15 and, in fact, all of the things that you are going to hear in
16 terms of testimony must be viewed under the--or must be looked
17 at with the view that the completion date of this plant is
18 forcing people to do things in a manner that does not bode
19 well with the quality of the individual task performed, and so
20 I would hope that you three gentlemen would use both parts
21 of your discipline to make sure that the lawyers, who are
22 involved with all this, don't let their love for words get in
23 the way of the laws of physics.

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LIMITED APPEARANCE STATEMENT

BY MR. MILLER:

MR. MILLER: Members of the Board, my name is Terry Miller, and I reside at 3329 Glendora, and that's also in Bay City. I just have a few short remarks that I wrote up, but I don't think I will read them.

Three years ago I was not aware of nuclear power, not as much as I am now. I had quite a bit of confidence and faith in the regulatory system, too. I am not sure I have that today.

Our papers in Bay City, Midland and Saginaw, along with the television and radio, have presented to us many, many examples of what seem to be errors or mismanagement in the construction of the plant. We have read in our papers and seen on television problems associated with wells that are battered and reactor vessels. We have heard about cable trays that were built too small to hold very important wiring systems and cables in the installation. We have heard about problems around the air conditioning system and the control center.

We are here today because of a soils settlement problem. That does not give a whole lot of confidence in the people in the community when we hear this repeatedly. We also hear statements by Consumers Power Company that they are confident that these things will be corrected, but they still

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1 continue.

2 Those things give us a lot of concern, a lot
3 of concern, and just recently Dow Chemical has applied for a
4 hazardous landfill, which perhaps you are aware of.

5 I attended a public meeting a week ago. At
6 that landfill--those landfill meetings, those opposed to it
7 did some investigating and discovered that the area around,
8 and in some cases in the same area as the nuclear construction
9 site, was literally pocked with brine wells, some under high
10 pressure injection, that there were abandoned coal mines
11 in the area; that there were storage caverns that had been
12 used that the public--at least I was not aware of.

13 In addition, and perhaps more frightening,
14 there are geologic faults in this area, and coupled with the
15 collective construction problems with this plant, my concern,
16 and those that I know, has been extremely heightened, and
17 I am very fearful of the completion of this plant and what
18 it holds for this community.

19 I have a question. Given this information and
20 our concerns, will citizens be able to intervene during the
21 operating license hearing?

22 CHAIRMAN BECHHOEFER: Normally we don't answer
23 questions, but I might say we have already had the intervention
24 process, and while the rules do permit under limited circum-
25 stances late interventions, there are citizens already involved
in the process, and some of the points you raised are the

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1 subject of contentions, so to that extent, those matters will
2 be dealt with.

3 MR. MILLER: Limited appearances, however,
4 will be allowed, and in the case of extenuating circumstances,
5 late interventions also?

6 CHAIRMAN BECHHOEFER: Well, there are specific
7 criteria, and anybody can always apply for intervention, but
8 the criteria are fairly stringent.

9 Some of the issues you mentioned I believe are
10 the subject of contentions, some of them in the soils settlement
11 area.

12
13 MR. MILLER: Okay. Thank you very much.

14 CHAIRMAN BECHHOEFER: The geologic question,
15 particularly, will be--it is an issue that we are going to
16 consider later on in this soils settlement process, and that
17 specifically is to be covered.

18 Let's take a 15-minute break. We will be back
19 for some more limited appearance statements. We have left a
20 list for people to sign up, and I will pick up the list.

21 (Recess.)

22 CHAIRMAN BECHHOEFER: Back on the record.

23 The only other name I have for limited appearances,
24 who has signed up so far, is Sharon Warren.

25 Juse use the microphone.

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LIMITED APPEARANCE STATEMENT

BY SHARON WARREN:

MS. WARREN: My name is Sharon Warren. I live at 636 Hillcrest in Midland. I am Chairman of the Lone Tree Council, Tri-County Environmental Group.

I would like at this time to present a series of documents which I believe have important implications because of their findings upon the matters being considered in this and subsequent hearings around the Midland plant.

The first is a report of a study entitled, "Salsburg Hazardous Waste Disposal Site: Initial Design Assessment", prepared by Smith, Hinchman & Grylls Associates, Inc.--Applied Environmental Reserach Division.

I would like to read portions of that report.

The introduction of that report states, "At the request of the Ingersoll Township Board, Applied Environmental Research initiated an assessment of the environmental integrity and soundness of the plan for a hazardous waste site to be owned and operated by Dow Chemical Company. The site is located along Salsburg Road and is bordered by Waldo Road. The effort of AER has concentrated on two issues which in AER's judgment have not been fully addressed and described in Dow's site plan. The issues are: (1) the condition, location, and extent of subsurface craters formed by the placement and operation of production brine wells in the vicinity of the site,

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1 and (2) the hydrologic conditions underlying and lateral to
2 the proposed hazardous waste site.

3 "Brine well cavities and Ground Subsidence:

4 "An issue which has not been addressed in Dow's
5 site plan is the issue of ground collapse or subsidence caused
6 by solution mining of salt deposits. The sinkholes that may
7 result from this subsidence are not a remote possibility;
8 sinkholes have been reported in Grosee Ile, Michigan; Windsor,
9 Ontario, New York State, the Gulf Coast, Kansas, Saskatchewan,
10 Virginia and England. In many of these instances, the ground
11 collapse is accepted as a byproduct of solution mining and
12 operations usually continue after backfilling and other
13 remedial measures are instituted. In some cases, operations
14 continued with no steps taken to restore the original ground
15 surface. In all of the above cases, ground collapse ceased after
16 a time because the cavity formed by the solution mining
17 eventually filled in with rock and soil.

18 "The implication to the hazardous waste disposal
19 site is that it is not clear from the design study that the issue
20 of ground collapse has been addressed during the facility design.
21 In the absence of data from Dow or their consulting engineers and
22 in that the Michigan Department of Natural Resources has not
23 addressed the question, the issue remains to be studied.

24 Obviously, AER is concerned about collapse into the brine well
25 cavities because should a sinkhole occur in the vicinity of

1 the hazardous waste site, there is a possibility that the
2 integrity of the disposal site could be damaged, thus allowing
3 a release of hazardous material."

4 Further on in the report is discussed details
5 of solution mining, sinkhole formation and finally--this is a
6 quote--"Because the ground collapse is initiated well below
7 the surface, there is usually no visual indication that a
8 collapse is about to occur. Careful monitoring of ground
9 levels and recording subsidence rates may indicate an ensuing
10 problem, but it does not provide a guarantee.

11 "The wells abandoned by Dow near the proposed
12 landfill are early wells that are reportedly no longer
13 economical to operate. If these wells are no longer operational,
14 the site of the cavities or gallery formed during their opera-
15 tion should be determined. Furthermore, as well casings
16 deteriorate below the surface, there is a possibility that
17 saturated soils could flow into the casings, down the well
18 shaft and fill the brine gallery."

19 (Continued on next page.)
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1 There are a number of questions that have
2 additional studies and data that are needed, and these questions
3 proposed in this report are:

4 What is the nature, thickness and extent of
5 fracturing of the bedrock between the surface and the salt
6 deposit?

7 What method of solution mining was employed at
8 the wells near the facility?

9 What is the estimated size of the gallery formed
10 by the solution mining?

11 What is the estimated areal extent of the
12 gallery?

13 Are the soils overlying the bedrock prone to
14 piping when saturated?

15 Are there artesian sources of water or other
16 operations active in the area that may be contributing to the
17 continued expansion of the gallery?

18 The second report that I am submitting into
19 the record is a letter dated May 6, 1981, from Dr. Eugene
20 Jaworski to William D. Marks, Michigan Hazardous Waste Site
21 Approval Board Chairman. In this letter, Dr. Jaworski deals
22 with a number of questions; specifically, Nos. 1, 3, 4 and 5,
23 which I feel must be answered by the NRC Staff as soon as
24 possible. Included in that document is a report from Dr.
25 Jay Parrish, Geophysicist with GeoSpectra Corporation.

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1 Reading from the letter by Mr. Jaworski, he
2 poses these questions:

3 "Whose responsibility is it to fully investigate
4 the data from Geospectra Corporation of Ann Arbor
5 regarding the anomalous dips and faults in the area
6 of the proposed landfill?"--which is, by the way,
7 directly across the river from the Midland Nuclear Plant site.

8 "In addition, a probable fault trend approxi-
9 mately 20 miles in length is evident along the
10 relatively straight stretch of the Tittabawassee
11 River near Midland. If this is a fault, it appears
12 to have influenced the course of the Tittabawassee
13 River which developed its drainage pattern during the
14 past 14,000 years.

15 "It is my understanding that Dow Chemical
16 Company is disposing of waste brine via on-site
17 disposal wells at 10,000 psi and via field wells at
18 about 200 psi.

19 "Are these disposal pressures correct?"

20 "What are the geologic implications of waste
21 injection at 10,000 psi at the Dow Chemical plant
22 site on the plugged wells, anomalous dips and/or
23 faults, and other possible structural bedrock
24 weaknesses in the landfill area?"

25 "Are geologists at Dow Chemical Company aware

1 of any earthquake or earth movements in the landfill
2 region which were caused by waste fluid injection?

3 "Is it likely that injected waste brine or
4 other injected liquid waste will migrate up under the
5 proposed hazardous waste landfill via an accident,
6 spill, or blowout?

7 "Have any of these problems occurred previously?"

8 And, lastly:

9 "Could the Site Approval Board be furnished with
10 an official summary of Dow Chemical Company's most
11 recent annual subsidence survey?"

12 Reading briefly from the letter by Mr. Jay
13 Parrish, Dr. Jay Parrish, Geophysicist--this report has
14 already been sent to Washington--this is a letter to Eugene
15 Jaworski from Dr. Parrish:

16 "I have enclosed a copy of a portion of my
17 structure map for Midland County. As you can see
18 we don't have all the wells, but I had noted several
19 NE-SW trending zones of anomalous dip. This could
20 indicate faulting. The the northeast of Midland
21 there definitely is a fault along the west edge of
22 Bay County, which I have projected down into Midland
23 Township, where I lose it due to lack of data. I
24 cannot claim that there are any definite faults in
25 the Midland area--only that the probability is good

MILLER FALLS
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COTTON CONTENT

1 enough that I would definitely recommend having a
2 look at all the well log and seismic data.

3 "There seems to be a syncline just north of
4 Midland and quite frankly I get confused as to
5 exactly what happens in northeastern Midland Town-
6 ship. The amount of structural activity going on
7 in Midland Township is rather great for the Michigan
8 Basin."

9 From my conversations with two people in
10 Washington, a geophysicist and a seismologist, I was told
11 prior to my receipt of these documents that there was not
12 enough information available, because all information was
13 received from the Department of Natural Resources, who
14 receives its information from the Dow Chemical Company, and
15 most of these things, Dow Chemical Company has not provided.
16 We have found through our investigations--not myself, but
17 the people from Ingersoll Township--we have located three
18 caverns. One of them lies in Section 28, which I believe is
19 the section that the nuclear plant is being constructed on.
20 We have no information as to the size of the caverns, what is
21 in those caverns.

22 This map, if anyone is interested--and I will
23 show this to Mr. Hood--shows the location of those caverns.

24 Based upon these documents, I would ask:

25 Has the issue of ground collapse been addressed

1 during the design of the Midland Nuclear Units 1 and 2?

2 Second, what are the sizes of the galleries
3 that have been produced by the solution mining of brine in the
4 area of the nuclear power plant?

5 Three, is it true that the NRC Staff has based
6 its geologic information and decisions on Michigan Department
7 of Natural Resources facts which, according to the SH&G Report,
8 are not complete?

9 Four, what is the "cone of influence" of the
10 chemical and brine disposal wells?

11 Five, what is the cause-and-effect relationship
12 between earth faults and high-pressure chemical disposal wells.

13 In conclusion, I ask that the NRC and the Atomic
14 Safety and Licensing Board to investigate and obtain the answers
15 to these questions as they relate to the Midland Nuclear
16 Plant, because of the grave consequences that the results of
17 solution mining, high-pressure injection wells, caverns and
18 earth faults may have on the integrity and safe operation of
19 the Midland Nuclear Plant.

20 Thank you.

21 (The Board conferring.)

22 CHAIRMAN BECHHOEFER: Ms. Brown, I wonder whether
23 the Staff was looking into any of the matters that Ms. Warren
24 mentioned, in connection both with the seismic aspects of this
25 proceeding and the material dealing with faults; and in connection,

1 perhaps, with--well, the ground collapse question might be
2 relevant to the adequacy of the corrective actions. So I
3 wondered whether the Staff was looking into, or was aware, or
4 had any information which would warrant being referred to?

5 MR. PATON: Mr. Bechhoefer, may I respond to
6 that?

7 CHAIRMAN BECHHOEFER: Yes, certainly; I meant
8 either you or Ms. Brown.

9 MR. PATON: We have looked into that. Mr.
10 Kimball, from the Geosciences Branch, will be here. The
11 parties, at least, agree that we will try to put him on the
12 stand the first thing Friday morning. If that's acceptable
13 to the Board, I suggest that we have Mr. Kimball read all of
14 Mrs. Warren's statement, and respond as to exactly where the
15 Staff is with respect to all of her statements, on Friday.

16 We have looked into it. He, obviously, can
17 give you a more complete picture of exactly where we are on
18 all those issues.

19 CHAIRMAN BECHHOEFER: That's fine with us.

20 MR. PATON: Thank you.

21 CHAIRMAN BECHHOEFER: Are there other persons
22 who wish to make limited appearance statements?

23 (No response.)

24 If not, we will get into some of the preliminary
25 matters we mentioned.

1 First, I would like to deal with the jurisdiction-
2 al question that Mr. Marshall raised several times. The Board
3 has talked over these jurisdictional questions, and we
4 express no opinion whether or not EPA has or hasn't jurisdiction.
5 We believe we are to hold hearings on this subject matter
6 under the Atomic Energy Act, essentially, and to some extent,
7 NEPA; but the Atomic Energy Act, primarily. And, therefore,
8 we believe we have jurisdiction. We can't say whether or not
9 EPA has or hasn't jurisdiction of its own, but we think that
10 that's really not of concern to us.

11 MR. MARSHALL: I even quoted Muskie, who wrote
12 the law, or helped write it.

13 CHAIRMAN BECHHOEFER: Yes, right; but what I'm
14 saying is that it doesn't really matter. If EPA has juris-
15 diction, it's not exclusive jurisdiction.

16 MR. MARSHALL: Well, right; except here it
17 doesn't delegate--on the question of soils, it doesn't delegate
18 any mutual agreement between any other agency, other than
19 those agencies under the control of EPA.

20 CHAIRMAN BECHHOEFER: Right. What I'm saying
21 is that it doesn't really matter if EPA has jurisdiction; it
22 doesn't--

23 MR. MARSHALL: Right. That's what I'm saying;
24 correct; absolutely.

25 CHAIRMAN BECHHOEFER: But what I'm saying is it

1 doesn't really matter. We control the whole hearing under
2 the Atomic Energy Act, and that's what we're doing.

3 MR. MARSHALL: All I wanted to do is raise the
4 question on the record, that it is challenged. And, like I
5 said to Mr. Paton, I believe that your expert, Mr. Hood--we
6 don't question Mr. Hood; I think, though, he should be
7 reporting to EPA. Somebody in EPA, if it's nobody but someone
8 who takes the baskets out in the office--that's what I'm
9 saying. That's the only thing. We're both saying the same
10 thing here.

11 CHAIRMAN BECHHOEFER: All I'm saying is that
12 we have been delegated to hold the hearing.

13 MR. MARSHALL: There's Appeal Board decisions
14 about that, is what you're saying.

15 CHAIRMAN BECHHOEFER: The Commission has told
16 us to hold the hearings; so we express no opinion on whether
17 or not EPA has jurisdiction. We do not think it would be
18 exclusive, in any event.

19 MR. MARSHALL: I understand perfectly.

20 CHAIRMAN BECHHOEFER: The next matter I wanted
21 to raise was the scheduling of the site tour which we had asked
22 about.

23 MR. MILLER: Yes, sir, I can respond to that.
24 We're prepared to--the Company is prepared to make a site tour
25 available to the Board and the parties, really almost at your

1 convenience.

2 I think that part of it depends on the timing
3 of when certain witnesses are going to be here.

4 I might just say to the Board that we're
5 prepared to go forward today with Mr. Keeley, but then the
6 remaining two witnesses would not be available until tomorrow;
7 and I'm not certain how long the cross-examination of Mr.
8 Keeley or our other two witnesses will take. It's conceivable
9 that either Wednesday afternoon or Thursday morning would be
10 a convenient time to have the site tour.

11 CHAIRMAN BECHHOEFER: To be sure that you don't
12 misunderstand, I think the Board would prefer an afternoon.
13 Now, Wednesday afternoon, would that be--

14 MR. MILLER: Yes, sir, that would be fine.

15 CHAIRMAN BECHHOEFER: I can't guarantee that
16 we'll be through with your other witnesses, but--

17 MR. MILLER: Well, they'll be available on
18 Thursday as well, so that's no problem.

19 CHAIRMAN BECHHOEFER: I see. And so today we
20 are going to start with the Staff testimony, and--

21 MR. MILLER: I thought it was just Mr. Hood's
22 testimony, and--

23 CHAIRMAN BECHHOEFER: That's right. That's
24 correct.

25 MR. MILLER: May I ask the Board to inquire--

1 CHAIRMAN BECHHOEFFR: Is Wednesday afternoon
2 satisfactory to the other parties? We've chosen afternoon
3 mainly because we would adjourn for lunch, and perhaps would
4 want to change clothes. I don't know what a site tour
5 involves, but I think we might be a little less formal than
6 coats and ties.

7 MR. MILLER: Yes, sir, I think that's advisable.

8 May I ask the Board to inquire as to whether
9 any of the Intervenors are going to accompany us on this site
10 tour?

11 MR. MARSHALL: I've delegated two of them to
12 represent me there. I won't be going, but I've got a couple
13 of eyes that's going to look at it.

14 MS. STAMIRIS: I will be there, too.

15 MR. MILLER: Will Mrs. Sinclair be--

16 MR. MARSHALL: Yes, she will.

17 VOICE: No, she will not be accompanying you.

18 MR. MILLER: She will not be?

19 VOICE: No.

20 CHAIRMAN BECHHOEFER: Mr. Marshall, are the
21 people you mentioned members of the Mapleton Intervenors?

22 MR. MARSHALL: Yes.

23 CHAIRMAN BECHHOEFER: I think the Applicant
24 will need their names.

25 MR. MARSHALL: Well, one of them is John-- But

1 they won't be going on this trip. They won't be going to--

2 CHAIRMAN BECHHOEFER: Well, that's what we
3 asked about.

4 MR. MARSHALL: Sam Wentworth is one, and his
5 wife; and Kip Etchelman. And we have--

6 CHAIRMAN BECHHOEFER: Well, will they want to
7 go on this tour?

8 MR. MARSHALL: No, that's what I'm saying. They
9 won't be going, and I won't be going, either. But this lady
10 (indicating Ms. Stamiris) will be representing me. She'll be
11 my eyes.

12 CHAIRMAN BECHHOEFER: Well, we're trying to
13 figure out the number of people.

14 MR. MARSHALL: Well, no, my people won't be
15 going, and neither will I.

16 CHAIRMAN BECHHOEFER: So I guess it will be only
17 Ms. Stamiris, then, from the Intervenors.

18 MR. MILLER: Fine. May we have the names from
19 the Staff as well?

20 MS. BROWN: I know that Jim Thessin definitely
21 will be going. As far as other members of the Staff, may we
22 decide and tell you tomorrow?

23 MR. MILLER: Fine.

24 CHAIRMAN BECHHOEFER: Okay. Well, we'll plan
25 that for Wednesday afternoon, following an adjournment on

1 Wednesday morning. I guess we can fix an exact time and an
2 exact place to meet.

3 MR. MILLER: Fine.

4 CHAIRMAN BECHHOEFER: I think the next matter
5 that we should take up is--well, a question that was raised
6 by the Staff's letter to the Applicant, concerning the August
7 schedule. We wanted to inquire where that stood. It was a
8 letter that indicated that the Staff had not received certain
9 information on certain schedules, and that the Staff might not
10 be prepared to go to hearing in August, I guess, on corrective
11 actions.

12 I wondered whether we could have any more
13 definite feel, because we do have problems finding times when
14 we're available, and getting the groups available.

15 MS. BROWN: Chairman Bechhoefer, originally,
16 when we scheduled the August hearings, we were expecting to
17 discuss the diesel generator building and the results of the
18 boring analyses; and at that time, we were going to get the
19 boring information by the beginning of July, so our witnesses
20 would have had an opportunity to review it, and then to present
21 testimony on those boring results.

22 Now, we've been notified that those boring
23 results will not be transmitted to us until later in July--
24 excuse me--August, August 3rd or 4th. Therefore, it's impos-
25 sible for our witnesses to address their appraisal of this

1 information at the August session.

2 However, the Staff feels that there are other
3 areas that could be addressed that we're currently discussing
4 with Consumers, whether they still wish to. I think it's
5 important to get their input on whether they're willing to
6 address certain discrete contentions that don't involve the
7 boring information, in August.

8 So we are ready and would be prepared with
9 certain testimony we've already filed; however, we would not
10 be prepared to address boring information.

11 CHAIRMAN BECHHOEFER: Well, in terms of
12 scheduling, the Board has much more of August available, and
13 later dates it will be harder to work in hearing times--not
14 that later dates won't be available, but--

15 MS. BROWN: I might add that another topic
16 which the Staff would be prepared to address in the already-
17 scheduled August weeks, would be the dike issue, concerning the
18 dike.

19 DR. COWAN: Can you give us any idea of how
20 much time after the boring results are received would intervene
21 before you could address the problem? I'm thinking in terms
22 of the rest of August, where there is some flexibility in
23 scheduling, if this matter could be brought up, sort of at the
24 end of the hearing.

25 MS. BROWN: Judge Cowan, I don't think that would

1 be possible. Our witnesses have told us that it would take
2 approximately two weeks for them to review the boring informa-
3 tion. Then they would need an additional two weeks to prepare
4 their testimony. Then I would imagine that the Board would
5 like some time to review the testimony before it's discussed
6 at a hearing.

7 In addition, that particular witness has some
8 vacation scheduled for August, so I don't see the diesel
9 generator building boring information being discussed at any
10 time in the August sessions.

11 DR. COWAN: So, basically, you're saying that
12 this would have to be postponed to September, or possibly
13 October?

14 MS. BROWN: Yes. That's what the Staff is
15 saying.

16 CHAIRMAN BECHHOEFER: The Board Chairman is tied
17 up in Texas for two weeks in September, and is going to the
18 beach for another one. That's three or four weeks in September,
19 already. So....

20 MR. MILLER: Mr. Chairman, I think that--

21 CHAIRMAN BECHHOEFER: October is relatively free.

22 MR. MILLER: I would like the opportunity to
23 discuss in some detail with the Staff what the scheduling
24 possibilities are, and report back to the Board, if we might,
25 say, by the beginning of the session on Thursday. Would that

1 be satisfactory?

2 CHAIRMAN BECHHOEFER: Yes. This is just for--
3 mostly for preliminary planning purposes. And also, while
4 we've scheduled this room for, I guess, the first two weeks
5 in August essentially, and I think the last week in August,
6 if it should appear that the last two weeks might be better
7 than the first two weeks-- There are possibilities, but we
8 ought to know before the room gets occupied for other purposes.

9 I might say, it's possible that some of these
10 matters would be heard at the same time that we hear the
11 seismic matters.

12 MR. MILLER: Yes, sir. The testimony on the
13 structural analyses of all the other structures that were
14 founded on fill--the auxiliary building, and service water
15 pump structure, are planned to be addressed in the fall
16 hearings, along with the seismic issue, as well. So there
17 will be, I think, lengthy hearings contemplated in the fall.

18 The question, really, that I'd like to discuss
19 with the Staff, is, shall we do what we can in August? Because
20 I think the major topic that we hope to address was the
21 diesel generator building. Or one possibility is that it
22 would make more sense to not have the hearings in August,
23 given the expense, and so on, involved with coming here for
24 what might be a really rather limited evidentiary presentation.

25 CHAIRMAN BECHHOEFER: The only additional

1 observation I could add, though, would be: As much as I can
2 get done in August would be preferable to me.

3 MR. MILLER: Well, that's an important consider-
4 ation.

5 CHAIRMAN BECHHOEFER: There's another case
6 that's going on that's fairly long, and has a lot of my
7 September tied up, and probably will not go to hearing in
8 October or November, however.

9 I would like to get as much as possible done
10 before that; although, as I say, a lot of October and
11 November is free.

12 Well, you can advise us later during the week
13 sometime.

14 MR. DECKER: I presume you will touch base
15 with the other parties?

16 MR. MILLER: Yes; certainly.

17 CHAIRMAN BECHHOEFER: I think now is an
18 appropriate time to at least address and listen to some
19 arguments about the stipulation. The Board is not prepared
20 to rule at this time, but we would like to--there's one sort
21 of broad question that's troubling us about the stipulation,
22 and the first item in the show-cause order asks us to answer
23 a question which I will read specifically. It says:

24 "The issues to be considered will be whether
25 the facts set forth in Part 2 of this order are

1 correct."

2 The question I would like to pose is, if we
3 should accept paragraphs 1 and 2 of the stipulation, with the
4 exception of the material false statement allegations, would
5 we, on the basis of the stipulation, be free to answer the
6 question, "Yes"?

7 I'd like the parties to address that, plus,
8 perhaps some other matters about what the public view of the
9 situation is in terms of this proceeding, and whether we should
10 lead off probably with the Applicant on that, the Applicant
11 or the Staff. Of course, we want Ms. Stamiris and other parties
12 too, on this, as well. I've mentioned you, Ms. Stamiris,
13 because you've raised more questions about it than anyone else.
14 But the Board's question really is: Can we, on the basis of
15 the stipulation, provide an answer to Issue 1 of the modifica-
16 tion?

17 Either Mr. Miller or....

18 MR. MILLER: Well, I'll be happy to.

19 CHAIRMAN BECHHOEFER: Yes, I'd like to hear from
20 you and the Staff on this, particularly.

21 MR. MILLER: Well, let me see if I can respond
22 first to the question that you posed.

23 CHAIRMAN BECHHOEFER: And I'm excepting material
24 false statement allegations from the Applicant, because I
25 realize the stipulation didn't cover that.

1 MR. MILLER: Yes. It also does not address the
2 question of whether or not there was sufficient information
3 supplied to the Staff prior to December 6, 1979 with respect
4 to acceptance criteria for the proposed remedial work. All
5 that paragraphs 1 and 2 of the stipulation address are quality
6 assurance deficiencies. I think I'd like to cut it down even
7 a little further, because it is only in Question 1 that there
8 is, in effect, an admission by Consumers Power Company that
9 there were certain identified quality assurance deficiencies.
10 Paragraph 2 of the stipulation deals with, or is couched in
11 terms of a nolo contendere type approach to the ultimate issue
12 of whether there was a quality assurance breakdown. The
13 Company does not concede that a breakdown--whatever that means--
14 in fact occurred. It only says that it will not contest the
15 Staff's conclusion that it occurred.

16 I should point out that with respect to the
17 items that are set forth in paragraph 1 of the proposed stipula-
18 tion, they were foreshadowed by the Company's answer to the
19 notice of hearing. That is not the most crystal-clear document
20 that has been filed in any of these proceedings, in part
21 because of the nature of the order to which it was responding.
22 But what does come through, I think, is that there were
23 admissions made in the response to the notice of hearing by
24 Consumers Power Company that concede some of the same facts
25 that are set forth in paragraph one of the stipulation. In

1 addition, paragraph 1 of the stipulation is drawn essentially
2 from the Company's response to Question 23, under 10 CFR 50.54
3 (f), responses. Indeed, it does not go beyond the Company's
4 response to that question. I would point out to the Board
5 that the response to that question is on file, prior to
6 December 6, 1979.

7 Now, with that preamble, I'd like to respond to
8 your question. I think, based on the recitation of the facts
9 I've just given, that it would be appropriate or possible for
10 the Board to enter an affirmative finding with respect to
11 Question 1, as to portions of the facts that are set forth in

12 2 of the December 6, 1979 order. That is, paragraph 1
13 of the stipulation concedes that there were certain identified
14 quality assurance deficiencies, and I believe that those can
15 be pegged directly to the quality assurance deficiencies that
16 are set forth in the order or its appendices.

17 (Continued on following page.)

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1 MR. MILLER: It is really--

2 CHAIRMAN BECHHOEFER: It is Appendix A. It
3 is not-- Appendix B is false statements, I think.

4 MR. MILLER: Yes, sir. It is also found at
5 Page 2 of the order itself. I'm sorry. Starts at the bottom
6 of Page 1, actually.

7 CHAIRMAN BECHHOEFER: Well, as a specific
8 example, if you just turn to the--talking about some internal
9 inconsistencies--and I think there are six specified in Paragraph
10 1 of the notice of violation. Would the answer to that be
11 as a result of the stipulation, that all those inconsistencies
12 did exist, or is the stipulation that merely some inconsistencies
13 did exist, but no specificity as to which one? I am using
14 that just as an example. There are other things that will
15 arise later.

16 MR. MARSHALL: Mr. Bechhoefer, this isn't quite
17 clear to me, and I wish it to be explained a little clearer.
18 Am I understanding that they are pleading innocent to the
19 charges leveled by the NRC, but allowing themselves to be
20 fined on a plea of nolo contendere in this instance? Are they
21 maintaining their innocence and at the same time allowing them-
22 selves to be fined for whatever they are charged with?

23 CHAIRMAN BECHHOEFER: Not really.

24 MR. MARSHALL: I'm confused. I would like that
25 clarified.

E6L2

1 CHAIRMAN BECHHOEFER: What we are trying to
2 ascertain is to what extent they are admitting certain activities--

3 MR. MILLER: I think that the--

4 CHAIRMAN BECHHOEFER: --in terms of the charge
5 that we have from the Commission to answer a specific issue--
6 address a specific issue.

7 MR. MILLER: Right. I think that the stipula-
8 tion tracks most closely with that portion of the order itself
9 which begins at the bottom of Page 1 and continues over to the
10 top of Page 2 of the order.

11 DR. COWAN: But does that also track with the
12 specific items recorded in Appendix A? I think this is the
13 question he is really bringing up. I heard you say that you
14 thought it did.

15 CHAIRMAN BECHHOEFER: That's referred to on
16 Page 1 of the order itself.

17 MR. MILLER: Right. I think, Judge Bechhoefer,
18 that it is fair to say that the stipulation was negotiated
19 without specific reference to the items of non-compliance,
20 if you will, that are set forth in Appendix A to the order.
21 Rather, the parties took as their benchmark the Company's
22 answer to Question 23 of the 50.54F responses, and used that
23 as the basis for the negotiation, as well as the language of
24 the order itself.

25 I do not believe that there is perfect symmetry

1 between the items of noncompliance that are set forth in
2 Appendix A to the order, the language of the order itself and
3 our stipulation.

4 I cannot say, as I sit here, that the Company
5 admits the specific items of noncompliance that are found
6 in Appendix A.

7 The answer to Question 23, which is attached to
8 Mr. Marguglio's testimony and will be sponsored by him--it is
9 also attached to Mr. Gallagher's testimony--really contains
10 quite a comprehensive analysis of the quality assurance
11 implication of the soils settlement issues, and to the extent
12 that deficiencies are recognized in that document, constitutes
13 an admission by the Company that such deficiencies were involved
14 with the defective soils placement at the site, and it was
15 really that document, rather than the Appendix A notice of
16 violation, which served as the basis for our negotiations.

17 CHAIRMAN BECHHOEFER: Mr. Paton?

18 MR. PATON: Yes. May I respond, Chairman
19 Bechhoefer?

20 CHAIRMAN BECHHOEFER: Yes.

21 MR. PATON: Judge Bechhoefer, the Staff does
22 not believe that the question that the Board has raised should
23 be a problem, and we see it this way: There is a fundamental
24 difference in this stipulation, as Ms. Brown addressed,
25 between the first part of it and the second part of it.

1 On the second part of it, where there is a
2 stipulation that there is reasonable assurance that quality
3 assurance will be appropriately implemented in the future, we
4 believe the Board must hear independent evidence on that because
5 that's a matter affecting health and safety, and the Board
6 simply cannot take the word of the parties or any one party.
7 You have to decide that yourself.

8 As to the first two paragraphs of the stipula-
9 tion, that relates to the enforcement action. On that one,
10 there is no need for the Board to find independent--in your
11 independent judgment, to determine that all the facts are
12 true. There is just not that need from a health and safety
13 point of view, so there is that difference.

14 Now, the parties have submitted to the Board
15 facts which were alleged in the order--

16 CHAIRMAN BECHHOEFER: Do you think that we, as a
17 licensing Board carrying out the Commission's mandate on the
18 two issues under the modification order--could we get by
19 with a decision saying that we don't think there is any need,
20 from a public health and safety standpoint, to resolve the
21 question so that we don't have to determine whether the facts
22 in Part 2 are true?

23 MR. PATON: Without question, Judge Bechhoefer.
24 I am not sure I would word it exactly that way, but here is
25 my point--

1 CHAIRMAN BECHHOEFER: I worded it that way for a
2 reason.

3 MR. PATON: I do not think that the Commission,
4 when they said, "One of the issues in this case is, 'Are the
5 facts contained in Part 2 true?'" , they meant to handcuff
6 you in the unusual posture of this case, whereas the Applicant's
7 counsel have said they have pled nolo contendere, which is
8 what they have done. They have submitted to the jurisdiction
9 of the Board with respect to the enforcement action. I am
10 sure the Commission did not intend for you to go through the
11 idle exercise of then independently proving all the facts
12 which could only end up saying, "This Board has jurisdiction
13 in this enforcement action." I am sure they didn't intend
14 that.

15 It is just like in a criminal case. There is
16 an indictment that alleges facts, and if the Defendant comes
17 in and pleads guilty, the Court does not then require strict
18 proof of all the facts alleged in the indictment.

19 I only make that extrapolation because Mr. Miller
20 went so far as to compare it to a nolo contendere plea, and I
21 think that's very close to where we are.

22 The only question is, "Does this Board have
23 jurisdiction to hear that enforcement action?" We are already
24 there. I am sure that the Commission did not intend for you
25 to go through what I think would be an idle exercise of

E6L6

1 hearing all the facts that we allege will support the order.
2 I think that's clear.

3 CHAIRMAN BECHHOEFER: I think the Commission's
4 Question 1 was not in terms of jurisdiction. I think it was
5 in terms of as a predicate to Contention 2, which is, "Should
6 the order be enforced?"

7 MR. PATON: Yes, but the first question is,
8 "Are the facts true?" The facts are all before December 6,
9 '79. The second question is if the facts are true, then the
10 order should have issued, but the Applicant has come in here
11 and said, "I submit to your jurisdiction. I do not challenge
12 the conclusion," and that's all you can end up saying, that
13 those facts don't support any more than that.

14 Now, it is possible that if there is some
15 relevance, if some of those facts bear on future implementa-
16 tion of QA, then to the extent that they do that, we can
17 address those issues, and they could be relevant to that
18 extent; but insofar as giving this Board jurisdiction in the
19 enforcement action, I see no need to go back and prove every
20 one of those facts merely because the Commission said, "Are
21 the facts contained in Part 2 true?". I don't think they meant
22 to handcuff you in that manner.

23 CHAIRMAN BECHHOEFER: Shall we ask, would it
24 be worthwhile to ascertain which of the specific facts are
25 admitted and which aren't, and require proof only of the ones

1 that aren't?

2 MR. PATON: I don't think, as far as the stipula-
3 tion is concerned-- There is a stipulation as to some facts.
4 If the Board were to do that, the way I would view it, it would
5 essentially do away with the advantage of the stipulation.

6 What the Applicant is saying is if we take a
7 lot of time to prove all those facts, there probably won't
8 be any advantage to the stipulation as far as the Applicant
9 is concerned.

10 What the Applicant is saying is, "I submit
11 to your jurisdiction. I don't submit those facts."

12 They are also saying, "Now, let's get on with
13 the hearing where we prove whether there is reasonable
14 assurance in the future, which has to do with health and
15 safety," and that's really the important issue here.

16 MR. MARSHALL: We don't see it that way, Your
17 Honor. We see nolo contendere--

18 CHAIRMAN BECHHOEFER: Well, you will have your
19 turn. I want to hear what the Applicant and Staff has to say
20 first because they are promoting this stipulation.

21 MR. MILLER: Judge Bechhoefer, excuse me.

22 CHAIRMAN BECHHOEFER: Yes.

23 MR. MILLEK: I guess I would characterize
24 the status just a trifle differently from Mr. Paton.

25 First of all, this really isn't--it is not

E6L8

1 analogous to a criminal proceeding, even though I guess I
2 was the first one to use the term "nolo contendere", but
3 this really is in the nature of a civil proceeding where certain
4 facts are admitted, and whatever consequences flow from those
5 facts in terms of the scope of the order and the Court's
6 responsibilities under that order, we accept.

7 We believe, as I said, that you would be
8 warranted in making an affirmative finding under Question 1
9 with respect to the quality assurance portion of the order on
10 the basis of the stipulation.

11 I wouldn't really put it in terms of jurisdiction.
12 It really is-- It is evidence-- The stipulation is evidence
13 which the Board can and should consider as establishing certain
14 facts, and we go on from there, as Mr. Paton says.

15 I do not believe-- I agree with Mr. Paton on
16 this: I do not believe that the Board has some sort of
17 independent obligation to determine that the facts that we
18 admitted are in fact true. We have admitted them. We accept
19 the consequences and wish to go forward.

20 CHAIRMAN BECHHOEFER: I recognize that. How
21 about the facts that you haven't specifically admitted. That's
22 really what I was driving at.

23 MR. MILLER: I see. Well--

24 CHAIRMAN BECHHOEFER: That's what I was trying
25 to focus on.

1 MR. MILLER: All right.

2 CHAIRMAN BECHHOEFER: I have no question that
3 we don't have to take independent evidence when you have
4 admitted something specifically. There is no question about
5 that.

6 MR. MILLER: Correct. The only question is
7 whether or not the admission--

8 CHAIRMAN BECHHOEFER: Right.

9 MR. MILLER: --itself would be sufficient to
10 support the order, I think, because if all we were talking
11 about was going beyond the admission that's found in the stipula-
12 tion, to take evidence on matters that because of a turn of
13 phrase might be somewhat different, then the stipulation--

14 CHAIRMAN BECHHOEFER: That's correct; that's
15 correct.

16 MR. MILLER: It would seem to me that from a
17 trial lawyer standpoint, that would be cumulative, and while
18 it might satisfy a nice--a sense of orderliness in making
19 certain that everything in the appendix to the order was ticked
20 off, in terms of what's necessary to sustain this Board's
21 order with respect to Question 1, I don't believe it would be
22 necessary.

23 Paragraph 1 of the stipulation is a significant
24 admission on the part of the Company. It is not any sort of
25 technical admission on insignificant facts. It goes, we

1 believe, to the heart of the quality assurance issues prior
2 to December 6, 1979, and was entered into on that basis, with
3 the full realization that certain legal consequences flowed
4 from that.

5 CHAIRMAN BECHHOEFER: I guess I was going to
6 hear from Ms. Stamiris first, and then Mr. Marshall after that.

7 Ms. Stamiris, do you have a comment?

8 MS. STAMIRIS: I have been opposed to the stipula-
9 tion for many months, as the parties have been involved in
10 conference calls are well aware. I have done everything in
11 my power to avert this stipulation for all of this time, right
12 up until just prior to the hearing, something you haven't
13 mentioned yet, by the appeal that I took to the appeal board
14 in this case.

15 CHAIRMAN BECHHOEFER: On that note, I did not
16 receive that until about 10 or 11 o'clock yesterday. I did
17 receive it just before I took off.

18 MS. STAMIRIS: Well, I understood that there
19 was a great delay, and although I had sent it by express
20 mail on Wednesday and it was guaranteed to arrive on Thursday
21 afternoon, I didn't know there was a Federal holiday on Friday.

22 CHAIRMAN BECHHOEFER: I think that fouled things
23 up a little.

24 MS. STAMIRIS: Anyway, the whole purpose of my
25 sending the appeal that I did when I did was really a

E6L11

1 roundabout way to avert this stipulation. Once again, I
2 haven't tried to deny that or cover that up in any way.

3 I found myself faced with everyone coming for
4 this hearing, and what I expected from comments that had been
5 made in the different conference calls was that the stipulation
6 would be approved, and yet I felt that it was extremely unfair,
7 and I object very strongly not only to the manner in which it
8 was negotiated, but also to what is most important, the very
9 substance of the stipulation, which I do think needs to be
10 explained, and I would like to explain it a little bit or read
11 it to the public because we are all talking about it, and I
12 think the people here aren't aware of it.

13 CHAIRMAN BECHHOEFER: I think you should be able
14 to put on the record, also-- Since we didn't record the
15 telephone conference calls, it would be useful for you to put
16 on the record what objections you have.

17 MS. STAMIRIS: What my objections are? Okay.

18 First I will say that when I made this appeal,
19 like I started to say, I found myself wanting to appeal against
20 the quality assurance stipulation before the whole proceeding
21 began because, after all, this stipulation is going to not only
22 set the tone of the proceeding, but decide the very issues which
23 are to be heard.

24 In fact, if the stipulation is accepted, it will
25 completely turn around what the original intention of the

E6L12

1 December 6th order was and what the NRC position originally was
2 on this.

3 For those reasons, I made the appeal on the
4 basis of my summary disposition motion, which at the time I made
5 it in April was also related to the quality assurance stipula-
6 tion.

7 I intend today--and I am not sure--I am going
8 to have to ask some procedural assistance here--just what the
9 proper way to do this would be, but I intend today to submit
10 an appeal against the stipulation itself.

11 I guess you did say today that you did not
12 intend to rule now. At this time do you have an idea of whether
13 you will probably rule on it tomorrow morning?

14 CHAIRMAN BECHHOEFER: I think we probably will
15 by tomorrow morning.

16 MS. STAMIRIS: I do think it is important
17 because, after all, like I say, I don't believe we can go
18 forward in this quality assurance portion of the hearing until
19 we know the terms under which we are about to go forward, and
20 that's what this stipulation is about, so I wanted to say
21 that I intend to appeal that decision, if and when it is made,
22 unless, of course, the whole stipulation is ruled out.

23 I would need assurances, even if the whole
24 stipulation were ruled out, that informal agreements between
25 the two parties would not be condoned, to such a manner that

1 if they didn't have a piece of paper agreeing not to litigate
2 the five years of quality assurance breakdown and the reasonable
3 assurance that the NRC has already given, that those things
4 wouldn't be there, just the same, in their actions and in the
5 way the hearing was handled.

6 CHAIRMAN BECHHOEFER: How do you think that
7 acceptance of the stipulation-- Let's talk about just Paragraphs
8 1 and 2 at the moment. How do you envision that acceptance
9 of the stipulation could prejudice any of your rights or
10 abilities?

11 MS. STAMIRIS: Well, I have mentioned those
12 things to you before.

13 First, could I read the stipulation, or at least
14 paraphrase--or if somebody else wants to, they can--the first
15 portion of it, and read Parts 2 and 3? It is very short, and I
16 think the public should be aware of what we are talking about.

17 CHAIRMAN BECHHOEFER: Well, 3 is something
18 completely different.

19 MS. STAMIRIS: Well, it is a part of this stipula-
20 tion. Even if you-- Whether or not you accept Part 3 as it
21 is given here--in other words, you have already indicated--
22 in fact, you indicated in the conference call on the phone that
23 you would be likely to hear evidence and arguments on Part 3,
24 being the reasonable assurance, but nevertheless, it is part
25 of this agreement. In fact, it is prerequisite criteria for

1 Parts 1 and 2.

2 It was not until, as all parties in this
3 proceeding well know, the reasonable assurance was given in
4 the form that it was that Consumers was willing to put Parts
5 1 and 2 into this agreement. They are all tied together.
6 I simply want to--

7 CHAIRMAN BECHHOEFER: As the staff has indicated,
8 though, the Board, in any event, could not make the reasonable
9 assurance finding required by Paragraph 3 without hearing
10 evidence on that, asking questions, and hearing both our
11 questions and your questions, questions of all the parties
12 on the matter, so that that's why I view that one somewhat
13 differently.

14 I wanted to see how, assuming we should agree
15 that 1 and 2 should be accepted, that would prejudice your
16 case or your ability to present your case.

17 MS. STAMIRIS: Well, you know, I can tell you why
18 I believe that it will very definitely prejudice my case and
19 really the rights of the public who are to live with this nuclear
20 plant.

21 First of all, I would like to just read through
22 briefly what it is.

23 This is a quality assurance stipulation agree-
24 ment between the NRC and Consumers that was dated June 5th,
25 1981, and the first part says, "Prior to December 1979, there

E6L15

1 were quality assurance deficiencies related to soil construc-
2 tion activities under and around safety related structures
3 and systems at the Midland plant site."

4 Then they go into detail, listing some of the
5 design and construction specifications that were not followed;
6 a lack of clear direction and support between the contractors,
7 engineering office and construction site; a lack of control
8 and supervision of plant fill placement activities, which
9 contributed to inadequate compaction; and maybe most important
10 of all of these is corrective action regarding the non-
11 conformances related to plant fill was insufficient or inadequate,
12 as evidenced by repeated deviations from specification require-
13 ments.

14 So Part 1 sets forth some specific facts and
15 things related to soil settlement that Consumers has admitted
16 to that have led to the December 6th order, which is the basis
17 for this hearing.

18 Then Part 2 states, "Consumers Power agrees not
19 to contest the NRC Staff's conclusions that the events referred
20 to in Paragraph 1 constituted a breakdown in quality assurance
21 with respect to soil placement at Midland and constituted
22 an adequate basis for issuance of the order of December 6th,
23 1979."

24 I think that we can all agree that Part 2 is
25 an agreement not to litigate the five years of quality assurance

E6L16

1 breakdown that led to this very hearing.

2 Part 3--and the important thing is that Part 3
3 came as a prerequisite to Part 2; that the NRC has already
4 given their reasonable assurance--and I will read it. It
5 says, "The quality assurance program satisfies all requisite
6 NRC criteria."

7 Further, as a result of revisions in the
8 quality assurance programs, the improved implementation of
9 that program and other factors discussed in testimony submitted
10 by James D. Keppler, the NRC has reasonable assurance that
11 quality assurance and quality control programs will be
12 appropriately implemented with respect to future soils
13 construction activities, including remedial actions taken as a
14 result of inadequate soils placement.

15 Now, the problem I have with Part 3 is--the
16 most important problem I have with that is that this reasonable
17 assurance totally disregards the five years of quality assurance
18 breakdown that have just been alluded to in Part 1 of this
19 stipulation. In other words, if reasonable assurance has to
20 be reached and be given, it is supposed to be reached by this
21 Board after hearing all of the facts presented. It is not
22 supposed to be presented to this Board in a neatly packaged
23 conclusion such as this prior to even considering these issues
24 by the NRC, especially when that reasonable assurance is
25 based on one recent inspection, and because of this one recent

E6L17

1 inspection, the NRC is willing to forgive all of the past mis-
2 takes that led up to this whole thing.

3 If we could accept that as being fair in just
4 the simplest of terms, which I don't think we could, it is not
5 according to the rules and procedures that I understand are
6 set forth to govern this proceeding.

7 COTTON CHAIRMAN BECHHOEFER: Well, let me ask you this:
8 If you were able to establish through cross examination of the
9 witnesses that the Staff and Applicant is sponsoring with
10 respect to the current QA program, concerning whether they took
11 into account the past deficiencies and the manner in which
12 they took--or, if so, the manner in which they did so, would
13 you consider yourself prejudiced in that event? That is how I
14 view the proposal that is before us.

15 MS. STAMIRIS: Yes.

16 CHAIRMAN BECHHOEFER: All of these things could,
17 in our view, still be established.

18 MS. STAMIRIS: I would still consider myself
19 prejudiced in the way you set it forth in two ways: One is
20 that the scope of the hearing and the focus of the hearing has
21 been shifted at the last minute to just this present implementa-
22 tion, if you will, and when you say if I could determine
23 from the witnesses how much they had taken into account the
24 past performances, the only way that I would be assured is
25 if I was told that past performances was taken into account

E6L18

1 on an equal basis, at least an equal basis with current per-
2 formance, and I have already been told, informally, that it
3 has not been; that this one inspection--

4 CHAIRMAN BECHHOEFER: You can, of course, ask
5 them that.

6 MS. STAMIRIS: Pardon me?

7 CHAIRMAN BECHHOEFER: That's one of the things
8 that you can ask them.

9 MS. STAMIRIS: Well, I certainly will ask them,
10 but to me it is obvious that on the basis of one inspection,
11 there is being a lot more weight placed on this one recent
12 inspection than the whole series of inspections; that the
13 NRC testimony and the quality assurance summary disposition
14 motion clearly points out, you know, there were a lot more
15 investigations with negative findings, and those have not been
16 taken into account. At least if they have been taken into
17 account, they have not been taken into account certainly on an
18 equal basis.

19 Aside from that, the shift of the focus of
20 this hearing to the present state that it is leaves me at a
21 disadvantage because most of my contentions were based on the
22 period leading up to the December 6th order, as I thought that
23 this whole hearing was going to be basically looking at at
24 least--at least, if not exclusively, at least looking fully
25 and carefully at the events that happened prior to December 6th,

E6L19

1 and all of my contentions and all of the work that I have
2 put in over the past year have to do mainly with that period.

3 I am not in a position, since I am not an NRC
4 inspector, to go out--and I don't have any inside sources that
5 tell me what quality assurance is really like at the plant as
6 of the end of May and the beginning of June and July, and so
7 when reasonable assurance is based on something like that and
8 even comes from the future, I must believe the commitments
9 and improvements that we are, say, just beginning to see signs
10 of, and if we believe that those represent what is going to
11 happen in the future, then how can I produce factual evidence?
12 No party can produce factual evidence about the future, and so
13 I am not in a position to be able to contest it, any more than
14 they are actually in a position to be able to prove it; that
15 it is going to be all right in the future.

16 I think the one last--

17 CHAIRMAN BECHHOEFER: You could inquire, at least,
18 as to whether certain past deficiencies have actually been
19 factored into their program for the future.

20 MS. STAMIRIS: The other--

21 CHAIRMAN BECHHOEFER: I know there are several
22 of those that we, ourselves, are interested in. You may pick
23 them up as well.

24 MS. STAMIRIS: The other thing that I think
25 needs to be--the question that I think needs to be asked is

E6L20

1 really how many times is the NRC willing to follow this same
2 procedure which has proved to be faulty in the past.

3 Now, if I am going to play devil's advocate
4 with myself and ask the question, "Why does it matter if
5 their QA has been deficient for the past 10 years if in fact
6 we can show that in the last week their QA is now good?"--now,
7 I am not saying that that's the case because I disagree with
8 the conclusion that their QA is adequate today, but if that
9 were the case, then someone might argue that, well, of course,
10 this last week represents the present, represents now, you know.
11 It is what's going on now, so it is justification to overlook
12 all of the past years of problems.

13 Well, if someone was going to take that point
14 of view--and it seems like that's what we are coming close to
15 in this stipulation agreement--then the question has to be
16 asked--or the implication is definitely there that by believing
17 that this last week of quality assurance is a better indicator
18 of what will happen in the future, then all of the past
19 performance that went on before has been essentially ignored.

20 Now, this procedure has been followed at three
21 different hearings at this particular plant in the past, and
22 in 1973 and in 1974 reasonable assurance was given that quality
23 assurance would improve and be implemented properly in the
24 future. The ironic thing about it is that in each of those
25 cases, the very men in the NRC who made those reasonable

E6L21

MILLERS FALLS

1 assurances have since, with the benefit of hindsight, admitted
2 that those assurances were wrong and turned out false because
3 the only thing that can prove whether or not reasonable
4 assurances for the future are correct is the passage of time,
5 and we have tried that three times before. With the passage of
6 time, we have found out it is incorrect, yet we are willing to
7 do something even more detrimental, as far as I'm concerned,
8 in this hearing because reasonable assurance in this hearing is
9 being offered not as a conclusion to the hearing by the Board
10 who has heard the case, but reasonable assurance is being
11 offered prior to the hearing by one of the parties in order
12 that--no, I shouldn't say that because I can't go quite that
13 far. Obviously, the big question is that we know that Part 2
14 of the stipulation, that Consumers and the NRC agree not to
15 litigate the five years of QA breakdown, is based on the
16 reasonable assurance.

17 (Continued on next page.)
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1 Now, the charge that I was about to make, but
2 I won't make because I can't quite make, but I have certainly
3 questions in my mind, is whether, in fact, the reasonable
4 assurance was influenced in any way by Part 2, by this desire
5 to speed up the litigation and not have to go through five
6 years of quality breakdown that the order was based on.

7 All I can do is say that it's a question that's
8 left in my mind, and perhaps the question wouldn't be so
9 strong if I had been treated more fairly in being allowed to
10 attend some of these meetings which I felt that I had the
11 right to attend, or even to see the confidential agreement
12 which I have had to file a Freedom of Information Act request
13 for, and that request has been denied by the NRC, although
14 I haven't received a letter stating the grounds for the denial.
15 And my understanding is that it has been sent to the Justice
16 Department. And this confidential agreement between Consumers--
17 or this confidential memo between Consumers and the NRC--sets
18 forth the terms of this very stipulation agreement.

19 So taking all these factors into consideration--

20 CHAIRMAN BECHHOEFER: We haven't seen that
21 either, so--

22 MS. STAMIRIS: Pardon me?

23 CHAIRMAN BECHHOEFER: We don't want to see it.

24 MS. STAMIRIS: Yes. Well, I asked if you would,
25 and you didn't want to see it, during one of the conference

1 calls; because you indicated that it would tend to discourage
2 stipulations of this sort.

3 CHAIRMAN BECHHOEFER: That's normal policy.

4 MS. STAMIRIS: Well, I don't know about normal
5 procedures and things like this, but all I know is that
6 all the reasons that I have set forth, I think go really to
7 the heart of the basic unfairness of this whole stipulation,
8 and I am not opposed to expedience. I think both parties
9 will--at least I think that my actions in this proceeding
10 have demonstrated that I'm not doing this just to delay or
11 to use the process to my own advantage. But I believe that
12 expedience, when health and safety questions or other questions
13 of personal rights are stepped on, then expedience should not
14 be followed.

15 What I'm saying is that I disagree with Mr.
16 Paton's conclusion or your conclusion--I can't remember who
17 said that--that part I did not involve health and safety
18 questions; because I think that all of these things that went
19 on that led to this whole soil settlement problem had very
20 broad implications for the rest of the plant, and very
21 definitely raised health and safety questions, and very
22 definitely raised facts that bear on the future implementation
23 of the quality assurance program.

24 CHAIRMAN BECHHOEFER: Do you have a copy of
25 the regulations with you?

1 MS. STAMIRIS: Part 2?

2 CHAIRMAN BECHHOEFER: Yes.

3 MS. STAMIRIS: Yes.

4 CHAIRMAN BECHHOEFER: I wonder how you view
5 Section 2.203?

6 MS. STAMIRIS: I think that's the one where the
7 whole proceeding is done away with, or is that.... No.

8 Well, that is not the section under which this
9 stipulation has been formulated, is it?

10 CHAIRMAN BECHHOEFER: I don't know if--

11 MS. STAMIRIS: I don't know if it fits in the
12 unique category of--

13 CHAIRMAN BECHHOEFER: We don't know what section
14 it's formulated under, but--

15 MS. STAMIRIS: --because I did want to mention
16 Section 2.753, which I'm very familiar with, and I think most
17 of the parties have heard my objections on this before, and
18 this is my understanding, because Section 2.753 is a very
19 brief paragraph called "Stipulations," and it says:

20 "Apart from any stipulations made during or
21 as a result of a prehearing conference, the parties
22 may stipulate in writing any relevant fact..." and
23 I will skip some of the phrases-- "...any relevant fact or the
24 contents or authenticity of any document. Such a
25 stipulation may be received in evidence. The parties

1 may also stipulate as to the procedure to be
2 followed in the proceeding. Such stipulations
3 may, on motion of all parties, be recognized by
4 the presiding officer to govern the conduct of
5 the proceedings."

6 And that's one of the important rules that I
7 think has been violated in the stipulation agreement, and
8 it's my interpretation that that last sentence, "Such
9 stipulation may, on motion of all parties, be recognized by
10 the presiding officer to govern the conduct of the proceedings--"
11 I have obviously objected to the stipulation for a long time.

12 CHAIRMAN BECHHOEFER: That applies, however,
13 in my opinion, to methods of proceeding. Procedural questions,
14 which would be, perhaps, in derogation of some specific rule,
15 I think requires all parties to agree to. I'm not sure that
16 this governs the kind of stipulation that we have here.

17 MS. STAMIRIS: I think that it does, whether or
18 not-- I think it affects procedure, and it also affects more
19 than that. I think that the beginning part of this paragraph
20 is intended to limit stipulations to relevant facts and the
21 contents for authenticity of any documents, and certainly
22 the reasonable assurance doesn't fall into that category. And
23 the conclusion of the whole thing--

24 CHAIRMAN BECHHOEFER: Well, the latter doesn't,
25 either.

1 MS. STAMIRIS: Pardon me?

2 CHAIRMAN BECHHOEFER: The latter, the procedural
3 part, doesn't either.

4 MS. STAMIRIS: Well, I just think that I have
5 no choice, you know, in that I have pursued this, I think, as
6 far as I can, that I will have to, since it is something that
7 cannot be done later, therefore it is justified to be an
8 interlocutory appeal; because if we were to--

9 CHAIRMAN BECHHOEFER: That's not for us to
10 say.

11 MS. STAMIRIS: No, I know.

12 CHAIRMAN BECHHOEFER: That will be the Appeal
13 Board.

14 MS. STAMIRIS: So this is what I'm saying; is
15 I think that I have gone as far as I can with my objection to
16 the stipulation before this Board, and that's why I think it
17 will need to be decided finally by the Appeal Board, and not
18 until the Appeal Board decides who's right and who's wrong in
19 the interpretation of this rule and the impact of the proposed
20 stipulation, until that is decided I don't see how we can go
21 forward with this proceeding; because, after all, it's a
22 question of how are we to proceed?

23 CHAIRMAN BECHHOEFER: Well, did you have any
24 opinion on Section 2.203?

25 MS. STAMIRIS: Well, Section 2.203 I think would

MILLERS FALLS
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1 be a little bit more honest, because it seems to be-- I don't
2 want to state this as my final opinion, or anything, but just
3 my memory of reading this before and looking it over quickly,
4 I think that this is where a stipulation or a compromise is
5 reached where the whole proceeding, or the whole hearing is
6 dropped, and we don't even have a hearing in the first place;
7 isn't that right?

8 CHAIRMAN BECHHOEFER: Well, the presiding officer
9 may order such adjudication of the issues as he may deem to be
10 required. This could be either with or without a hearing.

11 MS. STAMIRIS: Right. Although it--you know--
12 I think what we have here, the QA stipulation as it's
13 presented between the two parties, the way I understand it,
14 I think what we have is a shell of a hearing, especially on
15 quality assurance. We don't have a real hearing going on,
16 because all the conclusions are pretty well in. Although I
17 know you say that you reserve the right to make the final
18 judgment on whether reasonable assurance exists, the fact that
19 the NRC has come forth when they have, in the manner that they
20 have, and being that I'm the only person that's certainly
21 going to say anything against it, and I don't consider myself
22 in a very strong position to do so, I feel like we would be
23 going through the motions of having a hearing under those
24 circumstances, and to do away with the whole proceeding maybe
25 would be a more straightforward way. But, of course, I think

1 the right of the public and the health and safety questions
2 involved are violated either way.

3 CHAIRMAN BECHHOEFER: Mr. Marshall, do you
4 have a--

5 MR. MARSHALL: Yes, I have just a couple
6 thoughts that have been bothering me.

7 One is that Ms. Stamiris acts in a dual
8 capacity; one as an intervenor, the other as an attorney for
9 the intervenor. I can't understand how come she was precluded
10 from this stipulation process in the first place, how come
11 she wasn't sitting right in there with them. This, I can't
12 understand.

13 It seems to me that as attorney for the
14 intervenors, she had an interest there as great as anyone
15 else's, and that she should have been included right in that
16 process that was going on. That's one.

17 Now, two: We go back again to this question--
18 Mr. Miller raised the question of the Federal plea of nolo
19 contendere. As I recall nolo contendere--we read these things
20 out in Mapleton once in awhile, at the crossroads--it's a
21 plea to the effect that we're innocent, but you've got us
22 out-generated so we're going to just capitulate and let you
23 do whatever you want now. That's exactly how we see it in
24 Mapleton, and I don't know how we can see it any other way.

25 If you will, I'd like you to explain to me how

1 you people up there in Washington see it.

2 (Laughter.)

3 CHAIRMAN BECHHOEFER: Well, it's a little bit
4 different.

5 MR. MARSHALL: Well, this is how we see it,
6 anyway, at Mapleton. And again I say--and I want the record
7 to show that I said--that I feel that Ms. Stamiris should have
8 been sitting right in on that debating team they had there
9 when they were doing all this courtesy to one another. I
10 think she should have been right there. I don't care to have
11 been there. I can argue with them anytime. But I think she
12 should have been there, and I think it's only right, fair and
13 proper. And when she said she wasn't being treated fairly
14 and squarely, I absolutely agree with her. She wasn't. I
15 don't think there's anybody that's a graduate from an
16 accredited law school that would say otherwise.

17 CHAIRMAN BECHHOEFER: Mr. Paton, do you have
18 further comments?

19 MR. PATON: Just one.

20 CHAIRMAN BECHHOEFER: Do you have a comment on
21 the 2.203 question I raised?

22 MR. PATON: No, I think I agree with the
23 statement.

24 CHAIRMAN BECHHOEFER: Is the stipulation being
25 submitted under any specific section?

1 MR. PATON: I don't see why it couldn't be
2 submitted under both the 2.203, and specifically under enforce-
3 ment, and the other regulations, under general applicability.
4 I don't see any inconsistency between the two sections.

5 The only comment I would make is I think many
6 of the points Ms. Stamiris makes--and I think the Board
7 indicated the same thing--are points that are more properly
8 made on cross-examination, and not on preliminary objections
9 to a stipulation. I think she can make the points that she
10 wants to make, or attempt to make them, under cross-examination.

11 She has this certain complaint, and I think her
12 remedy lies in cross-examination, not in an objection to the
13 stipulation.

14 MR. MILLER: I'd like to respond very briefly.

15 I agree with Mr. Paton and yourself, Mr.
16 Bechhoefer, that since this partakes of both an enforcement
17 proceeding and a licensing proceeding, I believe both Sections
18 2.203 and 2.753 are probably applicable. And for purposes of
19 accepting the stipulation, I don't believe there's any
20 significant limitation or difference in the Board's authority
21 in accepting the stipulation.

22 I'd just like to respond briefly, though, to
23 Ms. Stamiris' allegation that somehow her rights have been
24 prejudiced by the agreement between the Staff and Consumers
25 Power Company. That simply hasn't taken place. There's been

1 no effort, through the stipulation process, to limit or
2 preclude, her otherwise legitimate rights to present evidence
3 by way of cross-examination or direct evidence, with respect
4 to the issues that are comprised within her contentions.

5 Both the Staff and certainly the Company
6 recognize their obligations to present, both in response to
7 Contention 3 and, as I said in my opening statement, to give
8 substance to Paragraph 3 of the stipulation, the facts
9 underlying the issue of reasonable assurance, if you will.
10 That is, changes and improvements in both the programmatic
11 and more specific aspects of the quality assurance program
12 that have taken place coincident with the soils issue.

13 The stipulation is evidence. It is, we think,
14 powerful evidence. And we want the Board to take account of
15 all three paragraphs of the stipulation. But it's not desposi-
16 tive evidence; it's not the only evidence; and if other parties
17 see fit to go forward with contrary evidence, then the Board
18 will be required to make a judgment as to which evidence is
19 most persuasive.

20 What Ms. Stamiris does not have the right to is
21 to have the Staff and the Applicant go through some sort of
22 morality play, in which we rehearse at length on the stand the
23 quality assurance deficiencies which were established in our
24 response to Question 23, and which are the subject of this
25 stipulation. There has never been a shift in focus. The focus,

1 as far as Consumers Power Company is concerned, has been, from
2 the very first when it filed its answer to the notice of
3 hearing, its affirmative defense is steps that have been taken
4 to make certain that the soil settlement problem would not
5 recur, and to demonstrate to the Staff, to the Board and the
6 public at large, that there was reasonable assurance. And I
7 would like to emphasize at this point that it's "reasonable
8 assurance"; it's not guaranteed. People don't make guarantees.
9 The law doesn't require them to make guarantees.

10 CHAIRMAN BECHHOEFER: I think we have heard all
11 we have to hear on that. I think we'll take a break for
12 lunch now. How about an hour and a half? We'll try to make it
13 an hour and a half.

14 MR. MARSHALL: Could I say just one thing before
15 we go off the record? In regard to what Mr. Miller said a
16 minute ago, I've been reading the stipulation--2.753 on
17 stipulations--and I notice that it isn't mandatory to accept.
18 It's not mandatory. I think he stated--

19 CHAIRMAN BECHHOEFER: I think we're aware of
20 that.

21 MR. MARSHALL: Well, I think he misspoke
22 himself in saying-- That's what I'm saying.

23 CHAIRMAN BECHHOEFER: All right. We'll recess
24 for lunch.

25 (Whereupon, at 12:55 p.m., the hearing was
recessed, to reconvene at 2:30 p.m., this same day.)

AFTERNOON SESSION

(2:30 p.m.)

CHAIRMAN BECHHOEFER: Back on the record.

Before we hear from Mr. Hood, is there anything any party wishes to raise before we begin? Ms. Stamiris.

MS. STAMIRIS: Yes. I had some areas that I would like clarified.

In my June 5th request for clarification on the notice for hearing, I asked some questions about some-- particularly regarding the amendment. Maybe I should go through that and go through the questions because you did answer one of the questions, and then the others I said I was going to bring up at the beginning of the hearing.

CHAIRMAN BECHHOEFER: Okay. Let me turn to that.

(Pause.)

CHAIRMAN BECHHOEFER: Okay.

MS. STAMIRIS: Okay. The first part of that you answered on the telephone when you said that the remedies that I was quoting and referring to were not the remedies that you meant.

CHAIRMAN BECHHOEFER: That's correct.

MS. STAMIRIS: I think we understand that part of it.

Then in the next part, I asked you to please

1 expl-in and clarify the possible outcomes of the order modifying
2 construction permit, especially regarding the amendments
3 sought in Part 4 of the December 6th order, which are at issue
4 in this proceeding, and just taking one question at a time,
5 I wonder if you could clarify for me, if it is possible, what
6 is the most that could come from this, and what is the least
7 that could come from this, and explore what the possible
8 outcomes are from this hearing.

9 CHAIRMAN BECHHOEFER: Now, the way we view
10 it, the most--I don't know if the word "most" is appropriate.

11 MS. STAMIRIS: Depending on your point of view.

12 CHAIRMAN BECHHOEFER: Yes. We could uphold
13 the modification order, which would call for a cessation of
14 all soils-related construction, pending the submission of
15 further information to the Staff in the form of an amendment
16 to the construction permit, and at least theoretically,
17 an amendment having safety significance would be noticed for
18 hearing and, theoretically, all of this could be heard again
19 in terms of the amendment, the remedial action, whatever that
20 might be.

21 We view that as incorporated into this current
22 proceeding, so that--but at least in theory, that could happen.

23 MS. STAMIRIS: Could it not also happen within
24 this proceeding? Would it necessarily involve another pro-
25 ceeding?

CHAIRMAN BECHHOEFER: Well, I would ask the Staff to clarify whether a formal amendment will be provided with respect to the remedial actions, a construction permit amendment. I would guess that there will be FSAR modifications submitted. Am I not correct?

MR. PATON: Mr. Chairman, could we ask the Applicant? I think they submitted an application in December of 1979--

MR. MILLER: We submitted an amendment to our application, which took account of the then pending modifications insofar as they comprise remedial work with respect to the soils. Since then, there have been additional amendments to the FSAR, which is a part of the application, which have been filed from time to time to reflect ongoing evolution of the remedial work, and I think there were references in my opening statement and in Ms. Brown's opening statement about changes in specific design features of remedial work, and all of that has been reflected on the docket.

CHAIRMAN BECHHOEFER: Yes. I take it you would not expect to apply for a construction permit amendment.

MR. MILLER: That is correct, we would not expect to do so.

CHAIRMAN BECHHOEFER: The difference being that if the modification order were enforced in its entirety, I think you would probably be forced to file such an amendment

E8L4

1 under the strict terms of that order. That's why I said
2 "theoretically".

3 MR. MILLER: That's what the order says, yes,
4 sir.

5 CHAIRMAN BECHHOEFER: Yes.

6 MS. STAMIRIS: Okay. That helps me clarify that
7 part of it.

8 Then the second question that I still needed
9 answered was that I asked, "On what basis will the question
10 whether this order should be sustained be decided?" Can you
11 set forth any kind of framework on how you will base your
12 decision?

13 CHAIRMAN BECHHOEFER: Well, that will depend
14 on the evidence. If the evidence shows that the--first, that
15 the facts were true but, second, that sufficient corrective
16 actions had not been proposed, at least, we might decide that
17 on that basis, the order should be sustained in its entirety.

18 Alternatively, if we should decide that the
19 corrective actions have been--the proposed corrective actions
20 seem to be adequate, we could not sustain the remedy proposed
21 in the order. We could make the remedy subject to--we could
22 make whatever remedy we approved of subject to such conditions
23 as we found necessary for public health and safety, but we
24 can't specify precisely what types of evidentiary presentations
25 would support a decision that the order should be sustained in

E8L5

1 full.

2 MR. DECKER: Well, in addition to that, we
3 would certainly take into consideration the results of all
4 your cross examination.

5 MS. STAMIRIS: Could you give me a definition
6 of "evidence" at this time? I know that's a very simple ques-
7 tion, but a lot hangs on it.

8 CHAIRMAN BECHHOEFER: Evidence will be what is
9 admitted into the record, either through direct testimony or
10 through cross examination.

11 MS. STAMIRIS: Does evidence not have to have a
12 basis in fact? I mean you could not consider speculation to
13 be evidence, could you?

14 CHAIRMAN BECHHOEFER: Well, that, I think, would
15 go to the weight we would have to give it, rather than to
16 whether it is acceptable, but evidence which is material
17 means it relates to the subject matter of this general pro-
18 ceeding.

19 MS. STAMIRIS: So whether or not it came from the
20 future or the present--

21 CHAIRMAN BECHHOEFER: That would go to the weight
22 we could give it, meaning how much weight--or how persuasive
23 we found that evidence to be.

24 MS. STAMIRIS: If I understand you correctly,
25 then, you would--statements about the future could be considered

1 as evidence?

2 CHAIRMAN BECHHOEFER: That's correct, and we
3 would have to under--well, strike the word "under". We would
4 have to explore the basis for those statements to see what
5 weight should be given to them.

6 MS. STAMIRIS: I had a few other procedural
7 questions, and I don't know-- I am wondering-- I may not be
8 prepared to do it just correctly this afternoon, but when I
9 ask questions, when I am cross examining and I want to ask
10 questions about something that's on a piece of paper, if it
11 is a very short sentence that I want to refer to, is it all
12 right if I just show the person that I am asking the question
13 of the paper, and then read it right in, or do I have to provide
14 copies of every single thing I refer to?

15 CHAIRMAN BECHHOEFER: Well, assuming you were
16 not trying to introduce the paper as evidence, you at least
17 should show it to the witness and the witness' counsel so that
18 they may see it in context. Then you can ask questions about
19 it. If it is too long so that it can't be understood from
20 just reading the record, it might be better for you to attempt
21 to either introduce it through the particular witness--and,
22 again, that would assume that the witness could identify the
23 document and indicate its authenticity, that type of thing.

24 MS. STAMIRIS: If I should, in my judgment,
25 decide that this was, for instance, a very short sentence that

1 I wanted to refer to and it was in a document that I thought
2 was readily identifiable, if I then chose not to introduce it
3 formally as evidence, it would still be just as good or, you
4 know, it would have the same value, wouldn't it?

5 CHAIRMAN BECHHOEFER: Well, the witness' answer
6 to the question would.

7 MS. STAMIRIS: Right.

8 CHAIRMAN BECHHOEFER: You should make it clear
9 in the record, so that when somebody is reading the transcript,
10 you ought to be able to make sure that the transcript reader
11 knows what question he is answering--what question the
12 witness is answering. You may not have to introduce the whole
13 document that often. Most often it is probably better not to
14 do so, but the record should be made clear so that not only we,
15 but people who are reviewing the record will know what ques-
16 tion was asked and what the answer means.

17 MR. MILLER: Judge Bechhoefer, if I could just
18 interject--

19 CHAIRMAN BECHHOEFER: Yes.

20 MR. MILLER: --I think it would be useful to
21 all parties if all documents that are used in the course of an
22 examination of a witness are at least marked for identification;
23 that is, it would be Stamiris Exhibit 1 for identification,
24 whether Ms. Stamiris decided to offer it or not, so that we can
25 identify the exhibit number, the date and have some other brief

1 description of the document in the transcript, so that we will
2 all have the benefit of knowing precisely which document she
3 is referring to.

4 CHAIRMAN BECHHOEFER: I think that would be
5 useful. I hope there is no problem with numbers of copies, and
6 that type of thing.

7 MR. PATON: Judge Bechhoefer, may I inquire about
8 that procedure? You are not contemplating that that document
9 then be incorporated into the transcript?

10 MR. MILLER: No, no.

11 MR. ZAMARIN: Just identified.

12 CHAIRMAN BECHHOEFER: Just for identification.
13 If there appears to be some need to put it in or if you wish
14 to have a particular document put into evidence, then you will
15 have to move for that. You will also have to establish
16 its authenticity, and some witness will have to sponsor it,
17 so someone will have to answer questions about it.

18 MR. ZAMARIN: Judge Bechhoefer, I have one observa-
19 tion. I am not sure that Mrs. Stamiris, in her question and
20 your response, would understand your response the way we as
21 lawyers would, and I took her question to be that if, for
22 example, in asking a question she read a portion of a document
23 or a statement, whether then that statement would be in evidence,
24 even though the document from which it was read was never intro-
25 duced into evidence.

1 CHAIRMAN BECHHOEFER: I thought I said no.

2 MR. ZAMARIN: I wasn't sure whether it was clear
3 because you indicated to the extent that something is in the
4 witness' answer, it would be in evidence, but simply because
5 it was in a question, I am not sure she realized that would
6 not put it in evidence.

7 MS. STAMIRIS: Well, you know, when I asked--
8 when I said, "Is it just as good?", that is what I meant. In
9 other words, if I have a document and I identify the document
10 with the person I am questioning, and read two sentences from
11 it, I want it to stand--be just as valid and be given the same
12 weight that evidence would be given.

13 MR. MILLER: But your question isn't evidence.

14 MS. STAMIRIS: No.

15 CHAIRMAN BECHHOEFER: The question itself--

16 MS. STAMIRIS: The question would not be evidence.

17 CHAIRMAN BECHHOEFER: The witness' answer will.

18 MS. STAMIRIS: Okay. The witness' answer will
19 be. All right. That's good. Then the statement that I read
20 is not evidence?

21 CHAIRMAN BECHHOEFER: It is not evidence, as
22 such. I mean it will have to be identified so that we, and
23 other people who review the record, will know what your ques-
24 tion was--what the witness' answer means, but to be evidence,
25 as such, the document has to be introduced.

E8L10

1 MS. STAMIRIS: I see. When I deem it necessary
2 to introduce a document as evidence, if it is too lengthy,
3 or for whatever reason, what is the minimal number of copies
4 that I would have to have? I am hoping that--

5 CHAIRMAN BECHHOEFER: I would like to say three,
6 but I am not sure. Three plus copies for the parties. I
7 think the reporter needs three.

8 MR. PATON: The reporter needs three.

9 CHAIRMAN BECHHOEFER: Then the Board and the
10 parties-- I should say--

11 MR. MILLER: To the extent that these are
12 documents that we already know about--that is, NRC inspection
13 reports or 55E inspection reports--we have the copies available
14 to us, and it won't be necessary. Perhaps at the break or at
15 the close of the session, Ms. Stamiris could give us a list of
16 the documents, if that wouldn't be disclosing her cross examina-
17 tion prematurely, and we can find out which, if any, documents
18 we need copies of.

19 It may very well be that we have copies of every-
20 thing and will not require copies ourselves.

21 MS. STAMIRIS: Well, I think probably 90 percent
22 or more of the documents that I would want to use to draw my
23 questions from would be documents that the other parties already
24 have as a part of this proceeding, either as the kind of things
25 he mentioned, or some of them are exhibits that accompanied

E8L11

1 depositions.

2 MR. MILLER: Clearly, we have those.

3 CHAIRMAN BECHHOEFER: Right.

4 MS. STAMIRIS: So in that case, the minimum
5 number under those circumstances then would be three for the
6 Court Reporter, three copies?

7 CHAIRMAN BECHHOEFER: We ought to have three for
8 the Board.

9 MR. DECKER: We have got copies of some.

10 CHAIRMAN BECHHOEFER: We may.

11 MS. STAMIRIS: Does she need them immediately?

12 Could I possibly let you look at them while I am doing the
13 questioning, and then hand them to her after you have seen
14 them? I don't mean to inconvenience you; but, you know, I think
15 you realize that I am just hoping-- It might get expensive
16 for me.

17 CHAIRMAN BECHHOEFER: Each member of the Board
18 ought to have one copy available. In addition to that,
19 the Court Reporters need a copy. The reporters' copies are
20 the official Commission copies.

21 MS. STAMIRIS: Thank you.

22 CHAIRMAN BECHHOEFER: One of those copies will
23 be sent to the Appeal Board, and one of which will go into the
24 Eighth Street document room, and I am not sure what happens to
25 the other one.

1 MS. STAMIRIS: That's all the questions I have.

2 CHAIRMAN BECHHOEFER: Ms. Brown, do you wish to
3 call--or, Mr. Paton, do you wish to call a witness?

4 MS. BROWN: Yes. The NRC Staff will now call
5 Mr. Darl Hood.

6 Prior to that, Mr. Paton has one comment he
7 would like to make.

8 CHAIRMAN BECHHOEFER: I'm sorry if I overlooked
9 you.

10 MR. PATON: That's all right, Mr. Chairman.

11 I have just a quick remark that I would like to
12 make. It would seem a little premature, but Mr. Keppler, who
13 is the Director of Region 3-- We have been trying to work with
14 the other parties in arranging the time--or with the Applicant,
15 at least, in arranging the time of witnesses, and Mr. Keppler
16 we would like to put on the first thing Friday morning. It has
17 been very difficult to schedule this proceeding or estimate how
18 long it is going to take, and we took a guess that Mr. Keppler
19 and Mr. Gilray would testify first thing Monday morning, Monday
20 morning next week.

21 Mr. Keppler has indicated he would have a tre-
22 mendous difficulty in getting here Wednesday of next week. I
23 think that's the 15th.

24 He also stated that he could be here Thursday
25 of this week, if it came out that way. I wanted to alert the

E8L13

1 Board that if we get to next Monday and if the questions go
2 on so that he would have to be here three days, he would have
3 great difficulty doing that.

4 Maybe Thursday morning I might ask the Board if
5 we can discuss whether he should come here Thursday of this
6 week as opposed to next Monday.

7 I just wanted to alert the Board that I have
8 that problem, and I will ask you about it again Thursday to
9 see if by that time we have a better indication of where we
10 are.

11 CHAIRMAN BECHHOEFER: All right. Gilray was--
12 what was his schedule, Monday only?

13 MR. PATON: We planned to put him on the stand
14 Monday morning, he and Mr. Keppler.

15 CHAIRMAN BECHHOEFER: Well, what is his avail-
16 ability?

17 MR. PATON: His area?

18 CHAIRMAN BECHHOEFER: No. His availability.

19 MR. PATON: He is generally available. He would
20 probably come when Mr. Keppler came. The problem is Mr. Keppler,
21 the Director of Region 3, has some problem next Wednesday. That
22 is very premature, but I will remind you Thursday to see if
23 we have made any progress as to when he should be here, whether
24 he should plan to be here Monday, or possibly he could be here
25 later this week.

E8L14

1 DR. COWAN: That would be Friday, I assume.

2 MR. PATON: Yes.

3 DR. COWAN: If he came out Thursday, that would
4 be Friday.

5 MR. PATON: Yes, yes; right. Thank you, Mr.
6 Chairman.

7 CHAIRMAN BECHHOEFER: Okay.

8 MS. BROWN: The Staff would now call Mr. Darl
9 Hood.

10 DARL S. HOOD,

11 called as a witness by counsel for the Regulatory Staff,
12 being first duly sworn by the Chairman, was examined and
13 testified as follows:

14 DIRECT EXAMINATION

15 BY MS. BROWN:

16 Q Would you please state your name and position
17 for the record?

18 A My name is Darl Hood. I am the Project Manager
19 for the NRC Staff for the Midland project.

20 Q Mr. Hood, have you prepared any written testimony
21 for this proceeding?

22 A Yes, I have.

23 Q I direct your attention to two documents in front
24 of you, one which is entitled, "Testimony of Darl S. Hood
25 With Respect to a Licensing Board Question Concerning Continued

E8L15

1 Construction", and another document entitled, "Supplemental
2 Testimony of Darl S. Hood With Respect to a Licensing Board
3 Question Concerning Continued Construction", and ask you whether
4 these two documents are the testimony that you have prepared.

5 A Yes, they are.

6 Q Is there a copy of your professional qualifica-
7 tions attached to the testimony?

8 A Yes.

9 Q Do you have any additions or corrections to make
10 to the original testimony with respect to the Licensing Board
11 question concerning continued construction?

12 A Yes, I do. There is a word left out that should
13 be inserted.

14 Q On what page of your testimony is this, Mr.
15 Hood?

16 A It occurs on Page 2 of the testimony, the original
17 testimony as opposed to the supplemental testimony. It occurs
18 in the third line of the answer to Question 4. The word that
19 is left out is the word "stated", which should be inserted after
20 "Licensing Board".

21 Q Do you have any further corrections to make to
22 your initial testimony or to your professional qualifications
23 statement?

24 A No.

25 Q Do you have any additions or corrections to make

1 to your supplemental testimony?

2 A I would point out, by way of clarification,
3 on Page 3, the eleventh and twelfth line, I make reference to a
4 chlorine building. I believe that the Applicant's terminology
5 for this particular building is a "chlorination building".

6 I have no further corrections to make with regard
7 to the supplemental testimony.

8 Q Do you have any additions you would like to make
9 to the supplemental testimony?

10 A No.

11 Q Have there been any recent developments in
12 connection with the surcharging of the borated water storage
13 tank valve pits?

14 A Yes, there have been. There has been further
15 correspondence between the Staff and Consumers since this testi-
16 mony was prepared.

17 Q Would you please relate the substance of those
18 communications?

19 A Yes. There have been telephone discussions
20 between Staff and Consumers Power regarding their desire to
21 proceed with surcharging the valve pit that is part of the ring
22 foundation support for the borated water storage tank.
23 Those discussions have centered upon the information that
24 the Staff needs to indicate its approval of proceeding with
25 that surcharge.

1 We have, last week, received a letter from
2 Consumers, indicating their intent to proceed by July 6 with
3 that proposed corrective action. They have also indicated that,
4 in their view, this corrective action is not a soil-related
5 matter.

6 I believe the Staff has a difference of opinion
7 with Consumers with regard to that point, as to whether this
8 is a soil-related matter.

9 We have also had discussions with Consumers
10 last week--I myself was not a party to this discussion. I
11 understand that Mr. Keppler, the Director of Region 3, was a
12 party to the discussion.

13 It is my understanding that Consumers does not
14 now plan to proceed with that surcharging on the date indicated,
15 by July 6th, but rather intends to await Staff approval before
16 proceeding with that particular activity.

17 It is also my understanding that the Staff has
18 indicated in telephone discussions that it will endeavor to
19 provide its position with respect to a letter that was forwarded
20 to us by Consumers and which is dated April 24th, 1981--excuse
21 me. That's the wrong date.

22 CHAIRMAN BECHHOEFER: How about June 26th?

23 THE WITNESS: June 26th. Thank you.

24 A (Continuing) The Staff will attempt to provide
25 its response to that letter by July 15th.

1 Q (By Ms. Brown) Mr. Hood, is the testimony which
2 is contained in the two documents before you and the testimony
3 which you have just given, true and correct, to the best of
4 your knowledge and belief?

5 A Yes, it is.

6 MS. BROWN: I would now move the testimony of
7 Darl Hood, entitled "Testimony of Darl S. Hood with Respect
8 to a Licensing P rd Question Concerning Continued Construction",
9 and his supplemental testimony, into the record as if read.

10 I would like to add that I have provided the
11 reporter with approximately 15 copies of both documents.

12 CHAIRMAN BECHHOEFER: Is there any objection?

13 MR. FARNELL: No objection.

14 MS. STAMIRIS: I have questions that I would
15 like to ask him about the content of that testimony.

16 CHAIRMAN BECHHOEFER: That's cross examination.

17 MS. STAMIRIS: I'm sorry. I didn't know.

18 CHAIRMAN BECHHOEFER: Right now all I am asking
19 for is objections to the introduction of the corrected testimony
20 of Mr. Hood, plus the supplemental testimony, those two pieces
21 of paper. That is subject to the cross examination.

22 MS. STAMIRIS: No.

23 CHAIRMAN BECHHOEFER: Without objection, those
24 documents will be admitted into evidence, bound into the record,
25 as if read.

(The document referred to, the prepared and
supplemental testimony of Darl S. Hood, follows:)

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

TESTIMONY OF DARL S. HOOD WITH RESPECT TO A
LICENSING BOARD QUESTION CONCERNING CONTINUED CONSTRUCTION

Q. 1. Please state your name and position with the NRC.

A. My name is Darl S. Hood. I am a Senior Project Manager in the Division of Licensing, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission.

Q. 2. Have you prepared a statement of professional qualifications?

A. Yes. A copy of this statement is attached.

Q. 3. Please state the duration and nature of your responsibilities with respect to the Midland Plant, Units 1 and 2.

A. I am the Project Manager for the Midland Plant application for operating licenses. I have served in that position from August 29, 1977, when the application for operating licenses was tendered to the NRC for acceptance review, up to the present time. My responsibilities include management of the Staff's environmental and radiological safety reviews.

- 2 -

Q. 4. Please state the purpose of this testimony.

A. During the Prehearing Conference on January 28-29, 1981 and in its Prehearing Conference Memorandum of February 27, 1981, the Licensing Board that if on-going or near-term construction activities could have an adverse impact on proposed remedies, the Staff should present evidence to that effect so that the Board could consider whether any halt in planned or on-going construction activities would be appropriate pending resolution of the soils settlement questions. This testimony is in response to the Board's statement.

Q. 5. What is the NRC Staff's position regarding the Board's statement?

A. The Staff has been advised by Consumers that there are two near-term construction activities important to their scheduling needs that they wish to begin at this time. These activities include:

1. Proceeding with the installation of 20 permanent back-up interceptor wells in the area near the Service Water Structure and the Circulating Water Intake Structure. This work is in preparation for dewatering and installing the remedial supporting wall beneath the overhang portion of the Service Water Structure.
2. Surcharging the two valve pits which are adjacent to each of the Borated Water Storage Tanks.

Over the last several months the Staff and Consumers have been resolving their differences on proceeding with the installation of the

- 3 -

20 back-up wells. A revised specification and Q/A program for installing the wells which incorporates the recommendations of the NRC Staff and the Corps of Engineers is to be provided by Consumers the week of June 8, 1981. Upon receipt and favorable review by the Staff of the revised specification and Q/A program, the NRC will be in a position to concur with Consumer's decision to proceed with the well installations.

The Staff indicated at meetings held with Consumers in Bethesda on May 5-7, 1981 that there was no objection with proceeding with surcharging of the valve pits adjacent to the borated water tanks provided agreement with the Staff could be reached on an acceptable program for monitoring of settlement and potential structural distress during surcharging and on the need for disconnecting piping leading to the valve pits. These concerns of the Staff are not yet resolved.

DARL S. HOOD

OFFICE OF NUCLEAR REACTOR REGULATION
U.S. NUCLEAR REGULATORY COMMISSION

PROFESSIONAL QUALIFICATIONS

I am a Senior Project Manager in the Division of Licensing, Office of Nuclear Reactor Regulation. I am responsible for managing licensing activities by the Commission with respect to Midland Plant, Units 1 and 2.

I have served in the position of Project Manager with the Commission since August 1976. This position provides for the managing of radiological safety reviews of applications for licenses and authorization to construct or operate light water nuclear power plants. As of April 1980, the position also provides for the managing of the environmental reviews of such applications. I assumed responsibility for Midland Plant, Units 1 and 2, when the application for operating licenses was tendered in August 1977. Other nuclear plants for which I have previously served in this capacity are the standardization design of Westinghouse which is designated RESAR-414 (Docket STN50-572), Catawaba Nuclear Station, Units 1 and 2 (Dockets 50-413 and 50-414), and River Bend Station, Units 1 and 2 (Dockets 50-458 and 50-459).

Between June 1969 and August 1976 I held two sequential positions within the Nuclear Power Systems Division of Combustion Engineering, Inc. (C-E) at Windsor, Connecticut. After March, 1973, I was Assistant Project Manager for the Duke Power Project. This position provided assistance in directing all efforts by C-E to design, fabricate, purchase and license the nuclear steam supply systems, reactor core, and associated auxiliary systems for Cherokee Units 1, 2 & 3 and Thomas L. Perkins Units 1, 2 & 3. The position assured that all aspects of the contracts were met and that safe and reliable systems were provided to the required schedule and at a reasonable profit to C-E. I assisted Duke Power in preparing the Preliminary Safety Analysis Report (PSAR) and provided for all C-E licensing support for these units. I also provided coordination of all other nuclear plants referencing the C-E Standard Safety Analysis Report to assure compatibility with C-E standard reference design. Until March, 1973, I was a Project Engineer in C-E's Safety and Licensing Department and was responsible for licensing of nuclear power plants. I coordinated the preparation of the Millstone Unit 2 PSAR and FSAR and the Calvert Cliffs Units 1 & 2 FSAR and interfaced with NRC, the utility, architect engineer and all C-E functional departments on licensing support matters. I ensured that NRC criteria, standards, and guides were incorporated into the nuclear steam supply system design.

- 2 -

Between August 1966 and June 1969, I was a Nuclear Safety and Radiation Analysis Engineer in the Nuclear Safety Unit, Nuclear Division of the Martin Marietta Corporation at Baltimore, Maryland. The purpose of this position was to perform hazard evaluations for nuclear power sources applied in space missions. My primary duty was to determine public exposure to radiation for malfunctions occurring during the intended mission. I also determined means by which the hazard potential for nuclear space systems could be mitigated to the extent that nuclear safety criteria were met. I conducted research with regards to the development of suitable criteria for permissible exposure levels and their probabilities, taking into account the dependence of acceptable risk on the benefit to be derived. My primary assignment was with the SNAP 29 (Systems for Nuclear Auxiliary Power) project. My evaluations of this nuclear power source included the formulation and application of computerized models for the transport of fuel released at high altitudes, in deep ocean and in shallow waters. I derived models for these release areas to incorporate the activity into human food chains and determined the expected ingestion dose, the number of people involved and the exposure probabilities. Inhalation dose was determined for radioactive fallout from the high-altitude release.

Between February 1965 and August 1966 I was a Nuclear Quality Control Engineer within the Electric Boat Division of General Dynamics at Groton, Connecticut. The purpose of this position was to provide control of quality for naval reactor systems, components, and shielding during the construction or overhaul of submarines by this shipyard. My primary area of responsibility was shielding. Duties included establishing procedures for the inspection of fabrication and installation of lead and polyethylene shielding, and resolving problems in complying with these or other shielding procedures. The position required a knowledge of nuclear theory, SSW systems design, Bureau of Ships contract and design requirements, non-destructive testing techniques, and quality control requirements.

Between November 1963 and February 1965, I was an Aeronautical Engineer for Nuclear Propulsion and Power at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration in Huntsville, Alabama. I performed investigations of the nature and magnitude of the nuclear radiation environment, shielding systems and safety systems associated with proposed nuclear space vehicles for candidate space missions.

Between November 1963 and college graduation in 1962, I held various positions including chief of a missile electronics training unit at Redstone Arsenal, Alabama; student at the U.S. Army Signal Officer's Orientation Course at Fort Gordon, Georgia; and Marine Engineer for ordnance and special weapons with the Design Division of the Norfolk Naval Shipyard, Portsmouth, Virginia.

- 3 -

I received a Bachelor of Science Degree in Nuclear Engineering from North Carolina State University in 1962. I am a member of the Health Physics Society.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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

SUPPLEMENTAL TESTIMONY OF DARL S. HOOD
WITH RESPECT TO A LICENSING BOARD
QUESTION CONCERNING CONTINUED CONSTRUCTION

Q. 1. Please state your name and position with the NRC.

A. My name is Darl S. Hood. I am a Senior Project Manager in the Division of Licensing, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission.

Q. 2. Please state the purpose of this testimony.

A. My testimony of June 8, 1981 with respect to a Licensing Board question concerning continued construction discussed, in part, installation of 20 permanent back-up interceptor wells in the area near the Service Water Structures and the Circulating Water Intake Structure. This earlier testimony indicated that a revised specification and Q/A program for installing the wells which incorporates the recommendations of the NRC Staff and the U.S. Army Corps of Engineers were to be provided by CPC the week of June 8, 1981, and that upon receipt and favorable review by the Staff of the revised specification and Q/A program, the NRC would be in a position to concur with CPC's decision to proceed with the well installations. The purpose of this supplemental testimony is to provide the current status of the Staff's review and approval.

- 2 -

Q. 3. What is the current status of the Staff's review and approval for the installation of the 20 back-up interceptor wells?

A. By cover letter dated June 8, 1981, the Staff received from CPC the applicable portions of the revised specification and Q/A program for installing these wells. These documents were reviewed by the NRC Staff, including a member of the Office of Inspection and Enforcement at Region III. During the course of this review, several conference calls by telephone were held, during which CPC noted its intent to make further changes to these documents as suggested by the NRC.

In a telephone conference call on June 17, 1981, the NRC was advised that boring samples taken from three of seven dewatering well locations along the northwest wall of the Service Water Structure had revealed inter-bedded sands and clays with thicknesses and layers ranging from 2 to 3 feet for almost the full length of the hole. Because the finer clay soils were not adequately protected by the proposed gravel pack gradation selected for use in the wells, CPC proposes to relocate seven wells about 50 feet northwest, and an eighth well would be relocated about 20 feet west. CPC also stated that four new borings with sampling would be taken in the relocated wells, and the boring logs and gradation tests results would be provided to the NRC for review. CPC also stated its intent to proceed first with installation of the remaining twelve wells which will not be relocated, since these wells were found to consist of sand and were acceptably protected by the proposed gravel pack. The NRC staff noted its agreement with this approach during the telephone call.

- 3 -

On June 18, 1981, a letter from Mr. R. Tedesco advised CPC that, on the basis of CPC's statements of intent to make certain minor changes to its associated specification and Q/A documents and on the basis of other information provided in CPC's previous letters on dewatering, the Staff has reasonable assurance that installation of the twelve wells not designated for relocation will be performed in an acceptable manner. On the basis of the above testimony, and as also stated in the June 18, 1981 letter, the Staff has no technical objection should CPC elect to proceed with installation of the twelve wells not designated to be relocated and generally located along the northwest walls of the Circulating Water Intake Structure and the adjacent Chlorine Building. The Staff's concurrence with respect to the remaining eight of the twenty back-up interceptor wells is deferred pending review of the four additional borings with samples to be taken in their revised location.

1 CHAIRMAN BECHHOEFER: Ms. Brown, have you
2 finished your direct?

3 MS. BROWN: Yes, I have.

4 CHAIRMAN BECHHOEFER: You may proceed to cross
5 examine.

6 Oh, I would like one point of inquiry. Is the
7 Staff-- Does the Staff plan to put into the record in any form
8 the June 26th letter as an exhibit?

9 MS. BROWN: The Staff was not planning to.
10 That's why I had Mr. Hood testify to the subject matter. If
11 you wish it to be moved in or introduced, we will do that, but
12 I do not feel that it is necessary at this point.

13 CHAIRMAN BECHHOEFER: Well, we will withhold on
14 that for the moment.

15 You may proceed.

16 MS. STAMIRIS: I wanted to ask Mr. Hood some
17 questions about his original testimony, and the reason I was
18 not sure if I should object to it is simply because I take
19 exception to the interpretation given to the questions that
20 are in that testimony.

21 CROSS EXAMINATION

22 BY MS. STAMIRIS:

23 Q On the second page of the testimony is a ques-
24 tion that came out of the January 28th and 29th pre-hearing
25 conference, and I will read that--I will read the answer that is

1 referenced at the top of Page 2. It says, "During the pre-
2 hearing conference on January 28-29, 1981 and in its pre-hearing
3 conference memorandum of February 27, 1981, the Licensing
4 Board", you said, stated, "that if on-going or near-term
5 construction activities could have an adverse impact on proposed
6 remedies, the Staff should present evidence to that effect
7 so that the Board could consider whether any halt in planned
8 or on-going construction activities would be appropriate pending
9 resolution of the soils settlement questions. This testimony
10 is in response to the Board's statement."

11 I don't disagree that this was the Board's
12 statement, but I disagree with your interpretation of that
13 statement, and I wanted to ask whether you believe that when
14 that question was asked, did you believe that the basic concern
15 of the Board in asking that question was to see that construc-
16 tion activities did not threaten the remedial actions and
17 the safety questions that were involved with remediation?

18 A Yes, ma'am, I understand it that way. I would
19 point out that there are no other activities associated with
20 soils settlement matters that are occurring at the site. I
21 believe you are familiar with the Applicant's voluntary
22 commitment to hold up on those types of activities. These two
23 that I have testified to in this testimony are two that have
24 been identified to us as of interest, of immediate interest
25 to its schedule.

E8L21

1 Q That was what I thought. When I read your--
2 the next part, when it said that, "This testimony is in response
3 to the Board's statement," it seems like it has been completely
4 turned around. In other words, the concern, as you restate
5 it, appears to be not that construction activities are going to
6 impinge on the safety of remedial actions, but it seems that
7 the concern is that construction activities are getting held
8 up.

9 CHAIRMAN BECHHOEFER: Is that a question?

10 MS. STAMIRIS: I mean to--

11 CHAIRMAN BECHHOEFER: You have to ask it as a
12 question.

13 MS. STAMIRIS: I know. Okay.

14 Q (By Ms. Stamiris) What I am trying to ask is,
15 do you see a difference in the way the Board originally intended
16 that question or statement, and the way that you interpreted
17 it this second time--or this time in this testimony?

18 A Perhaps we are not communicating, but I don't
19 see any difficulty with the interpretation I have taken, which
20 is I address those matters which are of imminent concern, that
21 are of close concern, recognizing that there are no other
22 soils-related activities occurring, and that the Applicant
23 is not proceeding with any other activity.

24 Q I think I should read the answer to Question
25 5 where you state, "The Staff has been advised"-- Oh, first the

E8L22

1 question is, "What is the NRC Staff's position regarding the
2 Board's statement?"

3 The answer is, "The Staff has been advised
4 by Consumers that there are two near-term construction activities
5 important to their scheduling needs that they wish to begin
6 at this time."

7 In other words, would you say that the concern
8 in that statement is that near-term construction activities
9 may be held up?

10 A That answer addresses--speaks to two matters
11 that if they are not implemented in the very near future,
12 will impact construction schedules, yes.

13 Q Then the answer was "yes" at the end, is that
14 true?

15 A Yes.

16 Q Okay. Then don't you believe that that's
17 different than the original safety concern that was implied
18 in the first question of the Board, "that" being that the
19 second concern is a construction schedule concern rather than
20 an implied safety concern?

21 A Ms. Stamiris, my understanding of what your
22 question is is you would interpret the Board's position to
23 identify any activity, if it were to proceed, say, tomorrow,
24 would be of concern to safety. Is that your interpretation?
25 My interpretation is different. My interpretation of what

E8L23

1 the Board asked for is different than that. Is that the
2 problem we are talking about here?

3 Q No, that's not really my interpretation, that
4 anything would be, but I am remembering back to what the
5 definite feeling was that I had at the pre-hearing conference and
6 what I believed as the basic intent of the question, and that
7 was that--my interpretation was that they were concerned that
8 safety questions were being threatened by construction activities.

9 What I am asking you is, in fact, and what
10 you seem to have just answered to me, is that what is being
11 protected in the second question that you have posed--and to
12 me I think there is a bit of a turning around here. What
13 is being protected, rather than the basic safety interest,
14 is the basic construction schedule.

15 A If I understand you, you are saying I am
16 interpreting the question to speak with emphasis on the construc-
17 tion schedule as opposed to a safety question. I don't feel
18 that's the case. I don't feel it is the case because--

19 Q I'm sorry. I couldn't hear you at first.

20 A I don't feel that my response is oriented entirely
21 toward the construction schedule only, and the reason I don't
22 is in my interpretation of the responses, I am recognizing
23 that the only activities that are proposed for the near future,
24 of a construction nature, are the two that I am addressing.

25 CHAIRMAN BECHHOEFER: Let me interrupt, and

1 just to make it clear, are the two activities that you have
2 listed here the only ongoing or near-term construction
3 activities which could have an adverse impact on the proposed
4 soils remedies? By "near-term", I guess I mean within
5 certainly the next few months.

6 THE WITNESS: Judge Bechhoefer, you mean-- I
7 am trying to understand the question. You mean of any
8 activities that theoretically could be taken tomorrow with
9 respect to soils construction activities, if they were to
10 begin--

11 CHAIRMAN BECHHOEFER: No, I don't mean that. I
12 mean any activities that are either ongoing, which you say
13 there are none, or planned to be taken by the Applicant in
14 the near future. Are those the only activities--

15 THE WITNESS: Those are the only two that are
16 planned for the near future. In terms of the activities going
17 on at the site now, of a soils construction nature, there are
18 none, and these are the two that are proposed for the near
19 term.

20 CHAIRMAN BECHHOEFER: Those are the only two
21 that could have the safety impact that we were driving at in
22 the question?

23 THE WITNESS: Yes, sir.

24 CHAIRMAN BECHHOEFER: Okay. I just wanted to
25 clarify the record in that respect.

1 MR. DECKER: I am not clear yet. Mr. Hood,
2 did you mean to infer by listing these two things, that these
3 two near-term construction projects could or would have an
4 inverse impact on the proposed remedies--adverse impact on
5 the proposed remedies?

6 THE WITNESS: No, sir.

7 MR. DECKER: In your prepared testimony, you
8 were concerned about ongoing or near-term construction activities
9 which could have an adverse impact on proposed remedies.

10 Now, you list two of them. Do I infer that
11 these two activities could have an adverse impact on other
12 remedial actions?

13 THE WITNESS: I am afraid I will have to
14 retract my last response to you. The concern of the Staff is
15 that these two areas, if they are not properly executed, could
16 have an adverse effect on the safety-related structures them-
17 selves.

18 For example, if you will permit me to illustrate,
19 Staff would seek reasonable assurance that permanent wells,
20 back-up wells which are to be installed, which will become
21 part of the permanent area for the system once the completed
22 system is in operation--the Staff would seek the assurance
23 that the de-watering system can be relied upon, and that in
24 the process of its installation, detrimental effects would not
25 occur to the underlying soils in close proximity to, say, the

E8L26

1 service water structure.

2 We would be concerned, for example, with a
3 properly designed and installed gravel pack, which is part
4 of such a well system, which acts, if you will, as somewhat
5 of a filter, and it would prohibit the removal of the soils
6 and the creation of cavities, and therefore disrupt the degraded
7 properties of the adjacent soil as a supporting medium for
8 that structure.

9 (Continued on next page.)

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1 CHAIRMAN BECHHOEFER: Okay. Thank you.

2 MS. STAMIRIS: I think I'll go on, then-- i'm
3 sorry, but I have to ask him, I suppose, to-- I can only ask
4 questions, so I can't, you know, bring any points together
5 at this point, can I?

6 CHAIRMAN BECHHOEFER: That's correct.

7 MS. STAMIRIS: Then I'll move on, then, and ask--

8 CHAIRMAN BECHHOEFER: We're trying to develop
9 a factual record.

10 MS. STAMIRIS: I'll ask Mr. Hood whether he
11 believes that the NRC has changed their position from what it
12 originally was when they first issued the December 6 order for
13 modification of the construction permit.

14 MS. BROWN: Objection. I don't see how that
15 is relevant to the scope of this testimony that we filed, just
16 in response to the Licensing Board question. Mr. Hood will
17 be testifying on further contentions, but that particular
18 question of Mrs. Stamiris has nothing to do with this question.

19 CHAIRMAN BECHHOEFER: I think that's correct.
20 The questions have to be related to this individual testimony,
21 this testimony, not some other testimony that he may have.

22 MS. STAMIRIS: It is, but--

23 CHAIRMAN BECHHOEFER: Well, could you be
24 somewhat more specific in trying to relate it?

25 MS. STAMIRIS: It relates very clearly, but I'll

1 try and be more specific, because I want to get at this area
2 as to what I believe is a change that has been pointed out in
3 the interpretation of questions, and I think it's representa-
4 tive of a change that I would like to determine, whether the
5 NRC agrees with it or not.

6 BY MS. STAMIRIS:

7 Q Would you--in the December 6 order modifying
8 the construction permits--would you agree that the order
9 prohibited certain soil construction activities pending the
10 submission of an amendment to Consumers' application and the
11 issuance of an amendment to the construction permits?

12 MS. BROWN: Objection, Your Honor. That's
13 asking for a legal conclusion, I believe, which Mr. Hood is
14 not qualified to respond to. It appears to me that's the
15 same issue that Ms. Stamiris asked you for clarification on
16 earlier, which hasn't been resolved, precisely, at this time.

17 CHAIRMAN BECHHOEFER: That objection we will
18 overrule. I think the witness may be asked not for a legal
19 conclusion, but for his view as a technical expert, as to what
20 he thought the modification order required.

21 MS. BROWN: I would submit the document speaks
22 for itself.

23 CHAIRMAN BECHHOEFER: I still think he may
24 answer.

25 MS. STAMIRIS: I should identify this as a direct

1 quote. This is the second sentence from the NRC's old pleading,
2 dated 7-14-80, which was the NRC Staff's answer to petitions
3 for leave to intervene from eight different intervenors, and
4 in the introductory paragraph this is what the NRC stated,
5 themselves:

6 CHAIRMAN BECHHOEFER: Of course, that is not
7 Mr. Ho... But I think a technical witness' understanding of
8 a document may be asked for.

9 MR. PARNELL: Chairman Bechhoefer, also, that's
10 a mischaracterization of the document. She should have read
11 the rest of it, which says, "This order will become effective
12 on the expiration of the period during which a hearing may
13 be requested or in the event a hearing is requested, on the
14 date specified in an order made following the hearing."

15 Since a hearing was ordered--requested--this
16 document never became effective. And she's implying that it
17 was effective.

18 CHAIRMAN BECHHOEFER: Well, I don't know about
19 the implications, but the witness may be asked whether his
20 essential--questions leading to whether his position on these
21 two activities are inconsistent with what the Staff position
22 was at that time. I think it's a reasonable area to explore.

23 MS. BROWN: Chairman Bechhoefer, may I ask to
24 have the question read back, at least, or repeated by Ms.
25 Stamiris?

1 CHAIRMAN BECHHOEFER: Why don't you repeat it?

2 MS. STAMIRIS: I would like to identify it,
3 because I wasn't sure if Mr. Farnell--maybe I didn't under-
4 stand him, but it says, NRC Staff Answer to Petitions for Leave
5 to Intervene, and then there are names of the eight interven-
6 ors; and the second sentence in the introduction reads:

7 "The order prohibited certain soil construction
8 activities pending the submission of an amendment
9 to Consumers' application and the issuance of an
10 amendment to the construction permits."

11 And I was asking Mr. Hood whether he agreed
12 with that.

13 MS. BROWN: My objection remains the same. I
14 believe you overruled it.

15 CHAIRMAN BECHHOEFER: Yes. He may answer the
16 question.

17 THE WITNESS: Yes, I believe that's a fair
18 representation of the intent of the order.

19 BY MR. STAMIRIS:

20 Q May I ask, is that still the intent of the order?

21 A Yes.

22 Q Then doesn't the testimony that you submitted
23 in the supplement to that testimony contradict the statement
24 that you just agreed to?

25 A No.

1 Q. Could you explain, please?

2 A. Yes. It goes to the basis for which Staff would
3 prohibit that activity. Staff seeks a certain reasonable
4 assurance that the activity will be conducted in a proper
5 manner. To achieve that point, the Staff needs certain
6 information, such as the criteria, the Applicant's plans,
7 talking about remedial action. The Staff needs to understand
8 the concept, to a certain degree. It basically corresponds
9 to the level of information that the Staff typically has at
10 a construction permit; that is, at a point in the review when
11 it is ready to issue a construction permit.

12 In this particular case, we're talking about
13 a structure that's being modified. The Staff would
14 have to satisfy itself that the modification carries with
15 it the same level of reasonable assurance that the Staff had
16 at the point it issued the construction permit.

17 Q. But the statement says the order prohibited
18 certain soil construction activities pending the submission
19 of an amendment and the issuance of that amendment to the
20 construction permit. So, whether or not your basis for
21 reasonable assurance has changed for some reason, if you
22 still believe that this is the intent of the order, as you
23 just said, then the amendment to the construction permit has
24 not been issued, and you have jumped to one of the conclusions
25 that should not come about until the end of this whole

1 proceeding, by giving Consumers permission to install these
2 backup wells and do whatever remedial measures you are
3 approving at this point.

4 A. Yes. The Staff is essentially saying that with
5 these changes that are the subject of the testimony, that
6 Staff feels it has that level of assurance, and that it
7 therefore would not have any technical objection to the
8 Applicant proceeding with that activity.

9 Q. Do you believe that it contradicts the state-
10 ment that the amendment to the construction permit was to
11 have been ordered first--or issued first?

12 A. Ms. Stamiris, I concentrated on the technical
13 aspects, rather than the legal aspects, if you will. My
14 concern is that the Staff obtain that reasonable assurance.
15 And my understanding is that it has reasonable assurance that
16 it fills the needs, with the changes that are the subject of
17 this testimony.

18 Q. Did you believe originally that it was to be the
19 Board who decides this case, who needs to have that reasonable
20 assurance at the end of the proceeding, or at some point in
21 the proceeding, for them to give permission for these remedial
22 measures?

23 MR. FARNELL: Object. That's irrelevant.

24 CHAIRMAN BECHHOEFER: Why is that relevant?

25 MS. STAMIRIS: Why is that relevant?

1 CHAIRMAN BECHHOEFER: Well, you have an objection
2 that it's irrelevant.

3 MS. STAMIRIS: Well, it's relevant because I
4 believe that, just as the NRC offered their reasonable
5 assurance, I believe prematurely, in the stipulation, I
6 believe the NRC is offering its reasonable assurance and
7 basing the decision on that I believe should be the decision
8 of the Board. And I thought--and the reason I asked the
9 question--is I thought that Mr. Hood and others on the NRC
10 originally believed that interpretation, that these were
11 things the Board was to decide after all the facts were laid
12 out. And that's why I asked him what his interpretation was.

13 CHAIRMAN BECHHOEFER: The Board will sustain
14 that objection, on the ground that the order itself, during
15 the course of the hearings, permits construction to continue.
16 The Board could issue an order stopping construction as the
17 result of this testimony, for instance, if we believed this
18 testimony called for that. We do not have to give our
19 approval for continued construction, however, approving these
20 two items.

21 So that I think the situation is somewhat
22 reversed from the way you described it.

23 So that objection is sustained.

24 MS. STAMIRIS: I'd like to ask Mr. Hood whether--
25 well, I can't remember if I asked this before.

1 BY MS. STAMIRIS:

2 Q On what basis was the order for modification
3 founded?

4 A There were three bases in the order. One was
5 the order speaks to a breakdown of quality assurance.

6 Another basis for the order had to do with
7 material false statements that occurred in the FSAR.

8 The third basis for the order goes to the fact
9 that the information that the Staff needs to resolve the
10 safety issues, such as the soil settlement matter, was not
11 provided. The criteria, if you will, which we need to make
12 a judgment, were not available to us.

13 Therefore, the Staff did not have the reasonable
14 assurance that the safety issues associated with the soils
15 settlement activities would be satisfactorily resolved.

16 Q I was thinking more of when you decided how the
17 order would fit into regulations, like in Part 50; and I'm
18 wondering if you ever stated or took the position that the
19 design changes proposed by the Applicant represented a
20 departure from the principal architectural and engineering
21 criteria.

22 MS. BROWN: Objection. I fail to see the
23 materiality of that question to Mr. Hood's limited testimony
24 at this point.

25 CHAIRMAN BECHHOEFER: Could you explain the

1 relevance and materiality, just to this testimony before us?

2 MS. STAMIRIS: Because I'm trying to point out
3 that it has to do with what these questions are about, and
4 whether or not remedies such as this are to be approved
5 without an amendment to the construction permit. It has to
6 do with a change in the NRC position, which I am trying to
7 determine if a change like that has taken place, as what
8 I believe is indicated by the wording and interpretation of
9 these questions in his testimony.

10 CHAIRMAN BECHHOEFER: I'm afraid we'll have to
11 sustain that objection, too. We really don't see the
12 relevancy of that to this limited testimony.

13 I might say that the technical form of the
14 submission, as also being an amendment to the FSAR, the
15 effect is the same thing.

16 MS. STAMIRIS: I'm not so concerned about the
17 technicality of what the amendment is called, and I'm not
18 really heading towards procedural complications that might
19 lead to another hearing, or something like that. But I am
20 concerned about what I believe is a basic change in the NRC
21 position, and it seems like-- When will I be able to pursue
22 that? It seems to relate directly to this limited testimony,
23 and approval of what I thought were end results of the hearing.

24 CHAIRMAN BECHHOEFER: Well, these are just
25 limited to construction activity. This does not approve the

1 adequacy of the remedial fix at all. This is merely certain
2 construction activities, and the question is whether or not
3 they would have an adverse impact on various proposed
4 remedies and I guess on the buildings themselves.

5 MS. STAMIRIS: So will I be able to
6 pursue that at another time? I mean, the point is that if
7 we pass it up now, then this will have already happened. And
8 I do believe that it relates directly to this initial
9 testimony.

10 CHAIRMAN BECHHOEFER: Well, you can certainly
11 explore the basis for the Staff's reasonable assurance
12 finding of these two matters.

end 9 13

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1 MS. BROWN: Can I make a statement at this
2 point?

3 CHAIRMAN BECHHOEFER: Yes.

4 MS. BROWN: Perhaps this needs to be clarified,
5 but this order is not in effect at this time because Consumers
6 requested a hearing; therefore, when Consumers decided to
7 proceed with any future proposed remedial actions, they were
8 perfectly free to do that, without the Staff's approval and
9 without your approval; however, they voluntarily decided to
10 abide by the terms of the order, although they are not legally
11 bound to, and they chose to go through the Staff's--to receive
12 the Staff's concurrence on any proposed actions that they
13 wanted to proceed with, and that's precisely what they have
14 done with these back-up interceptor wells and are now doing
15 in surcharging the valve pits.

16 If you decided to sustain this order, then
17 perhaps an amendment to the application would be required, but
18 at this point, when the order is not in effect, I see no
19 relevance to Mrs. Stamiris' questions about, you know, why
20 hasn't an amendment to the construction permit been filed
21 and approved before they proceeded with these two activities.
22 That's not relevant because the order is not in effect;
23 therefore, there is no requirement at this point to amend that
24 construction permit.

25 CHAIRMAN BECHHOEFER: Right. This was just in

E10L2

1 response to the Board's own question about whether these
2 activities could have an adverse impact. That's really the
3 whole basis for this testimony.

4 MS. STAMIRIS: Well, I wasn't really trying to--
5 I was really just trying to establish whether or not there
6 was a change in the NRC position, and I hope that I will be
7 able to pursue that at a later time, but I will move on to
8 another area, which I hope that I can discuss. I think so
9 because Mr. Hood and Ms. Brown have brought it up themselves,
10 and that is the voluntary work stop that Consumers elected
11 to proceed under involving soils settlement problems.

12 Although I am not in a position to have definite
13 proof on the subject, I want to explore different statements
14 that have been made about it, and I would like to ask Mr. Hood
15 if he remembers a phone conversation that we had in mid-
16 January--and I'm sorry, but I can't be more specific, but I
17 do remember it was a few weeks before the January pre-hearing
18 conference, or a week or so.

19 At that time I was trying to establish the
20 date of the voluntary work stop, when it first took effect,
21 and you brought up a question about it yourself.

22 Q (By Ms. Stamiris) I want to ask you if you
23 remember saying something to this effect: "I have to question
24 to what degree this soils work has actually stopped." Do you
25 remember saying that, Mr. Hood, or something like that?

E10L3

1 A Yes, I do.

2 Q Could you explain what you meant by that,
3 please?

4 A There have been certain activities that have
5 occurred at the site which would not have been permitted
6 had the order been in effect, and when I made the statement,
7 I had those types of activities in mind.

8 I believe the specific activity I had in mind
9 at the time was the fact that the soils immediately adjacent
10 to the waste wall of the diesel generator building had been
11 excavated to the base of the footing for the purposes of
12 performing grouting of the crack--the gap that existed in
13 that foundation. That involved an excavation that would not
14 have been permitted under the terms of the order.

15 Q So regarding that excavation that you are
16 talking about, you believe that the voluntary work stop was
17 in effect?

18 MS. BROWN: Objection. I don't see the rele-
19 vance of whether the voluntary work stop was in effect or
20 wasn't. It was voluntary. It has no bearing, again, on the
21 scope of this testimony.

22 MR. FARNELL: It also has no bearing on the
23 question asked by the Board, which deals with the present.

24 CHAIRMAN BECHHOEFER: I can't see the relevance
25 of that either. We will sustain that. This is just to the

E10L4

1 limited testimony of this witness.

2 MS. STAMIRIS: Mr. Hood raised the very subject
3 himself. I wouldn't think that he would mind--

4 CHAIRMAN BECHHOEFER: But he will be back on
5 that other subject.

6 MS. STAMIRIS: Why did he raise the same subject
7 in this testimony if it was not relevant?

8 CHAIRMAN BECHHOEFER: He has pointed out-- I
9 would ask Mr. Hood one thing. Maybe this will clarify.

10 Do the various construction activities which
11 you have talked about, which you thought may be going on,
12 in the telephone calls to which you referred--first, are they
13 still continuing, or have they been completed?

14 THE WITNESS: The particular matter that I
15 referred to has been completed. If I understand your question,
16 the voluntary stop work is still in effect.

17 CHAIRMAN BECHHOEFER: All right. Well, my
18 question was, you have mentioned that you thought certain
19 activities were going on at the time of that telephone call,
20 and I am wanting to know whether those activities were now
21 being undertaken or had been completed, or what their status
22 was.

23 THE WITNESS: They have been completed.

24 CHAIRMAN BECHHOEFER: I see. I guess you answered
25 my question before, but these are the only two other activities

1 that would be involved within the scope of our question?

2 THE WITNESS: Yes, sir, because these are the
3 only two that are proposed for the near term.

4 CHAIRMAN BECHHOEFER: Thank you. You may
5 proceed.

6 MS. STAMIRIS: Well, I had more questions that--
7 you know, I was going somewhere with that line of questioning,
8 but I assume that if I can't--I am assuming that I can't
9 pursue that subject any more.

10 CHAIRMAN BECHHOEFER: With this witness at this
11 time.

12 MS. STAMIRIS: Okay.

13 CHAIRMAN BECHHOEFER: That does not necessarily
14 mean that the answer would be true for other witnesses or
15 for this witness when he again resumes the stand later.

16 Q (By Ms. Stamiris) Am I correct then in assuming
17 that these are the only two-- I am confused now. The second
18 of these remedial actions, surcharging the two valve pits
19 which are adjacent to each of the borated water storage tanks,
20 you are no longer approving that remedial action?

21 A The Staff has not decided whether or not it
22 approves that remedial action. It is reviewing a letter dated
23 June 26th, which has provided the information that the Staff
24 needs to make that determination, and it is indicated that it
25 will provide its decision--it will make that decision by July

ERASE

1 15th.

2 Q But has the Staff already concurred on the
3 installation of the 20 permanent back-up interceptor wells?

4 A Staff has determined that there are 12 of
5 those 20 for which it would not object if the installation
6 of those wells would proceed.

7 MS. STAMIRIS: I don't believe I have any more
8 questions, but I will briefly look through these other documents
9 I have and see if I think that they would be referring to
10 new areas.

11 (Pause.)

12 Q (By Ms. Stamiris) May I ask, when was the
13 borated water storage tank-- There are two borated water storage
14 tanks, right?

15 A Yes, there are, one base unit.

16 Q And on one of them the foundation ring has
17 cracked?

18 A I believe the foundation ring has cracked on
19 both of them.

20 Q On both of them. When were these tanks built?

21 A I don't recall the exact date when the tanks
22 were started. I know it was roughly two years ago, or there-
23 abouts. I know about where we were in our--in the stage of
24 our review when the construction proceeded. I do not recall
25 the exact date.

1 Q Do you recall if it was after the December 6th,
2 1979 order?

3 A I believe that's correct.

4 Q Did the Staff express any concerns or cautions
5 to Consumers about the fill soils prior to the construction of
6 these tanks?

7 A Staff had asked in its original 54F questions,
8 Question No. 6--those questions were asked in March of '79.
9 In that question we expressed our concerns, generally, about
10 what the Applicant--we questioned what the Applicant had
11 proposed to do in regards to those tanks. The response was by
12 way of proof tests, which is basically that they would
13 proceed with the construction, fill the tanks and then monitor
14 the settlement. There were follow-up questions also in
15 subsequent 54F questions, and some of those questions--that
16 line of questioning continued after the December 6th order was
17 issued.

18 MS. STAMIRIS: I don't have any further ques-
19 tions, Mr. Hood.

20 CHAIRMAN BECHHOEFER: Okay. Mr. Marshall, do
21 you have any questions?

22 MR. MARSHALL: Just two questions, is all.

23 CHAIRMAN BECHHOEFER: Okay.
24
25

MILLERS
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COTTON CONTENT

1 CROSS EXAMINATION

2 BY MR. MARSHALL:

3 Q You raised a question, Witness, in regard to a
4 chlorine building, which you said was some other type of
5 building; that is, I thought you said it was some other type
6 of building.

7 Now, I would like to know, where does this
8 building stand as it relates to the construction of the nuclear
9 power plant? Is it a Dow Chemical Company building you are
10 referring to?

11 A No, sir. The intake structure is what we are
12 talking about-- When we are talking about the service water
13 intake structure, it is really adjacent to three or four
14 other structures. In a sense, if you looked at them physically,
15 you might think it was just one big structure. In fact, it
16 is really three different complexes that happen to be adjacent.

17 Q What I am asking you, Witness, is it belongs
18 to the construction and is an integral part of the construction
19 of the nuclear plant, is it not?

20 A It is located on the nuclear site.

21 Q Then it is not on the other side of the river?

22 A No, it is not.

23 Q It isn't a chlorine building then.

24 A It is physically located adjacent to the circu-
25 lating water intake structure.

1 Q I wanted to make sure it wasn't a chlorine
2 building. I know where all of those chlorine buildings are
3 down there. The river and the nuclear plant is on the same
4 side of the river, and it is not a chlorine plant. The chlorine
5 plant is on the opposite side of the river.

6 A We are referring to a structure--

7 MR. MARSHALL: That's all. That's all I wanted
8 to know.

9 MR. FARNELL: I have one question.

10 CROSS EXAMINATION

11 BY MR. FARNELL:

12 Q Mr. Hood, the 12 back-up
13 interceptor wells we have been talking about, they are
14 reversible, are they not, in that they can be grouted if they
do not work out properly?

15 A That's correct.

16 MR. FARNELL: No further questions.

17 BOARD EXAMINATION

18 BY MR. DECKER:

19 Q Mr. Hood, you just answered one of my questions in
20 that the installation of the 12, at least, interceptor wells
21 was reversible. Is there anything about either the interceptor
22 wells or the supporting wall which commits this project to a
23 particular remedial solution and prevents other possibilities?

24 A Yes, sir. I understand your question to go to
25 the need of the permanent dewatering system?

E10L10

1 Q That's correct.

2 A The need for the permanent dewatering system
3 results from the fact that soils under the safety-related
4 structure included sand, and the concern is the liquefaction
5 potential. The sand has to be kept dry.

6 Q Were there other remedies suggested and con-
7 sidered for the circulating water intake structure, other than
8 this wall?

9 A Sir, there is no proposed remedial action
10 for the circulating water intake structure. There is some
11 remedial action proposed for the service water structure,
12 which is adjacent to that.

13 Q I beg your pardon. Right.

14 A Yes, sir. There was an earlier proposed fix,
15 if you will, for this service water intake structure, which
16 involved the use of piles, which would be attached to the
17 foundation at the service water intake structure by way of
18 corbels, which is just a huge concrete block, if you will,
19 which would be attached to the side of the service water
20 structure by means of bolts, and the piles would be located
21 under the corbel. That design is not now proposed.

22 Q It is not now being proposed?

23 A No, it is not.

24 Q By anybody? I mean by either Consumers or the
25 Staff.

E10L11

1 A That's correct.

2 Q In concurring in the installation of at least
3 12 of these 20 wells, are you also concurring in the supporting
4 wall beneath the overhang portion of this service water struc-
5 ture?

6 A No, sir.

7 Q Just the wells?

8 A Yes, sir.

9 Q Concerning the two valve pits which are adjacent
10 to each of the borated water storage tanks, what is there
11 about this which is not reversible in terms of alternate
12 remedial actions?

13 A The concern for that remedial action is that
14 you not do further damage to the tank. The tank has been
15 constructed and is now in place. The purpose of that surcharge,
16 if you will, would be to alleviate the stress in that tank
17 and the ring foundation itself.

18 My understanding of the problem is that the
19 pit has not settled to the same degree as the ring foundation,
20 and indeed has acted to, if you will, provide a hard spot,
21 such that permitting the ring to settle more, so that the pur-
22 pose therefore is to drive the pit down to the point it
23 would have been as it was originally anticipated prior to a
24 design change that was made, which removed some of the weight
25 that would have been on that pit and which was included in

E10L12

1 the initial calculations.

2 Perhaps I should explain what I mean. The
3 original design of that pit included tanks which were associated
4 with the injection for the containment sprays. There was a
5 change made in the type of additive that would be made to the
6 containment spray, and that particular change eliminated the
7 need for those tanks. The original calculation that was done
8 for the settlement of the valve pit for the water intake storage
9 tank assumed that weight was present, so in actuality, what
10 happened is that while it was designed, it did not have
11 sufficient weight on the valve pit, and it did not settle to
12 the same degree as the ring. The ring settled, and this put
13 a bending stress in the ring, and it subsequently cracked.

14 Q Am I correct that part of the remedial action
15 was to place an additional ring around the outside of the current
16 supporting ring?

17 A That is the proposed fix. A reinforced
18 concrete ring, which will be commensurate with the existing
19 ring, would be placed and would be attached to that existing
20 ring by means of dials, a dial being between the two. It
21 would assume at least part of the load from the existing
22 ring.

23 Q You haven't made any recommendations in your
24 testimony to the Board, one way or the other, as to whether
25 either of these actions, the surcharging of the wells--as to

E10L13

1 whether or not the Board should consider preventing that
2 action, in that they might preclude other possibilities in
3 the future. One might cast in some concrete remedies that we
4 haven't looked at yet, haven't considered yet. You haven't--

5 A Staff has considered that as one of its criteria
6 in arriving at its position, and it is the substance of my
7 testimony. I am saying that I have no objections to proceeding
8 with the installation of these 12 wells. You are correct
9 that I do not explicitly acknowledge that doing so would
10 thereby not foreclose other alternatives, but that is the
11 case.

12 MR. DECKER: I would have inferred that, if
13 necessary, but I wanted to hear you say that and just have
14 an opportunity to ask that.

15 BY DR. COWAN:

16 Q Returning to the seismic problem of the sand
17 becoming liquid, if this dewatering system is installed
18 according to your requirements and to your satisfaction,
19 does this resolve your concerns about possible liquefaction
20 problems?

21 A Staff has not yet arrived at its position with
22 respect to the adequacy of permanent dewatering as a fix.
23 In my testimony, I am only going after--I am only speaking
24 to a very small part of that overall system, and we really are
25 viewing this more from the standpoint of a construction

1 type activity, if you will, rather than the adequacy of a
2 proposed fix.

3 Q So that the overall adequacy of the fix is
4 still subject to testimony and discussion, but you have
5 addressed the problem of this limited installation of these
6 eight wells as satisfactory and have explained that the whole
7 idea is related in some way to the liquefaction of sand, and
8 this matter presumably would come up again in connection with
9 the seismic problem?

10 A Yes, and there will be further testimony
11 during the course of this hearing about the adequacy of the
12 permanent dewatering system.

13 DR. COWAN: Okay. That's all I have.

14 BY CHAIRMAN BECHHOEFER:

15 Q Mr. Hood, just to
16 clarify a couple of statements, with respect to the 20 wells
17 which are stated to be in preparation for the watering and
18 installing the remedial supporting wall, has the Staff approved
19 the installation of such a wall?

20 A No, sir.

21 Q Are the wells that are proposed to be installed
22 useful only with respect to that wall?

23 A Yes and no. Let me explain that. The wells
24 that we are talking about have a dual purpose. During the
25 construction phase, it has a construction purpose of lowering
the water table, which is necessary for the installation of

1 such a wall, and it is quite similar to the kind of construc-
2 tion activity that goes on at sites all the time. At the
3 time of excavation, there is temporary dewatering.

4 These wells would also serve a function during
5 plant operation, and that is it would maintain the water
6 table at a low level such that liquefaction is not a problem
7 at the site.

8 Q Do I take it from that testimony, however,
9 that if the remedial supporting wall were not to be installed,
10 the dewatering wells for dewatering could or would be located
11 elsewhere?

12 A I doubt that-- Yes, they may not be in the
13 precise location; however, the studies that have been
14 performed by the Applicant show that the general approach
15 or the encroachment of water from the table is coming from
16 the pond, and while I am not an expert on this subject,
17 the indications that we have had lead me to believe that even
18 if there was some other fix, there would nevertheless be
19 an interceptor type of the watering system which would inter-
20 cept the water that is coming--by virtue of the sands, the
21 natural sands that exist in that area, which are coming from
22 the cooling pond.

23 Q Well, would the wells necessarily be in the
24 same position, or doesn't it matter?

25 A I doubt that they would be in precisely this

E10L16

1 position. I believe that there would generally be wells in
2 that area to serve as interceptor wells to intercept the main
3 flow of the source of ground water which is coming from the
4 cooling pond.

5 Q Now, you decided that the remedial supporting
6 wall should not be built, that some other measure should be
7 substituted, and assuming you needed 20 wells, would you fill
8 in these 20 and build 20 more or dig 20 more, or would you
9 have 40 wells, 20 for current dewatering and 20 for whatever
10 alternative structure would propose to be used?

11 A I am not sure I understand your question, sir.

12 Q Well, I am thinking if something other than the
13 remedial supporting wall were used and you already have these
14 20 wells, would you leave these 20 wells in for permanent
15 dewatering and build some other number, maybe another 20,
16 for whatever supporting structure you might erect, or would
17 you fill in these and use the other 20 for a dual purpose?

18 A I believe that's a question that would have
19 to be directed to the Applicant, as to what his proposal
20 would be if he were not going to use these wells for a--from
21 his temporary construction standpoint. He may very well
22 elect to have those wells in a slightly different arrangement
23 than where they are, or perhaps a different number.

24 Q Well, what I was really driving at was, it
25 ended up with 40 wells-- I don't know that this is possible.

E10L17

1 If you ended up with 40 wells, does that have any adverse
2 safety consequences in terms of the underling ground structure?

3 A You are referring to 40 for the interceptor
4 purpose?

5 Q No. I am referring to 20 for the interceptor,
6 and possibly 20 more for another remedial action.

7 A The area of the watering, just to maintain
8 the water table for the entire plant?

9 Q Right, right, but I am assuming you have 20
10 now that you built for this purpose, and you could come
11 along and approve a different fix. Would you have 20 more,
12 and if you had 20 more-- Could you have 20 more, and if you
13 did, would that affect the underlying soils structure,
14 or could it?

15 A I don't believe that the Staff can answer that
16 question, and the reason is that it would depend upon what
17 the Applicant would propose to do. We would not ourselves
18 design such a system, nor do we do that as regulators.
19 We merely look at what is proposed as a remedial action to
20 determine if that's an adequate fix or not.

21 Your question, if I understand it correctly,
22 is, "Well, if you didn't use this particular type of a remedial
23 action and you go to some other type, might you have some
24 different arrangement?" I would think the most I can say is
25 that I can foresee that the Applicant might, under those

E10L18

1 circumstances, propose to arrange those dewatering wells
2 somewhat differently, and the reason I say that is I think
3 that because the present 20 wells that we are referring to
4 have been selected for the dual purpose that they serve, if
5 you now removed the dual purpose and you only have the one
6 purpose, there may be a more optimal arrangement.

7 Q I am assuming you have got your 20 already,
8 though; that presumably the work is going to start in the
9 very near future on that, before final approval of whatever
10 the fix will be. I am assuming you have got your 20.

11 A Then your question is--

12 Q My question is if you reject the fix, would
13 alternatives--given 20 wells already there, would that have
14 any safety significance to have to build, say, 20 more, dig
15 20 more?

16 A No, sir, I don't see a safety significance
17 of that.

18 Q Pardon?

19 A I don't see the safety significance of that;
20 that is, if you get 20 wells in and for whatever reason you
21 find it necessary to change the now proposed fix and you
22 wind up grouting the 20 that you have dug, plugging them, if
23 you will, with gravel, and now you decide because you have
24 got some other fix, you want to go out and dig 20 more,
25 is there a safety implication to that? I don't see a safety

E10L19

1 implication to that.

2 Q Would the wells that are filled--grouted, if
3 you will--have to have similar characteristics to the area
4 which didn't have a well in it in the first place, in terms
5 of certain supporting soils?

6 A Are we still talking just about the intake
7 structure?

8 Q No. We are talking about--

9 A Are we talking about the entire plant?

10 Q No. We are talking about the 20 wells that we
11 are talking about here. They have to be grouted. Would
12 the resulting--maybe the word shouldn't be "soil", but would
13 the result be usable to support some of those, or is that
14 completely a function of compaction, and that type of thing?

15 A I'm sorry. I just don't understand the ques-
16 tion.

17 MR. DECKER: Mr. Hood, if you decided for
18 any reason not to use a well at all or not any longer, and
19 you grouted it, would this change the bearing capabilities
20 above and in the vicinity of that well and, if so, would
21 it be for the better or for the worse?

22 THE WITNESS: Judge Decker, I don't believe I am
23 qualified to answer that question. I think there will be
24 others during the course of this hearing that can answer that
25 question.

E10L20

1 Q (By Chairman Bechhoefer) Well, turning to
2 just another clarification, when it says "two valve pits
3 adjacent to each of the storage tanks", does that mean four
4 pits?

5 A No, sir. It means there is a valve associated
6 with each borated water storage tank ring, a valve pit
7 associated with each ring.

8 Q So it is a total of two?

9 A A total of two for the site.

10 Q As a general question, is there any difference
11 between your statement, with respect to the 12 wells, that
12 you do not object--is there any difference from saying that
13 or from saying that you concur?

14 A No.

15 Q You say you don't object. In answer to one
16 other question, you said that you concurred, the Staff concurred.

17 A The more positive statement would be that we
18 concur.

19 Q But you don't consider them-- You do concur
20 with these activities?

21 A Yes, sir. It is worded that way because
22 we were asked to indicate our agreement, and I could just as
23 easily have said, "We now concur with proceeding with that
24 activity."

25 Q I just wanted to explore whether there was any

E10L21

1 difference in the Staff's point of view, and I take it there
2 isn't.

3 A No, sir.

4 Q One just minor clarification also in terms
5 of numbers. You indicated that seven wells had to be relocated,
6 and then another eighth well would have to be relocated.
7 Was the eighth well one in which none of the above samples,
8 boring samples were taken? It is at the start of the paragraph
9 on Page 2 of your supplemental testimony. It talks about
10 boring samples taken from three of seven locations. I wondered
11 how the eighth crept in there in terms of being relocated.

12 A There are eight wells that are located in the
13 area where the sand pockets occurred--excuse me--the inter-
14 laying of clay and sand occurred and, therefore, are proposed
15 to be relocated. Seven of those will be relocated in one
16 direction, and one in a slightly different direction. That's
17 the distinction that is being drawn.

18 Q I see. It indicates that samples were only
19 taken on the first seven.

20 A Let's see. Where is this?

21 Q The second paragraph of your answer to Question
22 3 on Page 2 of your supplemental testimony. What I was
23 trying to figure out is what the reason for the relocation
T 24 of the eighth well is, if it is merely proximity to the other
25 seven, or do you have some other basis for--

1 A Okay. The seven wells I am referring to are
2 those that are to the immediate northwest wall of the service
3 water intake structure. The eighth one is just inside the
4 corner of that structure; that is, it is in front of the circu-
5 lating water intake structure. It is that area that exhibited--
6 the area in front of the service water intake structure that
7 exhibited the interlayer of clays and sand and would cause a
8 concern for the dewatering activity and, therefore, would be
9 relocated. I don't know, as I sit here at the moment, about
10 three of the seven dewatering well locations and the distinc-
11 tion between the seven that was used in here as opposed to
12 later on indicating that there are eight to be relocated.
13 The eighth well is designated, I believe, G-9 by the Applicant
14 in his representation, and it is to be relocated about 20
15 feet in a westerly direction.

16 Dr. Cowan: Could it possibly be that the re-
17 location of seven wells means that the eighth well, which
18 might be acceptable where it was, is no longer acceptable,
19 but should be coordinated with the other seven? That seems
20 to me to be a possible explanation.

21 THE WITNESS: I believe it is stating that the
22 seven wells, which are those that are designated F-1 through
23 F-7, are the ones that are located directly to the cantilevered
24 wall, if you will, of the service water structure, and the
25 Applicant indicated that he intends to move those seven. Those

1 seven would be located in a due northwest direction of approxi-
2 mately 50 feet, necessary to clear certain obstructions that
3 are in that area.

4 Where the eighth well is to be relocated occurs
5 at a corner between the service water structure and the
6 circulating water intake structure. It will be moved 20
7 feet to the west.

8 Q (By Chairman Bechhoefer) Has the Staff reviewed
9 and/or approved the location of the four new borings you talked
10 about?

11 A We have discussed that with the Applicant and
12 have indicated our agreement with that approach, yes.

13 Q Do you think four borings are enough to enable
14 you to determine whether the eight wells will be acceptable?

15 A I am not qualified to answer that, but I can
16 state that the Staff's geotechnical experts and our consultants
17 have not indicated any objections to that particular point.

18 BY MR. DECKER:

19 Q If I understood your previous testimony before,
20 I believe it was under cross examination by Ms. Stamiris,
21 you stated that a crack in the foundation of the diesel genera-
22 tor building had been fixed by excavation and grouting, I
23 believe you said, since December 6th, 1979. Am I correct so
24 far?

25 A I believe I amended that statement shortly

E10L24

1 thereafter to say "gap" rather than "crack".

2 Q All right. You further stated that that would
3 not have been permitted had the modification order been in
4 effect, is that correct?

5 A Yes, sir.

6 Q I think I also heard you say that the borated
7 water tanks had been constructed since December 6th, 1979, is
8 that correct?

9 A Yes, sir.

10 Q Would that activity have been permitted had
11 the modification order been in effect, in your judgment?

12 A Yes, sir.

13 Q It would have been permitted, permissible?

14 A I believe that's correct.

15 Q Other than the excavation and patching of a
16 flaw in the foundation of the diesel generator building, do
17 you know of any other activity which has occurred since
18 December 6th which would not have been permitted had the modi-
19 fication order been in effect?

20 (Pause.)

21 A I hesitate because I believe that at some
22 course in time, I have been of the opinion that that was the
23 case, and as I sit here at the moment, I can't seem to recall
24 what that activity was. I guess I will have to answer your
25 question by saying I am not aware of it, as I sit here,

1 that there were other activities of that type.

2 MR. DECKER: Thank you very much. I have no
3 other questions.

4 CHAIRMAN BECHHOEFER: I have one follow-up to
5 yours. I have one follow-up question to what Judge Decker
6 asked.

7 BY CHAIRMAN BECHHOEFER:

8 Q Did you state that the work that was done
9 on the borated water storage tank would not have been precluded
10 by the modification order if it were in effect? Is my
11 understanding correct?

12 A Yes, sir, I just stated that. I believe the
13 wording of the order cites that that particular activity
14 would not have been precluded.

15 Q All right. Now, I would like, then, for you
16 to explain what difference, if any, you have with the Appli-
17 cant concerning that statement in the June 26th letter, that
18 the borated water storage tank problem is or is not soil-
19 related.

20 A The Applicant, in its June 26th letter, states
21 that he does not feel that the problem with the foundation
22 for the borated water storage tank is soil-related. I under-
23 stand the basis for his position to be that the problem did
24 not result from excessive settlement, but I believe he is
25 indicating that, yes, there was settlement, and obviously there

1 are cracks in the structure, and there has been settlement.

2 His point is, I believe, that the settlement
3 that has occurred is within the predicted amount. I believe
4 he views the problem as one of a faulty design, and it is
5 basically the problem that I referred to earlier; that there
6 was not proper recognition given to the valve pit, which is
7 attached and is an integral part of that ring, settling
8 at one rate, and the ring foundation settling at another rate.
9 I believe the original calculations were performed with the
10 assumption that there would be additional weight on the valve
11 pit, which was not present. Staff--

12 Q Now, what is the-- I'm sorry. I was going
13 to say what is the basis for the Staff's disagreement with
14 that.

15 (Continued on next page.)
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1 A. The Staff really says the fix for the borated
2 water storage tank is dependent upon the soil. Remedial
3 actions for the ring is an adjacent ring attached by a valve
4 to an existing ring, to assume part of the load.

5 We were concerned about the properties of the
6 soil to support those rings. We believe that fix is soil-
7 dependent, and we are basically seeking assurance that the
8 soils, if the ring is modified, will be adequate to support
9 it, and that we can depend upon the corrected ring to
10 adequately perform the safety function to survive an earth-
11 quake.

12 We are equally concerned--what, of course, I
13 think we're really concerned about is the tank itself, the
14 fact that the tank has some distress as a result of the fact
15 that the ring is not level. And that is a matter that the
16 Applicant has under review as far as corrective action, to
17 assure that that tank level is reestablished. We are
18 seeking assurance that excessive levels will not occur in
19 the future with respect to the corrected ring, and we believe
20 that is soil-related.

21 Q. So, in other words, you're saying that the
22 fix is soil-related. The construction of the building itself
23 is not soil-related. I'm interpreting, just from your answer,
24 you to say that the construction of the building itself is
25 not--

1 A. I'm under some difficulty, as I sit here, not
2 having reference to the order in front of me and having to
3 proceed from memory. From my recollection of the particular
4 wording, those activities that are prohibited by the order
5 are such that proceeding with the construction of the borated
6 water storage tank would not have been prohibited.

7 (Document handed to the witness.)

8 I might point out that the implementation of
9 the fix for the ring may involve activities which would be
10 prohibited if this order were in effect.

11 I believe your question, though, was directed
12 to the initial construction of the tank.

13 Q. That's correct. And I was wondering why it
14 really didn't fall within Paragraph 4.1(a) of the order.

15 A. Because 1.(a) is directed to the soil material.

16 Q. Right. So that the construction of the water
17 tank doesn't affect the--

18 A. Not the construction of the tank. If you
19 changed the foundation, it would . But the activity that
20 occurs-- Maybe I should explain that the ring-- What we're
21 talking about is the metal part of the tank itself, the shell,
22 that aspect proceeded.

23 Q. That, I didn't understand from your answer to
24 a previous question. I was assuming the construction of the
25 tank included the shell and the surrounding rings. If I was

1 incorrect, which I apparently was....

2 A. My comment was directed to the metal tank.

3 Q. Okay. I didn't understand that. That was the
4 source of the confusion and those questions.

5 A. I was directing my comment to the activity that
6 had proceeded, which I understood to be the source of Ms.
7 Stamiris' concern, the tank construction. Now, the ring
8 foundation, the base for the tank, was already present.

9 CHAIRMAN BECHHOEFER: Does Staff have any
10 redirect?

11 MS. BROWN: Yes, it does.

12 WITNERS FALL REDIRECT EXAMINATION

13 BY MS. BROWN:

14 Q. Mr. Hood, did you state that Consumers grouted
15 the gap in the diesel generator building?

16 A. Yes, I did.

17 Q. Has the NRC accepted the fix provided by that
18 grouting of the gap? Has the Structural Engineering Branch
19 of the NRC signed off on that?

20 A. No.

21 MS. BROWN: The Staff has no further questions.

22 CHAIRMAN BECHHOEFER: You may ask questions based
23 on the Board questions or Ms. Brown's redirect.

24

25

CROSS-EXAMINATION

1
2 BY MS. STAMIRIS:

3 Q When you said that you thought that the borated
4 water storage tank construction would not have been precluded
5 by the December 6 order, what did you base-- Well, I think
6 you've already told us what you based that on. Would you say
7 that in believing that it would not have been precluded, that
8 it did not foreclose or affect soil settlement problems, or
9 things in other ways? Did you see any harmful effect of
10 allowing the borated water storage tank to be completed?

11 MR. FARNELL: Object on the grounds that it's
12 not relevant. It was permitted by the order, but does not
13 have anything to do with this hearing.

14 CHAIRMAN BECHHOEFER: I think that's correct.
15 We will sustain that.

16 Q (By Ms. Stamiris) My next question was-- This
17 is from a March 20, 1979 letter from the NRC, signed by Mr.
18 Hood. It's subject is, "Summary of March 6, 1979, Trip to
19 observe Status of Soil Program," and at the bottom of that,
20 at the first page of that letter, it says:

21 "The Applicant reported that instrumentation
22 previously installed in the tank farm area was
23 relocated so as not to interfere with construction
24 activities."

25 Would this tank farm area be where the borated

1 water storage tanks are?

2 A Yes, ma'am.

3 Q Do you remember the instrumentation that was
4 relocated?

5 A There were certain borous anchors, or something
6 of that type, that were originally located and being used to
7 monitor the soils in that area. My recollection is that they
8 were in the way of construction, and some construction crew
9 destroyed those instruments. And I understand that additional
10 instrumentations were subsequently correct.

11 Q So it was not--

12 A The instruments were interfering with some
13 activity that occurred in that area, and the construction crew
14 demolished them.

15 Q So you did not give any permission or concurrence.
16 You just found out after the fact that those--whatever those
17 instrumentation devices were--had been--

18 A That's right. We found out about that after the
19 fact. This was of concern to us, that ongoing construction
20 not interfere with our ability to understand what the situation
21 was. And that was of particular concern to us, because it's
22 an example of the kind of thing that can happen that would
23 affect our ability to understand what's going on.

24 Q And when you say borous anchors, what was their
25 purpose? I don't understand exactly what they do.

1 A. I don't recall if I said it was a precise type
2 of instrumentation that I was referring to. I believe my
3 comment was it was some type of instrument like a borous
4 anchor that was providing us some indication of the soil
5 characteristics in that area.

6 Q. Would you consider that since this was-- All
7 right, this is a March 6, 1979, letter, so it was before the
8 order but well into the NRC identification and investigation
9 of the problem. Do you think that this is something that the
10 Applicant should have received approval on?

11 MS. BROWN: Objection. That calls for a
12 hypothetical answer.

13 MR. FARNELL: Is she saying that we should have
14 told them before we destroyed them?

15 CHAIRMAN BECHHOEFER: I guess if the witness can
16 answer, he may. We will overrule the objection. It is sort
17 of hypothetical, but....

18 A. I don't really see why an Applicant should seek
19 permission from the Staff.

20 MS. STAMIRIS: I have no further questions.

21 CHAIRMAN BECHHOEFER: Mr. Marshall?

22 MR. MARSHALL: Well, I'm just wondering about
23 these water pumps. I'm not quite sure that I understand about
24 this dewatering situation down there in that floodplain.

1 BY MR. MARSHALL:

2 Q What are we talking about? Are we talking about
3 throwing water down the Tittabawassee River, or where are you
4 putting that water?

5 A The water is discharged back to the cooling
6 water pond.

7 Q Into the pond?

8 A Yes, sir.

9 Q And this is taken from sand, as I understand it,
10 that's full of water?

11 A It's taken from subsurface.

12 Q Do we have a situation here where we're
13 recycling the same water over and over? Awhile ago I heard
14 you say it's coming from the cooling pond. Is it now being
15 pumped back into the cooling pond? I mean is this sort of
16 like a canal course?

17 A Somewhat.

18 Q Same thing, huh? Well, I'm wondering, since
19 you are the project engineer, and I have you right here now,
20 I want to ask you, since I've raised this question before in
21 writing: The Applicant has, upstream, a not-too-good situation
22 in that they have a dam up there that's awfully old, but it's
23 their dam. They don't control all the dams that are above
24 it, that are still older.

25 What provisions have you made for a breach of

1 the dam 10 miles up, that would flood all that water down?
2 Would those pumps pump all that water away, take it and put
3 it in the cooling pond too?

4 MR. FARNELL: Objection.

5 MS. BROWN: Objection. That's not the subject
6 of this hearing.

7 MR. MARSHALL: I didn't expect an answer. I
8 just wanted to get it into the record.

9 CHAIRMAN BECHHOEFER: It's not relevant to this
10 witness.

11 Does the Applicant have any further questions?

12 MR. FARNELL: Yes, I do.

13 BY MR. FARNELL:

14 Q. Isn't one of the benefits of the installation
15 of the twelve backup wells to provide empirical recharge
16 data to help in the design and construction of a permanent
17 dewatering system?

18 A. Yes, it is.

19 Q. And won't that data, after it's been developed,
20 be reviewed by the NRC in its determination of the adequacy
21 of the design and implementation?

22 A. Yes, it will.

23 CHAIRMAN BECHHOEFER: The only question I have
24 is, should that be 12 or 20? Your answer was--

25 THE WITNESS: The entire 20 will eventually fall

1 under that category.

2 CHAIRMAN BECHHOEFER: The Board has no further
3 questions.

4 MS. BROWN: Staff has no further questions.

5 MR. MARSHALL: Nothing else.

6 CHAIRMAN BECHHOEFER: At this point, this
7 witness may be excused.

8 (Witness excused.)

9 The Board would like to take a short break, but
10 we think that it would be desirable to introduce the direct
11 testimony of the next witness, but not start the cross-examina-
12 tion. So we'll take maybe a 10-minute break, and then we'll
13 start cross-examination first thing in the morning.

14 MR. FARNELL: We think it would be just as
15 expeditious to do this right now. We feel it would only take
16 five or ten minutes, and then we could break for the day.

17 CHAIRMAN BECHHOEFER: That's fine.

18 (Discussion off the record.)

19 Okay, you may proceed.

20 MR. FARNELL: Consumers Power would like to
21 call Gilbert S. Keeley as its first witness.

22

23

24

25

1 GILBERT S. KEELEY,
2 called as a witness by counsel for the Applicant, being first
3 duly sworn by the Chairman, was examined and testified as
4 follows:

5 DIRECT EXAMINATION

6 BY MR. FARNELL:

7 Q Could you state your name for the record, and
8 your position for the record, also?

9 A My name is Gilbert S. Keeley. My job is
10 Project Manager on the Midland Nuclear Power Plant for
11 Consumers Power Company.

12 Q Have you prepared written testimony for this
13 proceeding?

14 A Yes, I have.

15 Q Do you have that testimony in front of you?

16 A Yes, I do.

17 Q Does this testimony consist of 17 pages, with
18 two exhibits attached, and an affidavit dated June 4, 1981?

19 A Yes, it does.

20 CHAIRMAN BECHHOEFER: I have a copy that has
21 substantially more pages than that.

22 MR. MILLER: You may have Mr. Cook's testimony
23 attached also.

24 MR. ZAMARIN: We were trying to save staples.

25 (Laughter.)

1 MR. MILLER: I'm sorry. We did staple them
2 together.

3 CHAIRMAN BECHHOEFER: All right. You may
4 proceed.

5 Q (By Mr. Farnell) Directing your attention to
6 the testimony and the attached two exhibits, do you have any
7 corrections or additions to this testimony or exhibits?

8 A Yes, I do. I have two corrections.

9 On page 1, the second paragraph, starting with
10 the first line, should read, "From July, 1975," instead of
11 1971.

12 The second correction is on Exhibit 2, which
13 is page 3, and the title is selected soils placement activity.
14 It shows an asterisk. That asterisk should be a number 1, to
15 go with note 1 down below.

end 11 16 (Continued on following page.)

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1 Q (By Mr. Farnell) Are there any other correc-
2 tions?

3 A No, there are not.

4 Q With these corrections, is this testimony true
5 and accurate, to the best of your knowledge?

6 A Yes, it is.

7 MR. FARNELL: Judge Bechhoefer, I request that
8 this testimony be incorporated into the record as if read, and
9 that the two exhibits be entered into evidence, and the affidavit
10 also.

11 CHAIRMAN BECHHOEFER: I just have a point of
12 inquiry. Will these exhibits be exhibits to this testimony,
13 rather than, say, Applicant's Exhibits?

14 MR. FARNELL: They are exhibits to this testi-
15 mony.

16 CHAIRMAN BECHHOEFER: All right.

17 MR. MILLER: I think it will be easier if we
18 identify them on the record as Keeley Exhibits 1 and 2, with
19 the understanding that they are sponsored by Consumers Power
20 Company, and if we identify each of our witnesses', at least,
21 exhibits by the name of the person sponsoring them, I think
22 that that will be adequate identification for the record.

23 CHAIRMAN BECHHOEFER: Okay. Will the Applicant
24 have any exhibits that aren't tied directly to direct testimony?

25 MR. MILLER: There are none at present.

E12L2

1 MR. PATON: Mr. Chairman, I think the point
2 you are getting at is, you know, we better make it a point
3 that these are bound into the transcript as if read, because
4 exhibits are not bound into the transcript. I think that's
5 what you were referring to.

6 CHAIRMAN BECHHOEFER: It was. Are these two
7 exhibits going to be bound in as attached?

8 MR. FARNELL: Yes, these are attached to his
9 testimony, and we would ask that these be bound into the
10 record also.

11 CHAIRMAN BECHHOEFER: Very well. Well, that's
12 okay. To the extent that you have any other exhibits, they
13 will be treated like other exhibits, and you can identify them
14 appropriately so that there will be no confusion.

15 MR. MILLER: Yes.

16 CHAIRMAN BECHHOEFER: Any objection?

17 (No response.)

18 CHAIRMAN BECHHOEFER: Absent objection, the
19 testimony of Mr. Keeley and the two exhibits will be accepted
20 into evidence and bound into the record as if read.

21 (The document referred to, the direct testimony
22 of Gilbert S. Keeley, follows:)

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24

25

This is the testimony of Gilbert S Keeley. I have been employed by Consumers Power Company since 1961. I am currently Midland Project Manager. My present duties include working on the Midland Soils hearing, reviewing the technical aspects of the proposed remedial fixes and providing guidance to the licensing group on soils-related matters. In addition, I provide direction to Midland managers in the areas of design production, construction, testing and administration of contracts. I report directly to James W Cook, Vice-President of Projects, Engineering and Construction.

From July 1971 to March 1980, the date of the appointment of a Vice-President for Midland, my Midland Project duties also included overall responsibility for licensing, design, construction, testing, cost analysis, scheduling and the administration of contracts between Consumers Power and its principal suppliers and of the contract between Consumers and Dow Chemical.

From November 1972 to July 1975 I was Director of Quality Assurance Services for nuclear and conventional power plants' design and construction. In that capacity I was responsible for structuring and implementing the Consumers Power Quality Assurance Program.

From 1970 to November 1972 I was director of Electric Plant Projects Engineering. My duties included supervising a staff in various engineering disciplines involved in the design of nuclear and fossil power plants. This staff also developed the technical basis for specifications issued by Consumers Power for the procurement of major equipment.

I also have held the following positions in the Consumers organization: From 1968 to 1970 I was a Supervising Nuclear Engineer with responsibility over a staff of engineers engaged in writing specification's for the procurement of

nuclear fuel; from 1963 to 1970 I was a Nuclear Engineer; and from 1961 to 1963 I was the Startup Engineer at Consumers Power Big Rock Point Nuclear Plant.

From 1955 to 1961 I was employed in the Atomic Power Division of Westinghouse Electric Corporation as an engineer. From 1949 to 1955 I was an engineer at Pacific Gas and Electric Company, and from 1948 to 1949 I was a test engineer with General Electric.

In 1948 I graduated from the University of Missouri with a BS in Electrical Engineering. I have taken postgraduate courses at the University of Idaho and the University of Michigan.

I have held various positions in engineering societies and committees relating to my work. During the years 1964 to 1970 I was a member of the IEEE Nuclear Standards Group; from 1970 to 1975 I was a member of the ASME N45.2 Standards Committee, which wrote QA standards to supplement Appendix B to 10 CFR 50; and from 1972 to 1975 I was Chairman of the ASME N45.3.13 work group, which wrote the QA standard on Control of Procurement.

I am a Registered Engineer in the State of Michigan and a member of Tau Beta Pi, the National Engineering Honorary Fraternity, and of the Michigan Society of Professional Engineers.

In this testimony I will provide a sequential history of events and activities relating to the soils settlement issues at the Midland Site. My overview will cover important events and activities in various areas, including quality assurance, communications and meetings between Consumers and the NRC Staff, construction activities and events at the site, design activities, and managerial decisions. In addition, I will address certain specific

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contentions of Barbara Stamiris, including example 8 with respect to Stamiris Contention 2, set forth in Stamiris' Response to Applicant's Interrogatories, dealing with "failure to excavate loose sands as committed to in the PSAR," and example 9, alleging that "installation of preload instrumentation was subject to time pressure assoc. (sic) with frost protection considerations."

A chronology of some of the important dates regarding the construction of the Midland Nuclear Power Plant is set forth in the attached Keeley Exhibit 1.

As set forth in the attached Keeley Exhibit 2, the placement of the soils underlying the Diesel Generator Building began in October 1975 and concluded in October 1977. From the start of the soils placements activities to July 1978, when the soils settlement was observed, NRC Inspection and Enforcement Region III made periodic inspections of site construction activities.

On March 26, 1973 the Midland Atomic Safety & Licensing Appeal Board (ALAB) issued memorandum and order ALAB-106. The requirements of ALAB-106 were, among other things,

1. On the first day of each calendar quarter, reports be submitted to the regulatory staff on construction work to be performed during that quarter, containing names of QA Supervisors and engineers of both applicant and the architect-engineer who will be on-site during the period covered by the report;
2. A statement of QA qualifications of each individual named be supplied;
3. On a monthly basis, nonconformance reports covering previous month's work be forwarded to the staff, with enough detail so that the reasons for the discrepancies, if any, will be apparent.

The Board requested that copies of all reports be forwarded to it by the Staff on a timely basis, together with any comments that the Staff may have. The Board further stated that it expected that the Staff would closely monitor the activities of the applicant and architect-engineer. The reporting requirements of ALAB-106 were in effect during the entire time of the soils placement activities.

Consumers Power has complied with all the requirements of ALAB-106 since its issuance. In fact, all of the Consumers Power nonconformances (QF's) and Bechtel nonconformances (NRC's) mentioned in the Soils IE Investigation Reports No. 50-329/78-20 and 50-330/78-20 had been provided to the Staff and Region III the month following their issuance. However, prior to the release on March 22, 1979 of the results of the NRC's soils investigation, (i.e. Investigation Reports No. 50-329/78-20 and 50-330/78-20), neither the Staff nor Region III had made any comment or suggestion whatsoever to Consumers Power or Bechtel that adequate corrective action had not been taken with respect to soils nonconformances.

In August, 1977, Consumers Power became aware of settlement of a grade beam for the Administration Building, a non-safety related structure.

Investigation indicated that in the affected area the fill had been compacted to a value lower than that required by the specification. It was determined that the testing contractor, U S Testing, had selected lower maximum laboratory dry density standards than were appropriate, which resulted in an indication that the soils underlying the grade beam had been compacted to greater than 95% of optimum. In actuality, such soils were compacted in a range of 83.1% to 90.5% of optimum.

The fill in this area had been placed and compacted with large equipment, after which it had been partially excavated to permit placement of concrete for the steam tunnel and Administration Building. Of a total of seven grade beams in the area, only one exhibited settlement. The inadequately compacted soil under the columns supporting the failed beam was removed and replaced with lean concrete.

To determine the extent of the poorly compacted fill, the two adjacent grade beams were load tested, with no indication of problems. In addition, from September 27, 1977 through September 30, 1977 two borings were taken in the area of the grade beams, one boring in the diesel generator building area, and one boring near the evaporator building area. The latter two borings indicated no problems in those two areas. Based upon the results of this investigation, the nature of the failure and the information available at the time, it was concluded that the grade beam failure was localized.

Shortly after that determination, construction of the Diesel Generator Building began with the sump concrete pour in October 1977.

As stated in FSAR Section 2.5.4.10.4, structural settlement measurements were to be monitored to provide a history of time-movement in order to verify settlement predicted by analysis. The details of the survey frequency are described in FSAR Section 2.5.4.13.2. They basically consisted of survey measurements for Seismic Category I and II structures every 60 days during construction and every 90 days during the first year of operation, with an evaluation to determine frequency for subsequent years. For Seismic Category I and II tanks, survey measurements are called for after the tanks are installed and prior to hydrostatic testing, during hydrostatic testing, after hydrostatic testing with the tanks empty, and after filling of tank for

operation, with an evaluation of previous data to determine frequency during subsequent years.

In July 1978, during routine monitoring of structures for settlement, it was found that settlement of the Diesel Generator Building was in excess of that which would have been expected. Accordingly, on August 21, 1978 a Nonconformance Report was issued; on August 22, 1978 the NRC Region III Resident Inspector was notified of this potentially reportable condition; and on August 23, 1978 construction on the building was placed on hold.

As of August 23, 1978 55% of the concrete for the Diesel Generator Building had been placed, with the walls in place to an elevation of 30 feet above grade, the generator pedestals poured, the mud mat poured inside the building, the electrical duct banks placed under the building with horizontal and vertical runs completed, the underground piping in the area under and adjacent to the building installed, and all backfill placed to grade level.

On September 7, 1978 the NRC Region III Resident Inspector was notified that Consumers Power had determined that the condition with respect to the Diesel Generator Building soils was reportable per 10 CFR 50.55(e). This was based on the fact that analysis of soil borings started on 8/25/78 showed that compaction of soil was significantly less than was measured during initial placement of the fill. Commitments were made to provide a formal report by October 7, 1978.

On September 29, 1978 the first 50.55(e) report was issued with the following recommended actions:

1. Determine the amount of settlement of the diesel generator building and increase the frequency of foundation survey measurements to find if the settlement is or will be excessive.
2. Determine the cause of settlement.
3. If the settlement is or will be excessive, determine what actions are required to correct the condition and preclude recurrence.

These recommended actions were implemented. In addition, a boring exploration and testing program which had been initiated on 8/25/78 to provide better definition of the fill conditions under the building and to obtain soil samples for laboratory tests, was continued.

Subsequent to the issuance of the initial 50.55(e) report on September 29, 1978, there were additional 50.55(e) reports transmitted on November 7, 1978, December 21, 1978, January 5, 1979, February 23, 1979, April 30, 1979, June 25, 1979, August 10, 1979 and September 5, 1979. These reports were provided to inform Region 3 and the NRR Staff of conditions relative to the settlement, investigative actions, remedial actions proposed or implemented, and material presented to the Staff in a meeting of July 18, 1979 which consisted of conceptual designs for the remedial activities.

Following discovery of the settlement problems, initiation of the exploration and testing program, and issuance of 50.55(e) reports on September 29, 1978 and November 7, 1978, the NRC Inspection & Enforcement Branch conducted an investigation in December, 1978 and January, 1979 and held meetings with Consumers Power Management in February and March 1979.

Also shortly after the settlement problem was discovered, a Task Force made up of Consumers Power and Bechtel personnel was formed to resolve the technical

issues relating to foundation soils. In September 1978, Drs. Ralph Peck and Alfred Hendron were retained as consultants to assist in the evaluation of data and feasibility of corrective actions. On September 28, 1978, a site visit was made by Dr. Peck to acquaint him with general site conditions, settlement observations and preliminary findings of the exploration and testing program. In October 1978 Dr. Woods of the University of Michigan was retained as a consultant for interpretation of dutch cone penetration tests and Mr. Dunicliff was retained to assist in developing a soils monitoring program.

The first major issue facing the task force was to determine what was to be done about the diesel generator building settlement problem. After a careful consideration of alternatives, the task force, upon the unanimous recommendation of the consultants, decided upon the "pre-load" or "surcharge" approach. This involved placing a layer of sand over and around the soils under the diesel building foundation. The additional weight of this sand would accelerate the consolidation of the soils below the building foundation. The technical basis for the proposal will be fully described in the testimony of Dr Ralph Peck.

The task force's recommendation was adopted by Consumers Power management. The task force also advised that construction work on the diesel generator building could resume, since the additional structural weight thereby produced would enhance the effectiveness of the pre-load. Management concurred, and construction of the diesel generator building resumed.

While the various remedial options were being considered, a field engineer recommended, and the task force decided, that certain instrumentation associated with the proposed surcharge be installed prior to the placement of

frost protection. The so-called "frost protection" consists of the placement of a thin layer of fill over existing grade to protect lower layers from freezing, a necessary first step in the preload process. Because some of the instrumentation to be installed in connection with the proposed surcharge required excavation or sub-surface installation, it was advantageous to install such instrumentation prior to placement of the frost protection layer. While some of this instrumentation was installed prior to the final decision in favor of the surcharge option, the instrumentation involved only minimal cost and had no effect on the choice for remedial action. This responds to example 9 in Stamiris' answers to Applicant's interrogatories.

The monitoring program recommended by consultants was implemented by site surveyors and included measurements of 29 settlement markers on the Diesel Generator structure and pedestals. Twenty-nine soil borings and 13 dutch cone penetrations were taken in the area of the Diesel Generator Building. Soil borings were also taken in other plant fill areas.

Several meetings were held with the Staff and, later, with their Consultants to inform them with regard to planned remedial actions. In addition to the meetings with the Region III IE personnel previously referenced, there was a meeting on-site December 3 and 4, 1978, attended by Dr Lyman Heller, the NRC's chief geotechnical reviewer, Darl Hood, NRC Project Manager, other NRC personnel including representatives from Region III, Bechtel Engineers and Consultants and Consumers personnel. At that meeting, the history of the soils problem was reviewed, the site exploration program was described and various aspects of the recommended pre load option were described and discussed.

Instrumentation installed at the site prior to the placement of the surcharge included piezometers, strain gauges for crack width measurement, borros anchors, and settlement markers. In addition, profiling of underground piping was carried out both before and after the surcharge placement.

On January 26, 1979 application of the surcharge to the Diesel Generator Building was commenced. Application of the first ten feet of fill material was concluded in approximately 25 days. On the advice of Dr Peck, placement was then stopped for a period of approximately two weeks in order to observe instrumentation. Application of the surcharge then recommenced and continued for approximately 25 additional days, at which point the surcharge height reached its maximum level of 20 feet. The surcharge remained in place at its maximum level from April 6 to August 15. During that period instrumentation (piezometers) and settlement markers were observed to determine the effectiveness of the surcharge. Based upon a review of data by Drs Peck and Hendron, the surcharge had carried out its purpose by August 15, when removal was started. The removal operation was completed by August 30.

The settlement data for the Diesel Generator Building and pedestals as well as plots of borros anchors, settlement platforms data, preload intensity data, piezometer readings and cooling pond level readings was provided to the NRC in 50.55(e) reports. This information was also provided, in part, in answers to 50.54(f) questions, and in meetings with the NRC.

In January 1979, settlement data, including that of the new monitoring program observed to that date, indicated that with the exception of the Diesel Generator Building and the pedestal (which had total settlements of 3-3/4" and 4-1/4" maximum, respectively), other structures had minor settlements. This was based on a foundation data survey program that had been expanded from that

committed to in the FSAR to provide an increase in foundation settlement points from 69 to 180 with the additional points being for structures located on plant fill. The measured intervals were decreased to 7 days on the Diesel Generator Building and 14 days on other structures on plant fill. The 60 day period remained in effect for other structures.

In the spring of 1979, additional borings were taken at the Midland Site. Based upon the results and analysis of borings, which were provided to the NRC via 50.55(e) reports, 50.54(f) responses, and meetings, it was decided that remedial action should be taken for the overhang portion of the Service Water Pump Structure, the Auxiliary Building Electrical Penetration Areas, and the Feedwater Isolation Valve Pits. Initially it was proposed that such remedial action would consist of chemical grouting to stabilize medium dense sand areas as discussed in the 50.55(e) report dated June 25, 1979, as well as the use of piling for support of the overhang portion of the Service Water Pump Structure. Seismic Category I tanks located on fill were to be filled with water and monitored for settlement, although the boring program indicated adequate compaction of the soils under the Borated Water Storage Tank ("BWST") and Emergency Diesel Fuel Oil Storage Tanks.

On March 21, 1979, the NRC Staff issued an initial 10 CFR 50.54(f) request for information. Subsequent requests were issued on November 19, 1979; June 30, 1980; August 4, 1980 and August 27, 1980. Consumers Power has responded to these questions during a period from April 24, 1979 through the present. On February 7, 1980 Region III was notified that due to the fact that 50.54(f) questions had been submitted and since an Order modify the Construction Permits was sent to the Company on December 6, 1979, there would be no further 50.55(e) reports. Further information would be provided via responses to 50.54(f) questions.

At a meeting on June 18 and 19, 1979, Consumers Power Consultants, including Peck & Hendron, recommended that the site be permanently dewatered, since it was recognized that there were potential difficulties in assuring that grouting would reach all sand pockets.

On July 18, 1979 a meeting was held with the Staff during which they were informed of the following:

1. Options considered to correct the various soils issues.
2. Results of the investigative program.
3. Settlement monitoring program including effects of surcharge.
4. Decision to implement site dewatering.
5. Remedial Work in Progress or Planned
 - (a) Diesel Generator Structure
 - (b) Service Water Pump Structure
 - (c) Tank Farm
 - (d) Diesel Oil Tanks
 - (e) Underground Utilites
 - (f) Auxiliary Building and Feedwater Isolation Valve Pits
 - (g) Liquefaction Potential
 - (h) Dewatering
6. Analytical investigations (structural, seismic, soils)
7. Statement by Dr. Peck on adequacy of remedial action.
8. Schedule for remedial activities.
9. Cause investigation.
10. QA/QC corrective actions.

The information presented to the Staff was then formally transmitted in the 50.55(e) report dated August 10, 1979.

On July 31, 1979 the NRC Project Manager, Darl Hood, stated to Consumers Power that the positive aspects of the July 18, 1979 meeting were the proposed design fixes. It was the consensus of opinion of Consumers Power and its Consultants that the NRC Staff had accepted the conceptual designs proposed and discussed to that date, and that there were no major problem areas.

On October 16, 1979 Consumers Power Company was informed that the US Army Corps of Engineers was to assist the NRC Staff in their review. On February 26, 1980 Consumers Power was notified that the Navy Weapons Center would also be assisting the NRC Staff, and on February 29, 1980 Consumers Power was informed that ETEC would be assisting the NRC Staff, as well.

After engaging consultant assistance, the NRC asked Consumers Power to advise the Consultants of the history of the problem, activities accomplished and planned remedial actions. Meetings for those purposes were held on November 14, 1979; January 16, 1980; February 27, 1980; and February 28, 1980. In the latter two meetings, Consumers informed the Staff that it had elected not proceed with further remedial actions until NRC Staff approval was secured. This was done voluntarily and was not mandated by the Order issued by the NRC Staff on December 6, 1979.

Included in some of the documentation and in some of the meetings listed above was the subject of the cause of the excessive settlement. The cause and corrective actions are described in detail in the answers to 50.54(f), Questions 1 and 23. Corrective actions taken on these causes as well as other quality issues are discussed in detail in the testimony of B W Marguglio.

A meeting was held on 9/27/79 between Consumers Power and NRC Management to discuss upgrading of the plant to incorporate the results of TMI-2 and general licensing critical path areas. Consumers Power was then informed that there were problems with NRC resources and that NRC Project Management had been urging the NRC Technical Staff to take a position with regard to the status of technical review in the soils area, but had so far been unsuccessful.

A 50.55(e) report dated September 5, 1979 indicated that the preload had been successfully completed. There had been essentially no settlement during the previous six weeks, as shown on figures attached to the report. Sufficient data had been obtained to allow prediction of long term settlement by extrapolation, and preliminary calculations indicated that residual settlement due to secondary compression of clay would be less than one inch over 40 years. In a 50.55(e) report dated November 2, 1979, it was indicated that the settlement monitoring of the Diesel Generator Building and pedestals would be changed from once a week to once a month until January 30, 1980, after which monitoring would be carried out in accordance with the regular foundation data survey program as described in the FSAR.

On November 19, 1979 the Staff sent 50.54(f) Questions 24-35 which concerned dewatering, site specific seismic spectra, structural analysis, settlement of the Diesel Generator Building, crack analysis load testing of the borated water storage tank and additional exploration, sampling, and testing to determine soil properties resulting from the preload program. These questions were received on November 26, 1979. On December 6, 1979, prior to the time for response to the latest 50.54(f) Questions, an order was issued modifying the Midland construction permits. In part the order claimed that, "Several of the Staff's requests are directed to the determination and justification of acceptance criteria to be applied to various remedial measures taken and

proposed by the licensee. Such criteria, coupled with the details of the remedial action, are necessary for the Staff to evaluate the technical adequacy and proper implementation of the proposed action. The information provided by the licensee fails to provide such criteria. Therefore, based on a review of the information provided by the Licensee in response to Staff questions, the Staff cannot conclude at this time that the safety issues associated with remedial action taken or planned to be taken by the Licensee to correct the soil deficiencies will be resolved." It had been assumed by Consumers Power that answers to 50.54(f) questions, as well as the information provided in 50.55(e) reports, were adequately responsive to the information the staff required for technical adequacy. On December 26, 1979 Consumers requested a hearing. Since requesting the hearing, additional 50.54(f) questions were issued by the Staff on June 30, 1980, August 4, 1980 and August 27, 1980 and additional answers and information have been provided by Consumers Power. Substantial information has also been provided to the Staff in subsequent meetings and via various discovery in connection with the hearing.

A letter on October 14, 1980, from R C Tedesco of the NRC Staff advised Consumers Power of a changed Staff position with respect to the criteria to be used for the seismic review of the Midland Site. Since that time Consumers Power and the Staff have conducted several meetings in which Consumer's Power has presented its proposal to meet the Staff criteria. The development of that proposal, the so called site specific response spectra (SSRS), has been described in detail in Consumers Power Motion to Defer Consideration of Seismic Issues. At the prehearing conference on April 27, 1981, the Staff and Applicant agreed upon, and the Board approved, a method for considering the seismic aspects of the proposed remedial action. Information on this subject

has been provided to the Staff, and meetings on the subject have been, and will continue to be, held.

Another area of discussion between Consumers Power and the Staff concerned a request for additional borings, submitted by the Staff on June 30, 1980. This subject is discussed at length in James Cook's testimony. Consumers Power is presently in the process of taking the borings requested by the Staff, results of which should be available in July, 1981.

I will now address an "additional example" in connection with Stamiris' Contention 2, which alleges that "financial and time pressures have directly and adversely affected resolution of soils settlement issues." The "example" provided by Stamiris in her response to Applicant's Interrogatory Number 2a, was "the failure to excavate loose sands as committed to in the PSAR." I disagree with this allegation, for the following reasons:

On 2/24/78 the NRC issued an FSAR question, #362.2, relating to a PSAR commitment to remove naturally occurring loose sand, if any, from beneath Class I and certain non-Class I structures. A review of relevant documentation failed to show that the commitment had been met in all areas. As a result, Consumers Power took steps, including an analysis of borings, to insure that loose sands were not present, and documented its results for the NRC in the response to FSAR Question 362.2. It was concluded, based upon analysis, that the naturally occurring sands at the site met density requirements except in a few isolated lenses of no significance to Category I Structures. The matter was discussed with the NRC Geotechnical Section on April 10, 1979, and was considered a closed issue.

The above information demonstrates that the resolution of the loose sands question had no relationship whatsoever to "financial and time pressures". On the contrary, Consumers Power took the necessary steps and incurred the necessary expense, both in money and time, to insure that a satisfactory technical solution was achieved.

Conclusion

The above rendition of events and activities at the Midland site demonstrates the tremendous expenditure of time and effort on the part of Consumers and Bechtel to satisfactorily resolve soils issues. This overview, while it does not cover every meeting, event or communication, does cover the highlights, and does provide a basis for putting the issues dealt with in other testimony in proper perspective.

Keeley Exhibit 1

The following are some important dates regarding the construction of the Midland Nuclear Power Plant:

| <u>Event</u> | <u>Date</u> |
|---|--------------------|
| PSAR transmitted to AEC-DRL for early review | October 31, 1968 |
| Application for construction permit filed with Atomic Energy Commission | January 13, 1969 |
| Construction permit hearing begins | December 1, 1970 |
| Construction permits issued by Atomic Energy Commission | December 15, 1972 |
| ALAB 106 issued | March 26, 1973 |
| Atomic Energy Commission issues amendment to construction permits incorporating quality assurance reporting requirements | May 23, 1973 |
| AEC Director of Regulation issues show cause order with respect to cadwelding | December 3, 1973 |
| Show Cause hearing (on cadwelding issue) starts in Midland | July 16, 1974 |
| Atomic Safety and Licensing Board issues findings from its Show Cause hearing. | September 25, 1974 |
| First of the two 330-ton nuclear reactor vessels arrives at plant site | November 29, 1974 |
| United States Court of Appeals for the District of Columbia Circuit remanded to the Nuclear Regulatory Commission for reconsideration of several issues in the 1973 order granting construction permits. | July 21, 1976 |
| Final Safety Analysis Report Docketed | November 18, 1977 |
| Filling of 880-acre cooling pond begins. | March 30, 1978 |
| In a unanimous opinion, U S Supreme Court overturns July 1976 Court of Appeals ruling and upholds validity of Midland construction permits. Supreme Court remands to Appeals Court for further review a portion of the case concerning adequacy of an AEC rulemaking proceeding on environmental effects of the nuclear fuel cycle. | April 3, 1978 |

NRC publishes notice of acceptance for review of, and opportunity for hearing on, application to operate the Midland units.

May 5, 1978

NRC issues Order modifying Midland construction permits with respect to soils problem.

December 6, 1979

Consumers Power Board of Directors announces new commercial operation dates of December 1983 for Unit 2 and July 1984 for Unit 1.

July 2, 1980

Consumers Power Company submits Revision 32 to Final Safety Analysis Report. 2000-page revision includes normal rereview and design evaluation.

January 1981

Keeley Exhibit 2

MIDLAND PROJECT
Selected Soils Placement Activity*

| | <u>Starting Date</u> | <u>Completion Date</u> |
|---|--------------------------|----------------------------|
| <u>Q-List Soils Placement</u> | | |
| <u>Structure</u> | | |
| Auxiliary Building electrical penetration area | December 1974 | November 1976 |
| Tank Farm Area (Borated Water Storage Tanks) | September 1975 | August 1976 |
| Service Water Structure Cantilever Section | November 1976 | June 1977 |
| Diesel Generator Building | October 1975 | October 1977 |
| <u>Non-Q-List Soils Placement</u> | | |
| Dike | July 1969 | October 1975 |
| Administration Building ² | May 1977 | June 1977 |

¹ "Q-list soils placement" shown is soils placement for support of the structure only.

² Based upon an attachment from a letter, J F Newgen to M D Edley, dated February 1, 1978.

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

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

AFFIDAVIT OF GILBERT S KEELEY

I am Gilbert S Keeley. I am presently employed by Consumers Power Company as the Project Manager, Midland Project. Based upon knowledge, information, and belief my testimony in the Midland Soils Case, which is attached hereto, is true and correct.

Dated June 4, 1981

Consumers Power Company

By

Gilbert S. Keeley

Sworn and subscribed to before me on this 4th day of June, 1981.

Parsons J. Hill
Notary Public, Jackson County, Michigan
My commission expires September 16, 1984.

1 CHAIRMAN BECHHOEFER: Is there any further
2 direct testimony?

3 MR. FARNELL: No, there is not.

4 CHAIRMAN BECHHOEFER: All right. We will resume
5 tomorrow morning with the cross examination of Mr. Keeley at
6 9:00 a.m.

7 MR. MILLER: Excuse me. Mr. Chairman, if it
8 is convenient, might it be possible to--I know we just scheduled
9 a site tour for tomorrow, but depending on the progress that
10 we make with Mr. Keeley's examination and the examination of
11 Mr. Marguglio and Mr. Cook, might we possibly go a full day
12 tomorrow and defer the site tour for a day, or would the Board
13 prefer to adhere to the schedule we have now?

14 Excuse me. This is off the record.

15 (Off the record discussion.)

16 MR. PATON: Mr. Chairman, may I inquire, are
17 intervenors going to cross examine first, as they just did on
18 the previous testimony?

19 CHAIRMAN BECHHOEFER: Yes. I would assume that
20 the Staff would cross examine last on the Applicant's testimony.
21 That's standard procedure.

22 MR. PATON: Fine. Thank you.

23 CHAIRMAN BECHHOEFER: We will go tomorrow. We
24 expect to run maybe until 12:30 or 1:00 tomorrow, break for
25 lunch, and go after lunch for the site tour.

E12L4

1 MR. MILLER: Perhaps we might even run later
2 than that. You know, it is daylight until almost 9 o'clock.

3 Well, let's see what sort of progress we are
4 making tomorrow. I am just concerned about our overall
5 schedule. I was a little bit surprised at the length of time
6 the examination of Mr. Hood took. I surely don't want to cut
7 anybody off. I just want to make sure that we have adequate
8 time, in the two weeks we have set aside, for everybody's
9 testimony.

10 MR. ZAMARIN: I think another consideration,
11 as far as going out, might be the heat of the day also. I
12 don't know if that's something you might want to consider,
13 but in the middle of the afternoon, climbing around the site
14 is somewhat rigorous activity, and you might want to consider
15 it later in the afternoon.

16 CHAIRMAN BECHHOEFER: We might have to have a
17 lunch break then. I was thinking we would have a lunch break
18 and then go out.

19 We will be adjourned until 9:00 a.m. tomorrow.

20 (Whereupon, at 5 o'clock p.m., the hearing was
21 recessed, to reconvene at 9 o'clock a.m., Wednesday, July 8,
22 1981.)

23 - - -

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25

This is to certify that the attached proceedings before the
Nuclear Regulatory Commission, Atomic Safety and Licensing Board

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

Date of Proceeding: July 7, 1981

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

Place of Proceeding: Midland, Michigan

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

Eddie Spriggs Daniels

Eddie Spriggs Daniels

William E. Landon

Official Reporter (Typed)

William E. Landon

Official Reporter (Signature)