

ORIGINAL
UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

In the matter of:

GEORGIA POWER COMPANY, et al

(Vogtle Electric Generating
Plant, Units 1 & 2)

Docket No. 50-424 OL
50-425 OL

Location: Augusta, Georgia

Pages: 1 - 165

Date: Wednesday, May 30, 1984

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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

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| In the Matter of: | : | |
| GEORGIA POWER COMPANY et al. | : | Docket Nos. 50-424 OL |
| | : | 50-425 OL |
| (Vogtle Electric Generating | : | ASLBP 84-499-01-OL |
| Plant Units 1 and 2) | : | |
| ----- X | : | |

Richmond County Municipal Building
Room 315 (Third Floor Courtroom)
530 Green Street
Augusta, Georgia

wednesday, May 30, 1984

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

BEFORE:

MORTON B. MARGULIES, ESQ., Chairman
Atomic Safety and Licensing Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

OSCAR H. PARIS, Member
Atomic Safety and Licensing Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

GUSTAVE A. LINENBERGER, JR., Member
Atomic Safety and Licensing Board Panel
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555

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1 APPEARANCES:

2 On Behalf of the Applicant:

3 GEORGE F. TROWBRIDGE, ESQ.
4 DAVID R. A. LEWIS, ESQ.
5 Shaw, Pittman, Potts & Trowbridge
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7 Washington, D. C. 20036

8 - and -

9 JAMES JOINER, ESQ.
10 Troutman, Sanders, Lockerman & Ashmore
11 127 Peachtree Street
12 Suite 1400
13 Atlanta, Georgia 30043

14 On Behalf of the NRC Staff:

15 ROBERT PERLIS, ESQ.
16 Office of the Executive Legal Director
17 Nuclear Regulatory Commission
18 Washington, D. C. 20555

19 - and -

20 MELAINE MILLER
21 NRC Project Manager
22 Division of Licensing
23 Nuclear Regulatory Commission
24 Washington, D. C. 20555

25 On Behalf of the Intervenor
Campaign for a Prosperous Georgia:

LAURIE FOWLER, ESQ.
Legal Environmental Assistance Foundation
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Atlanta, Georgia 30303

- and -

TIM JOHNSON
Executive Director
Educational Campaign for a Prosperous Georgia
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Atlanta, Georgia 30303

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CAROL A. STANGLER
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HOWARD DEUTSCH
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On Behalf of the Intervenor
Georgians Against Nuclear Energy:

DOUGLAS C. TEPER
1209 N. Decatur Road
Atlanta, Georgia 30306

- and -

DAN FEIG
1130 Atlanta Avenue
Atlanta, Georgia

- - -

P R O C E E D I N G S

JUDGE MARGULIES: Please come to order.

Good morning, ladies and gentlemen.

This matter involves an application filed with the Nuclear Regulatory Commission by Georgia Power Company and others for a license to operate Units 1 and 2 of the Vogtle Electric Generating Plant which is under construction in Burke County, Georgia. The proceeding is docketed under Nos. 50-424 OL 50-425 OL and ASLBP 84-499-01-OL.

Following the publishing of a notice of opportunity for hearing, Campaign for a Prosperous Georgia and Georgians Against Nuclear Energy filed petitions to intervene and requested the holding of a hearing. Applicant and staff did not object to their interest and standing.

A petition filed by Coastal Citizens for a Clean Environment was objected to on the grounds it failed to show standing and interest. Supplemental petitions containing proposed contentions were filed by CPG and GANE which, it admitted, would permit the petitioners to intervene as parties in the proceeding.

This special prehearing conference is held pursuant to our order of March 9th, 1984 and will take up the matters of the status of the parties whether the proposed contentions are litigatable and other issues

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1 ordered to be considered, including future scheduling.

2 Yesterday we received CPG's amendments to its
3 supplemental petition and a motion for waiver of 10 CFR
4 51.53C pertaining to need for power or alternative energy
5 sources.

6 Having broadly outlined the matters to be
7 considered at this special prehearing conference, it is
8 appropriate at this time to introduce the Members of the
9 Licensing Board.

10 On my right is Judge Gustave A. Linenberger.
11 Judge Linenberger is a nuclear physicist.

12 On my left is Dr. Oscar H. Paris. He is an
13 environmental scientist.

14 I am Morton B. Margulies, the Chairman of the
15 Licensing Board. My background is in administrative law.

16 We will now take appearances.

17 Who appears for the applicant?

18 MR. TROWBRIDGE: Mr. Chairman, my name is George
19 F. Trowbridge. I am a member of the Washington, D. C. firm
20 of Shaw, Pittman, Potts and Trowbridge and have filed my
21 appearance in this proceeding.

22 On my left is Mr. James Joiner of the Atlanta
23 law firm of Troutman, Sanders, Lockerman and Ashmore.

24 To my rear is David Lewis from our office.

25 I would like, if I may, to also, Mr. Chairman,

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1 introduce a number of officers of the company who are
2 present today, and I will ask them to stand as I call their
3 names.

4 JUDGE MARGULIES: I just want to take
5 appearances of counsel at this time unless they are going
6 to appear in a representative capacity, Mr. Trowbridge.

7 MR. TROWBRIDGE: No. They are here out of
8 interest in the proceeding I thought it would be a good
9 idea to introduce them perhaps after counsel.

10 JUDGE MARGULIES: Who appears for the staff?

11 MR. PERLIS: Thank you, Mr. Chairman.

12 My name is Robert Perlis. I am with the Office
13 of the Executive Legal Director.

14 To my right is Melaine Miller, the NRC's
15 Project Manager in the Division of Licensing.

16 JUDGE MARGULIES: Who appears for the
17 Intervenor's?

18 MR. FOWLER: My name is Laurie Fowler. I am an
19 attorney with the Legal Environmental Assistance Foundation
20 and we are representing Campaign For A Prosperous Georgia
21 in this proceeding.

22 To my right is Tim Johnson, the Executive
23 Director of Campaign For A Prosperous Georgia.

24 Also representing us are Mark Merlin and Howard
25 Deutsch of CPG.

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1 JUDGE MARGULIES: In terms of the
2 representatives, the other representatives of CPG, are they
3 counsel?

4 MR. FOWLER: They are not attorneys, but they
5 will be speaking in this proceeding regarding specific
6 contentions.

7 JUDGE MARGULIES: who represents GANE?

8 MR. TEPER: My name is Doug Teper. I am with
9 Georgians Against Nuclear Energy.

10 with us today is Daniel Feig from Atlanta and
11 Carol Stangler.

12 JUDGE PARIS: Mr. Teper, would you spell your
13 name for us, please.

14 MR. TEPER: It is T-e-p-e-r. T as in Tom, E,
15 P as in Peter, ER.

16 JUDGE PARIS: Thank you.

17 JUDGE MARGULIES: Are any of your
18 representatives admitted to the bar?

19 MR. TEPER: No, we are not.

20 JUDGE MARGULIES: Mr. Trowbridge, would you want
21 to introduce the officers that you intended to introduce?

22 MR. TROWBRIDGE: Yes. Mr. Robert Scherer who is
23 Chairman of the Board and Chief Executive Officer of
24 Georgia Power Company. Mr. James Miller who is President of
25 Georgia Power Company. Mr. Richard Kelley, Executive Vice

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1 President of Georgia Power. Mr. Richard Conway who is
2 Senior Vice President and Mr. Donald Foster who is Vice
3 President and General Manager of the Vogtle Project.

4 Also, a Vice President both of Georgia Power
5 Company and of the Southern Company Services, Mr. Ruble
6 Thomas. The Municiple Electric Authority of Georgia,
7 part-owner of the plant, is represented here today by Mr.
8 Donald Stokley, General Manager. Mr. Stacey, representing
9 Oglethorp Power Corporation, was not able at the last
10 minute to come.

11 JUDGE MARGULIES: Thank you, Mr. Trowbridge.

12 Are there any preliminary matters?

13 MR. TEPPER: Mr. Chairman, GANE would just like
14 to be listed in the record that in the future if there
15 should be any hearings we think there should be
16 accommodations more suitable where there will be
17 separations between different parties that are here and
18 more tables and more space and chairs.

19 JUDGE MARGULIES: It is a comment that has merit
20 to it.

21 MR. TEPPER: Thank you, sir.

22 MR. TROWBRIDGE: I would like to inquire of Mr.
23 Teper whether GANE is offering any revisions of its
24 contentions?

25 JUDGE MARGULIES: we will get into that, Mr.

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1 Trobridge when we pick up the individual contentions. When
2 we get to the duplicative contentions inquiry will be made
3 of that aspect.

4 The first thing that we should do is take up
5 the status of the parties. As I understand, there is no
6 objection to the interest and standing of GANE and GPG.
7 Citizens For Clean Environment is not present and they have
8 not attempted to overcome the deficiencies that were
9 pointed out by applicant and staff and they have not filed
10 any proposed contentions in this proceeding.

11 We will next to to the matter of the proposed
12 contentions and we will take up CPG'S proposed contentions.

13 On the basis of the letter that we received
14 yesterday dated May 27th, 1984, it is our understanding
15 that CPG's Contention No. 1 has been withdrawn. Is that
16 correct?

17 MR. FOWLER: Yes, sir.

18 JUDGE MARGULIES: We next come to CPG's proposed
19 Contention No. 2 dealing with the need for power. A motion
20 has been filed by CPG for waiver of 10 CFR 51.53C. I
21 believe the better procedure to follow in this matter is to
22 have the parties file a written response.

23 MR. TROWBRIDGE: That is what we plan to do. We
24 will file a written response within the time normally
25 allowed for motions and we will oppose the request for

1 waiver.

2 JUDGE MARGULIES: Does the staff have any
3 objection to that procedure?

4 MR. PERLIS: NO.

5 JUDGE MARGULIES: Does CPG have any comment on
6 that?

7 MR. FOWLER: We have two more affidavits that
8 are being copies right now that we would like to submit,
9 and we will hand those to you at the next break. We are
10 having copies made right now. These are the supporting
11 affidavits for the petition.

12 JUDGE MARGULIES: Is there any objection to
13 that?

14 MR. TROWBRIDGE: I would ask that our time to
15 respond run from today, if we receive them today, rather
16 than the earlier service date.

17 JUDGE MARGULIES: That is a reasonable request
18 and the time to respond will run from today.

19 That brings us up to proposed Contention No. 3
20 on financial qualifications. Both staff and applicant have
21 requested that this matter be deferred in that it is
22 anticipated that the Commission will come out with a
23 proposed guideline on the handling of such contentions. Is
24 there any objection to following that procedure?

25 MR. FOWLER: Yes, sir. As you know, on February

1 7th, 1984, the U. S. Court of Appeals, the D. C. Circuit
2 found that the Commission's rule eliminating financial
3 qualifications review requirements for electric utilities
4 was not validly the basis and was not validly supported.

5 Since then the court has issued a mandate and
6 we contend that as of now that financial qualifications
7 rule is not in effect and financial qualifications is
8 something that should be considered now by the Board. The
9 Court has issued its mandate.

10 MR. TROWBRIDGE: Mr. Chairman?

11 JUDGE MARGULIES: Yes, Mr. Trowbridge.

12 MR. TROWBRIDGE: The Commission met last
13 Thursday and voted on a policy statement and directive to
14 the Boards. That is not available yet because it is going
15 to be accompanied by separate opinions. It was a three to
16 one vote, but the substance of the Commission action, which
17 I think is binding on this Board, is that the Boards will
18 be directed not to entertain financial qualification
19 contentions in proceedings pending the adoption by the
20 Commission of a new rule.

21 Obviously the Board will wish to see that
22 before action, but I think once the statement comes out the
23 Board will be in a position to act on it.

24 JUDGE MARGULIES: I have been in a travel status
25 for the last four weeks. So I have not been in the office

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1 last Thursday and have not seen anything on the
2 Commission's action. I believe it will be appropriate to
3 review the Commission's action before we take any action on
4 proposed Contention 3.

5 Would applicant and the staff agree that the
6 proposed contention would be considered as having been
7 filed timely in the five-part test for late filed
8 contentions wouldn't apply to this contention should it be
9 considered appropriate for hearing in this proceeding?

10 MR. TROWBRIDGE: I think it was timely filed,
11 was it not?

12 MR. PERLIS: Yes. The contention was timely
13 filed. I don't think there is any question about that. I
14 think it is merely a question of whether the Commission in
15 its policy statement will or will not allow contentions
16 like this to be heard.

17 JUDGE MARGULIES: Moving on to proposed
18 Contention No. 4, it is my understanding from the letter of
19 May 27th that that, too, has been withdrawn. Is that
20 correct?

21 MR. FOWLER: Yes, sir.

22 JUDGE MARGULIES: We next move on to CPG's
23 proposed Contention No. 5 which as originally filed was
24 identical to a contention of GANE which is also GANE 5.
25 According to the filing on May 27th, 1984, CPG has revised

1 their proposed Contention No. 5.

2 At this time I would like to ask GANE's
3 representative as to whether GANE is following the same
4 procedure as CPG and revising their contention accordingly?

5 MR. TEPER: We are going to stay with GANE's
6 original contention on that one.

7 MR. FOWLER: We would like to explain why we
8 modified that contention, the basis of the contention, and
9 Mr. Johnson will address that.

10 JUDGE MARGULIES: Yes, would you please do so.

11 MR. JOHNSON: Yes, sir. On Thursday of last week
12 I met with a staff member from the U. S. Geologic Survey
13 who co-authored the original report postulating the
14 existence of the Millett earthquake fault. He informed me
15 that he had just completed new core samplings in the
16 area and he essentially verified the conclusions of the NRC
17 staff and the applicant and said that there is probably not
18 a fault there and, if there is, it is not capable. So we
19 are withdrawing the portion of our contention dealing with
20 the Millett earthquake fault.

21 On the other hand, we want to re-emphasize that
22 the information concerning the Charleston earthquake is
23 different from the information that was available to the
24 NRC at the time of the construction permitting. At that
25 time the USGS believed that there was a fault centered in

1 Charleston that caused that earthquake and the design for
2 the Vogtle nuclear plant was based on that postulated
3 fault.

4 However, since that time the USGS has been
5 unable to pinpoint any fault in Charleston and their
6 studies are ongoing. Therefore, at this point they do not
7 know the cause of the Charleston earthquake or where the
8 fault causing the Charleston earthquake might lie.

9 We feel that until more study is done that the
10 design basis on which the company based the seismic
11 standards are not valid.

12 In addition to that, since that time there have
13 been observed several faults north of the site that once
14 again validate our concern with the seismic capability of
15 the plant.

16 The co-author of that original Millett study
17 gave me the most recent map for the area, and in 1975, 1977
18 and in 1976 there were further earthquake faults observed
19 within about 30 miles of the plant site to the north along
20 the Savannah River. This once again emphasizes the need for
21 further study and for hearings on these problems.

22 JUDGE LINENBERGER: Sir, on this point, the
23 Board would like to inquire of your people perhaps a little
24 more explicit rationale behind your position that because
25 USGS seems not to have identified a specific fault at

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1 Charleston that you feel that the implication of this is
2 negative with respect to the adequacy of the seismic design
3 specifications for Vogtle? I have not understood the
4 rationale for that. You say it, but I haven't heard you
5 explain it. Perhaps I missed something.

6 MR. JOHNSON: Yes, sir. Well, the Charleston
7 earthquake, as the Commission is probably aware, was the
8 second worst earthquake ever recorded east of the
9 Mississippi River in the United States.

10 It occurred in 1886, and at that time they did
11 not have the equipment to measure it. I don't even think
12 there was such a thing as the Reiter scale or the Mercalli
13 scale at that time. However, it is now estimated that it
14 was somewhere in the range of 8 to 10 on the Mercalli
15 scale, which is above the range for which the Vogtle plant
16 was designed.

17 In fact, the design basis for the Vogtle plant
18 considered that if there were an earthquake in Charleston
19 of a comparable magnitude to the one occurring in 1886, the
20 the Vogtle plant would be able to withstand that with its
21 current seismic design.

22 At that time that seemed to be a valid design
23 basis, at the time of the construction permitting, because
24 the USGS had informed the NRC and the applicant that the
25 Charleston earthquake was probably caused by a fault

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1 centered in Charleston.

2 Since that time the USGS has done intensive
3 study. For the last 10 to 12 years they have intensively
4 studied the area and they concluded, as described in a
5 letter to Robert Jackson, the Chief of the Geosciences
6 Branch for the Division of Engineering for the Nuclear
7 Regulatory Commission, and the letter was from James
8 Devine, Assistant Director for Engineering - Geology of
9 USGS: "After several years of intensive study in the
10 Charleston region, no geologic structure or feature can be
11 identified unequivocally as the source of the 1886
12 Charleston earthquake."

13 The concern, and the USGS is continuing its
14 study, but the concern is that the fault may not actually
15 be centered in Charleston. I mean an earthquake could be
16 centered in a place and the fault extend much further than
17 they postulated at the time the construction permit was
18 issued.

19 Therefore, the design basis for the Vogtle
20 plant, based on an earthquake of comparable magnitude in
21 Charleston, might not be sufficient for an earthquake of
22 comparable magnitude occurring closer to the plant.

23 Items that seem to perhaps validate that the
24 area is more active seismically than was thought at the
25 time include the discovery of these smaller faults just

1 north of the plant site.

2 JUDGE LINENBERGER: Then perhaps the crux of
3 your argument is that the inability of the USGS to pinpoint
4 a responsible fault specifically in the Charleston area
5 causes you to conclude that whatever fault might have been
6 responsible for the 1886 event had to be closer to Vogtle
7 than the Charleston location. That is one of two
8 possibilities. The other possibility being it could be
9 farther away from Vogtle.

10 Although perhaps I didn't frame my question
11 properly, part of my own question here is is there
12 something that causes you to think that the closer
13 possibility is more likely than the farther possibility?

14 MR. JOHNSON: Well, the geology of the area
15 around the Vogtle plant site appears quite similar to the
16 plant geology of the area around Charleston. I don't have
17 any specific studies that we have hired geologists to do,
18 but what we are are saying is not that the fault
19 necessarily is closer to Plant Vogtle, but merely that it
20 is something that needs to be heard and that needs to be
21 examined and the contention should be a part of this
22 hearing, particularly in view of the discovery of these
23 smaller faults to the north of the plant site which may or
24 may not be related to the Charleston earthquake.

25 JUDGE LINENBERGER: Thank you, sir.

1 MR. JOHNSON: Thank you.

2 (Board conferring.)

3 MR. FEIG: Mr. Chairman?

4 JUDGE MARGULIES: Yes.

5 MR. FEIG: Could GANE add something to that, or
6 actually GANE would like to restate its position and make
7 sure that our concern still exists with the fact that the
8 Millett fault was stated as existing. We would still feel
9 that the it has not been conclusively proven that the
10 design of the plant meets the standards that would be
11 required to withstand any kind of seismic activity in that
12 area.

13 JUDGE MARGULIES: Mr. Trowbridge, do you have
14 anything to state in response?

15 MR. TROWBRIDGE: Yes, please, several matters.

16 One, the suggestion that this is new
17 information in the 1982 USGS letter to Mr. Jackson, which
18 was correctly quoted, namely that no geologic structure or
19 feature can be identified unequivocally as the source of
20 the 1886 Charleston earthquake.

21 I would go back to the advice which USGS gave
22 to the NRC at the time of the construction permit. That
23 advice is quoted on page 37 of our response, and reading it
24 in part: "The tectonic structures in the vicinity of this
25 earthquake are not well defined, but there does appear to

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1 be a concentration of seismic activity in the basin south
2 of the Cape Fear arch and particularly in the Charleston,
3 South Carolina area. Available geological and seismological
4 evidence indicates that the higher intensity earthquakes
5 are localized along the deepest part of the axis of the
6 basin."

7 This is precisely the basis on which we have
8 concluded that the Charleston earthquake is localized in a
9 zone, the nearest point to the plant being some 78 miles.

10 The USGS has not changed its advice and its
11 advice was not based in the first instance on a known
12 fault.

13 Mr. Johnson has made the statement that the
14 geology at the site is similar to the geology in
15 Charleston. There is no basis for that statement provided
16 in their contention. There is no citation to any basis for
17 that statement, and certainly the USGS report does not
18 support that statement.

19 Mr. Johnson has referred, without identifying
20 them and without having mentioned them in their contention,
21 to some faults 30 miles from the site. I question whether
22 at this stage of the game there ought to be additions to
23 the basis which we have not had an opportunity to address,
24 but if he could identify them by name, it may well be that
25 they are already addressed in our FSAR.

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1 JUDGE MARGULIES: Do you wish to respond,
2 Mr. Johnson?

3 MR. JOHNSON: Okay. I will begin by identifying
4 them by name. The report is entitled "Index of Faults of
5 Cretaceous and Cenozoic Age in the Eastern United States"
6 by David C. Prowell. On the report they are numbered 68,
7 70, 71 and 72. 'None of the particular faults are
8 identified by name. They are identified by number on this
9 map. Seventy through 72 are identified generally as being
10 in the Belair fault zone. Sixty-eight, under the column
11 listing "Fault Name" they have no name for it in the USGS
12 report. They detail who found it and the longitude and the
13 latitude of the faults, which I would be happy to provide
14 the applicants, if you wish.

15 As regards to the USGS statement in 1974 that
16 was just quoted by Mr. Trowbridge, they also stated at that
17 time that it should be assumed that moderate earthquakes up
18 to intensity 6 could occur in the general vicinity of the
19 site.

20 In general all of this information at that time
21 was based on the USGS assumption, and the USGS has said
22 this, that the Charleston earthquake, the major fault
23 causing the Charleston earthquake was centered in
24 Charleston.

25 Since that time they have specifically stated,

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1 and 1982, as a matter of fact, was the date of the letter
2 to NRC from USGS, November 16, 1982, they specifically
3 stated that after all these years of study they cannot
4 state with the same certainty that they thought they had
5 before, I mean they weren't absolutely certain because they
6 hadn't done all the studies in 1974 where this thing is
7 excerpted, but at that time they were fairly sure that the
8 Charleston earthquake, that there was a fault centered in
9 Charleston.

10 They have done intensive study, and those were
11 the words of the USGS, in that region and have not been
12 able to identify the fault.

13 we are merely saying that we think this should
14 be heard further and that the USGS people should be brought
15 forward to address these issues and explain what studies
16 are ongoing and what the likelihood today is in their
17 opinion of a higher intensity earthquake than the design
18 basis.

19 JUDGE MARGULIES: Mr. Trobridge.

20 MR. TROWBRIDGE: I know of no basis whatsoever
21 for Mr. Johnson's statement that USGS originally there was
22 a definite fault. The material I have quoted talked about a
23 seismic activity and that was the basis of the USGS advice.

24 The Belair faults are very old faults and they
25 are described and discussed in our FSAR. We are looking at

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1 the moment for an exact reference to the section of the
2 FSAR.

3 JUDGE MARGULIES: Mr. Perlis, do you wish to be
4 heard?

5 MR. PERLIS: Yes. First, I would like to comment
6 on the Millett fault. As far as we have been able to tell,
7 no seismologist or geologist has identified that fault as a
8 capable one. In the absence of CPG coming in with any
9 reason to believe that it is a capable one, we think that
10 portion of the contention should not be heard.

11 As to the Charleston fault, although we are
12 hearing some new information today, the only original
13 information really consists of two items. One, that the
14 exact location of the Charleston earthquake has not been
15 identified and, secondly, that the geology around the
16 Vogtle site may be similar to the Charleston site.

17 As to the second one, I am not a geologist, but
18 there is nothing in the contention which would indicate
19 that that might be true, that the geology around Vogtle may
20 be the same as the geology of the Charleston area.

21 As to the first one, it is not my understanding
22 that USGS has said that the Charleston earthquake could
23 occur near the Vogtle site, and there again is no basis to
24 believe that that might be the case.

25 MR. JOHNSON: Mr. Chairman, I think the burden

1 of proof is on the applicant that the geology is stable in
2 that area. I think there are considerable questions that
3 have been brought forth and the USGS seems unsure
4 themselves. I think this needs to be a matter of further
5 inquiry and needs to be a matter for further hearing.

6 It is not incumbent upon the intervenors to
7 provide proof that there is a capable earthquake there. It
8 is incumbent upon the applicant to prove that the
9 credibility of their seismic design is proper and can
10 withstand any possible quake.

11 MR. TROWBRIDGE: Mr. Chairman, there is
12 considerable discussion, there was at the construction
13 permit stage and there is again at the operating license
14 stage, in our FSAR as to the basis on which we conclude
15 what the seismic design of the plant should be and where we
16 postulate the earthquake.

17 We have met our burden of proof at this point
18 in the contention. It is incumbent upon the petitioners to
19 say what is wrong and what do they quarrel with. That is
20 what contention and basis is about.

21 MR. JOHNSON: Mr. Chairman, in response to that
22 I would just like to say that in the FSAR that was provided
23 by the applicant and earlier in their construction permit
24 they made certain assumptions about the geologic capability
25 of the area. Since then new information has been come out

1 by the USGS and I think there is considerable question as
2 to the assumptions that the applicant initially made.

3 JUDGE MARGULIES: Could you cite us something
4 specifically on what you base your assertion that the
5 geology around Vogtle is the same as Charleston?

6 MR. JOHNSON: Yes, sir. As I told you, last week
7 I went and spoke with the author of the study which
8 postulated the Millett fault and also he wrote this later
9 study for USGS or just index the index of faults.

10 He said that he did not want to be quoted as
11 saying there is going to be an earthquake at Plant Vogtle
12 or there is a fault there or anything like that. He was
13 very adamant about not wanting to be represented as taking
14 a position on the plant or anything of the sort.

15 However, I asked him if he could just give me
16 general background information on his study of the Millett
17 fault plus this other information, and he is the one that
18 stated that the geology in this whole region of the country
19 is very similar as far as the underlying structures.

20 He also stated that 10 years ago the USGS did
21 believe that the fault was centered in Charleston. Again,
22 he has participated in these studies that they have not
23 been able to determine the source of the Charleston
24 earthquake.

25 I think it would be useful to the Commission as

1 well as to the intervenors to have the USGS, whether he
2 would be the one or someone else with USGS, come forth, and
3 they might very well say that they think the design of the
4 plant is fine, but then they might not. We just believe
5 that there are enough questions here that it needs to be
6 heard further.

7 JUDGE MARGULIES: I don't recollect if you fully
8 identified the individual for the record and would you
9 please do so.

10 MR. JOHNSON: Okay. Again he is not a witness
11 for us. His name is David C. Prowell, P-r-o-w-e-l-l.

12 JUDGE MARGULIES: And what is his title?

13 MR. JOHNSON: He is with the Atlanta Regional
14 Office of the USGS and he is a geologist, but I do not know
15 what his title is.

16 JUDGE MARGULIES: Where is the Atlanta Regional
17 Office, right in Atlanta?

18 MR. JOHNSON: Yes, sir, on Peachtree Industrial
19 Boulevard.

20 MR. FEIG: Mr. Chairman, I want to bring this up
21 now because I think we are talking about some really
22 important things and there are a lot of people back here
23 that can't hear and we are having trouble up here sometimes
24 hearing across the room. I wonder if there is a PA system
25 or something. Also, it would be a lot easier.

1 we are not represented by legal counsel and
2 have really not had experience in a hearing like this
3 before. We are not really clear of the format of this
4 meeting and what is going to actually happen today and
5 what decisions are going to be made, and I think the public
6 should be made aware of those kinds of things that are
7 going to happen here. I think we just sort of jumped into
8 it, and I sort of feel like I would like a little
9 clarification as to the direction that we are sort of
10 heading today.

11 JUDGE MARGULIES: We will make no decisions here
12 today. We are inquiring into the areas in which we feel we
13 need additional information and no decisions will be made
14 on any of the contentions here today.

15 Mr. Trowbridge, before this prehearing
16 conference is over, could you give us the citations, or if
17 you have them now, would you tell us where that information
18 appears?

19 MR. TROWBRIDGE: Well, the Belair fault zone is
20 specifically discussed in Sectionn 2.5.1.1.4.2.1.

21 JUDGE MARGULIES: Of the FSAR?

22 JUDGE LINENBERGER: Of the FSAR?

23 MR. TROWBRIDGE: Of the FSAR. It is at page
24 2.5.1-14.

25 (Board conferring.)

1 JUDGE MARGULIES: That brings us up to CPG
2 proposed Contention 6 which is identical to that of GANE's.

3 MR. TROWBRIDGE: May I give you the punchline
4 from that FSAR citation, which is the last sentence. "The
5 most recent documentable movement along the Belair tault
6 zone occurred about 40 million years ago."

7 JUDGE MARGULIES: We now go to proposed
8 Contention 6 and I ask the intervenors, having seen
9 applicant's and staff's responses, is there any change or
10 anything you wish to add or inform us of in connection with
11 your proposed Contention 6?

12 MR. FOWLER: No, sir, not CPG.

13 MR. TEPPER: No, sir.

14 JUDGE MARGULIES: Do you have any questions?

15 JUDGE LINENBERGER: No questions, but since GANE
16 expressed a concern about a lack of familiarity with
17 proceedings such as this today on the part of themselves
18 and the audience, perhaps it is in order to make a
19 supplementary statement to what the Chairman said with
20 respect to our not making any decisions today. Indeed, we
21 are not going to.

22 The other thing that I think is important to
23 keep in mind is that this is not really a forum in which
24 the merits of any proposed contentions are to be debated.
25 That may appear to be a fine line at some points because

1 there will be questions about the adequacy of the bases
2 that have been supplied in support of contentions and it
3 may sound like we are getting into the merits.

4 It is not the Board intent to get into the
5 merits of any issues here, but only to explore whether they
6 are adequately supported by information that allows us to
7 make a decision as to admissibility.

8 Thank you.

9 MR. FEIG: It is still a public meeting, right,
10 in the sense of people should be able to hear what is being
11 said. If we can hardly hear up here, I don't think the
12 people in the back can hear what is being said. I feel like
13 something should be done as far as accessibility for people
14 to hear what is being said.

15 JUDGE MARGULIES: Well, I have heard no
16 complaints from any of the spectators.

17 VOICE: I can't hear. I can't hear a word he
18 said, Mr. Trobridge, and I can barely hear what they say.

19 JUDGE MARGULIES: well, why don't you move up to
20 the front bench.

21 VOICE: What?

22 JUDGE MARGULIES: why don't you move up to the
23 front bench.

24 VOICE: There is no room.

25 (Pause while the two available mikes are

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1 adjusted.)

2 JUDGE MARGULIES: We next go to proposed
3 Contention 7.

4 MR. TEPER: Sir, I believe we were going to
5 discuss Contention No. 6 first.

6 JUDGE MARGULIES: Okay. CPG said they had
7 nothing further to respond.

8 MR. TEPER: I understand we are not discussing
9 the merits, but I would just like to clarify in my own mind
10 and also for the members of the public who have come here,
11 my understanding is we are not here to discuss unresolved
12 safety issues that are generic to the nuclear industry and
13 we are supposed to become more plant specific, meaning if
14 there are certain generic issues such as thermal shock to
15 the pressure vessels that we have to justify how this
16 applies to Plant Vogtle; is that correct?

17 JUDGE MARGULIES: Those are the assertions of
18 the applicant and staff.

19 MR. TEPER: Well, would GANE be correct in
20 stating the fact that thermal shock would apply to plant
21 Vogtle because they do have pressure vessels which are
22 subject to this generic issue?

23 (Board conferring.)

24 MR. TEPER: I think my question is I am looking
25 for how to apply generic safety issues to specific plants.

1 It is my assumption, and I don't know if it is fair to
2 assume, that generic safety issues which apply to specific
3 plants should be brought up and be a subject of further
4 hearing.

5 (Pause while the Board speaks with building
6 personnel about getting additional microphones for the
7 hearing room.)

8 JUDGE MARGULIES: Do you wish to respond, Mr.
9 Perlis?

10 MR. PERLIS: The NRC does deal in its SER with
11 unresolved safety issues and how they relate.

12 JUDGE MARGULIES: Could you please speak up.

13 MR. PERLIS: The NRC in its SER will deal with
14 unresolved safety issues and how they relate to a
15 particular plant and, as I say, that will be in the safety
16 evaluation report which for this plant is expected to be
17 issued sometime next June 1985.

18 At this stage if a petitioner wishes to raise a
19 contention dealing with an unresolved safety issue, it is
20 the staff's position that they have to show some connection
21 between that issue and the plant in question. That would
22 not necessarily be true with every plant in question. I
23 don't think the fact that there is a pressure vessel at
24 Vogtle is the type of specific nexus that the Appeal Board
25 was looking for in River Bend, which is the case we have

1 cited.

2 MR. TEPER: Mr. Chairman, if the applicant has
3 not proved that they have taken care of this generic safety
4 issue, which I believe is under study by the NRC, then I
5 believe that applies very specifically.

6 I would like to ask at this time if GANE would
7 be in order it as soon as the environmental report comes
8 from Plant Vogtle, at that time if we would be able to
9 submit more bases and possibly more contentions because
10 more information would be then provided at that time that
11 might or might not address the problems that we are raising
12 at this time.

13 JUDGE PARIS: The document that Mr. Perlis was
14 referring to was the SER, the safety evaluation report and
15 not the environmental report.

16 MR. TROWBRIDGE: Mr. Chairman, may I speak for a
17 moment?

18 JUDGE MARGULIES: Yes.

19 MR. TROWBRIDGE: We supplied early in the game
20 copies of our FSAR and our environmental report to both
21 petitioners, and we have furnished supplements and
22 amendments to it.

23 There is a great deal of discussion in the FSAR
24 about the pressure vessel design, the materials that it is
25 made of, the fact that we complied with the NRC's fracture

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1 toughness criteria in Appendix G to Part 50 and that we
2 conducted the surveillance requirements of Appendix H.

3 We have also filed an amendment with the NRC
4 and furnished it to the petitioners in which we have a
5 specific calculation for this reactor and its particular
6 materials of when, if ever, we would reach even the
7 screening criteria NDT, and the calculation shows that in
8 over a period of 40 years, assuming an 80 percent capacity
9 factor, that we would not come anywhere near for this
10 particular reactor vessel the screening criteria.

11 Now, Mr. Chairman, I am conscious of the fact
12 that the Board is not considering the merits at this time,
13 and much of our response inevitably sounds as though we
14 were discussing the merits. That is the product, but not
15 the purpose of what we have done.

16 The purpose of our responses, and this one
17 included, is to show the Board the amount of information
18 which has been provided and which the petitioners have
19 simply not addressed.

20 We have cited cases, particularly the Catawba
21 case that was a Commission decision, concerning the
22 obligations which petitioners have to read and respond to
23 material, and I think the threshold for a basis and
24 specificity is very closely tied to the amount of
25 information that they have available to them to which they

1 could respond.

2 JUDGE LINENBERGER: For the Board's information
3 may we inquire here does GANE have access to the final
4 safety analysis report and has GANE familiarized itself
5 with the discussion contained therein on the pressure
6 vessel problem?

7 MR. TEPER: Yes, sir, we have familiarized
8 ourself with the FSAR.

9 JUDGE LINENBERGER: All right, that answers
10 that.

11 Secondly, has GANE familiarized itself with the
12 Commission's position with respect to unresolved safety
13 issues as explicated in the River Bend decision referred to
14 by Mr. Perlis?

15 (Pause.)

16 JUDGE LINENBERGER: I gather you are reading
17 something to find out whether the answer to my question is
18 yes or no.

19 MR. TEPER: I am actually glad you asked that
20 question. Unless it was contained in the response from the
21 NRC to the applicant or to the intervenors, we probably
22 haven't done further study. GANE has sought access to the
23 library at the Region II office to get further information
24 about unresolved safety issues and how they apply to
25 specific hearings. We don't want to prolong this hearing

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1 any more than we have to.

2 Unfortunately, the Region II office is not set
3 up for public use per se, other than having somebody guide
4 holding hands or step by step. Because of that, GANE did
5 make the request to have a type of Public Document Room.
6 Along the lines of that request we would like to have been
7 provided with studies that are being done on unresolved
8 safety issues, and at that point we would not have to
9 bring that up. It might be the focus of a separate kind of
10 hearing. But because we do not have access to that kind of
11 information, we find it necessary to bring up unresolved
12 safety issues at this hearing.

13 So at this time I don't know the specific plant
14 site that you referred to. I do know that from our
15 contention we talked about that the reactor vessel for
16 Plant Vogtle contains 0.10 to 0.12 percent copper and 0.012
17 to 0.020 percent phosphorous, which is out of their FSAR.
18 But no discussion is undertaken by the applicant as to the
19 effects of these levels of impurities on accelerated
20 brittleness and increased reference temperature for the
21 pressure vessel. That is the contention.

22 JUDGE LINENBERGER: Well, you could have
23 enlarged that list and said that the applicant didn't
24 discuss the effect of the phase of the moon on the same
25 thing. Now what causes you to believe that copper and

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1 phosphorous, the presence of those elements in the pressure
2 vessel alloy do indeed accelerate embrittlement?

3 Now I don't really need a detailed answer to
4 that question now, the Board doesn't, but that is I think a
5 good example of where you could indeed have strengthened
6 the basis to your contention. You threw out copper and
7 phosphorous or whatever and say, look there, it wasn't
8 talked about.

9 well, the phase of the moon wasn't talked
10 about, the distance of the sun wasn't talked about and all
11 sorts of things weren't talked about, but until you can tie
12 them in to being meaningful to acceleration of
13 embrittlement, it is not in doubt that they weren't talked
14 about.

15 MR. TEPER: Sir, I don't believe the pressure
16 vessel is made up of the moon or the sun, but it is made up
17 of phosphorous and copper and there is an embrittlement
18 problem which relates to the content.

19 JUDGE LINENBERGER: You have cited nothing to
20 show that in our basis.

21 Now let me ask you another thing. This is the
22 one contention where both GANE and CPG explicitly use the
23 word "guarantee" with respect to health and safety matters
24 and it has been this Board or this Board Member's
25 experience that guarantees are never a matter for

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1 litigation, not in the sense of the general health and
2 safety of the public.

3 Now why did you go to the word "guarantee" here
4 rather than the usually accepted reasonable assurance kind
5 of terminology? Was there a reason for it or was it
6 inadvertent?

7 MR. TEPER: It was inadvertent.

8 JUDGE LINENBERGER: All right. Please, then,
9 let's not dwell on it.

10 MR. TEPER: Okay. As regards to the impurities,
11 is it not true that there are certain things that are
12 scientifically accepted that the committee would be aware
13 of that we would not have to go into detail in, such as the
14 fact that these impurities could have an impact on the
15 speed of embrittlement and so forth and that merely by
16 pointing out that it wasn't addressed that this Board
17 would know within its staff and its own knowledge that
18 those things have an impact and we don't have to go into
19 every detail just like we wouldn't have to say the sun
20 rises in the morning because you already know that.

21 But we have to say what impact that has on the
22 plant, and the impact here is that the impurities in a
23 reactor vessel can affect the rate of embrittlement and the
24 reference temperature for the pressure vessel. The
25 applicant did not address that and that is the reason we

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1 raised the contention.

2 JUDGE LINENBERGER: Let me ask you, sir, just to
3 carry that point out a wee bit further, and I don't want to
4 dwell again on the merits, but what causes you to classify
5 or characterize these as impurities as opposed to their
6 being intention additives because of some beneficial effect
7 of their presence?

8 You call them impurities and maybe the
9 metallurgist would call them a beneficial additive. Now
10 something has caused you to not accept their having any
11 beneficial properties, but having negative effect
12 properties, and yet I can't get a handle on where that
13 information comes from and what causes you to take that
14 position.

15 MR. TEPER: Okay. They might very well have some
16 beneficial effects and they might very well be
17 intentionally placed in the vessel.

18 However, our point is that they also could have
19 an impact on the rate of embrittlement and, therefore, that
20 that is a key issue that the applicant has not addressed.

21 We are not contending at this point, you know,
22 as you have said, the argument here is not over the merits.
23 We are merely saying that the applicant has not addressed
24 this and that it is an important issue.

25 MR. TROWBRIDGE: Mr. Chairman.

1 JUDGE MARGULIES: Yes.

2 MR. TROWBRIDGE: We would agree that the amount
3 of copper and the amount of phosphorous has some effect on
4 the rate of embrittlement, but we would also point out, and
5 I am referring now to Amendment 5 to our FSAR, that we have
6 done a calculation based on the specific metal content of
7 our reactor vessel with the percentage of copper and the
8 percentage of phosphorous clearly shown and the NDT
9 calculations took those into account, and I haven't heard
10 any quarrel yet with those calculations.

11 (Board conferring.)

12 JUDGE MARGULIES: Let's move on to proposed
13 Contention 7 which deals with the value of the ground water
14 below the plant site. There has been no change to the
15 original proposed 7. Do either of the intervenors wish to
16 make any changes based on the statements of applicant and
17 staff?

18 MR. FOWLER: I would like to point out that we
19 did cite the Hatch nuclear plant annual report to NRC, 1979
20 to 1980, and that is where the reference to the
21 contamination of tritium from an unknown source came from.

22 JUDGE MARGULIES: Thank you, and that is the
23 last line of the proposed contention.

24 MR. FOWLER: Yes, sir.

25 JUDGE MARGULIES: How about GANE, do they add

1 that to their ---

2 MR. TEPER: We would also like to add that cite
3 onto our contention.

4 MR. TROWBRIDGE: Could I have that citation
5 again? I couldn't quite hear you.

6 MR. FOWLER: Yes, sir. It should already be in
7 your amendment. It is HNP Annual Report to NRC 1979 and
8 1980.

9 MR. TROWBRIDGE: Thank you.

10 MR. FOWLER: We just did not bracket it. It is
11 the last sentence in the basis of that Contention 7.

12 (Pause while the second mike was placed on the
13 parties' table by the building engineer.)

14 MR. FEIG: Mr. Chairman, I have some information
15 that pertains ---

16 JUDGE MARGULIES: Just one minute.

17 Let's go off the record.

18 (Pause.)

19 JUDGE MARGULIES: Back on the record.

20 MR. FEIG: We have some new information that we
21 have just received today and it pertains to Contention 7 as
22 well as 1 and 2. I can hand these to the different parties
23 up here, a copy of this, and we will have it typed up by
24 the end of the day. It is just some information that I have
25 just been able to get ahold of and I would like to

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1 elaborate on it whenever we talk about GANE Contention 2
2 because it does relate that information in that particular
3 contention, but it also does pertain somewhat to what we
4 are talking about in No. 7 here.

5 JUDGE MARGULIES: Could you indicate how it
6 pertains to 7?

7 MR. FEIG: This is a letter from Bill Lawless
8 who is here today and can elaborate on this further, but it
9 is a letter. Bill was an employee of the Department of
10 Energy at the Savannah River plant. He was the Senior
11 Project Engineer, Nuclear Waste Management Branch. He was
12 responsible for radioactive low-level waste operational and
13 research for the DOE Savannah River plant burial ground and
14 now is employed at Payne College as a professor in
15 mathematics.

16 it basically talks about burial grounds and SRP
17 and also talks about the effects of -- I have just gotten
18 this this morning and I really --

19 JUDGE MARGULIES: I think the better way to
20 handle this is to defer our consideration of proposed
21 Contention 7 and we will move on to 8 and when you have the
22 copies made and distributed we will go back proposed
23 Contention 7.

24 That brings us to proposed Contention 8. Some
25 modification has been made by CPG and would you like to

1 elaborate on that.

2 MR. FOWLER: Yes, sir. Marc Merline would like
3 to explain that modification.

4 MR. MERLIN: If I may, what I want to do is
5 elaborate and give a more definite basis ---

6 JUDGE MARGULIES: Would you like to step up and
7 use the microphone.

8 MR. MERLIN: Certainly.

9 What I would like to do is elaborate on the
10 basis of the contention with regard to its applicability.
11 In particular, there is a fair amount of confusion that is
12 demonstrated in the applicant's initial response to this
13 contention, and to the extent that it still exists, I just
14 want to make sure that there is an understanding of parties
15 concerned what the nature of the contention is.

16 The contention concerns quality assurance
17 procedures in the construction of Plant Vogtle. This is not
18 a claim or allegation that there are violations that have
19 not been resolved or, you know, suitably addressed.

20 What it is is a claim that the methodology and
21 quality assurance program implemented at Plant Vogtle is
22 not consistent or doesn't comply with the specific
23 regulations in the NRC code, specifically 10 CFR 50
24 Appendix B.

25 The primary intention of a quality assurance

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1 program is to assure or generate adequate confidence in the
2 correct functioning of the plant.

3 Now that is in sharp contradistinction to the
4 notion that a quality assurance program is following those
5 written procedures that have been mandated and exclusively
6 that those written procedures have been mandated in the
7 construction of the plan.

8 This is best illustrated in the basis of our
9 contention which describes the failure of radiographs
10 excuted by GPC contractors to include the heat affected
11 zone in welds in some of the piping in the coolant system.

12 Now again the point isn't whether that is a
13 violation. In fact, I won't even contest that it is not a
14 violation. The violation was withdrawn because this
15 structure in question was actually removed from the plant.
16 So I am not contending that the violation stands, but the
17 impact of the violation is best illustrated in GPC's
18 response to it and in the response from Richard C. Lewis of
19 the NRC to GPU's explanation of the violation.

20 GPC basically said it was not included in the
21 written code that the radiographs of the heat affected zone
22 should include the area of the weldment. Richard Lewis,
23 acknowledging that the violation had been lifted, proceeded
24 to say "Interpretations of the code by, and these are his
25 words, "code experts make the response appear to set aside

1 engineering reason when you consider that based on failure
2 analysts' experience the technical world realizes that the
3 heat affected zone of a weld is the most critical area of
4 the weldment."

5 I think the point here is that quality
6 assurance extends far beyond the simply application of
7 written procedures.

8 The reason I need to elaborate the contention
9 is that GPC's response to it demonstrated not so much a
10 misunderstanding of the contention, but a misunderstanding,
11 or at least a different interpretation of what constituted
12 quality assurance.

13 I refer to their response which in fact claims
14 that we failed to appreciate the notions of quality
15 assurance and they reiterate that testing procedures are
16 intended to be explicit and complete. I assume that they
17 mean they will be comprehensive in and of themselves and
18 that the ASME Code, and this is a particular reference, ".
19 . . many sections of which have been incorporated into the
20 NRC's regulations establish the standards for professional
21 practice." well, therein lies the rub, and that is that the
22 standards that the standards of professional practice far
23 transcend simple written codes.

24 There are areas of judgment and discretion and
25 critical assessment of procedures and novelties that appear

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1 in construction and almost actually in any field of human
2 engineering that have to be considered and evaluated as
3 they go along.

4 The persistence, and this is elaborated in the
5 basis, of GPC to equate quality assurance exclusively with
6 written procedure is what calls into question the effective
7 compliance with the NRC regulations concerning generating
8 confidence in the correct functioning of the reactor
9 system which they are embarking upon constructing and
10 putting into operation.

11 JUDGE LINENBERGER: Perhaps you could enlighten
12 the Board as to whether there has been an intentional
13 circumscribing of CPG Contention 8 from that that was
14 originally filed to that which has been amended in your
15 filing of last week.

16 MR. MERLIN: Okay.

17 JUDGE LINENBERGER: Let me get around to an
18 explicit question.

19 MR. MERLIN: Certainly.

20 JUDGE LINENBERGER: It would appear from the
21 restatement of CPG 8 on page 14 that CPG is restricting
22 their quality assurance concerns to the subject of welds.
23 That is the statement of the contention in brackets.

24 The contention previously stated did not seem
25 to be so circumscribed and, indeed, when one reads the

1 bases you have supplied for the amended CPG 8, it would
2 give the impression that again it is broader than a
3 consideration of welds.

4 Now to have an acceptable contention one really
5 has to be, as far as this Board member is concerned,
6 explicit about the scope. You can't limit the scope in the
7 contention and then make it far ranging in the bases
8 without explaining to the staff and the applicant what it
9 is you explicitly want to litigate and what they are
10 expected to defend.

11 MR. MERLIN: I think I can respond to that. As
12 many of the people here are aware and as some may not be,
13 there was a preliminary discussion of these contentions
14 between the parties, CPG and GANS and Georgia Power and the
15 Nuclear Regulatory Commission staff last week, and some of
16 the amendments that appear and some of the alterations and
17 revisions were in consequence to that. So these have been
18 presented.

19 The intention of the revision here had much to
20 do with the fact that the applicant's response to the
21 original contention was so far off the mark, in other
22 words, in basically trying to reiterate that these
23 violations had somehow been resolved, which was not the
24 intention, and it was felt necessary to elaborate more
25 specifically in the statement of the contention what the

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1 specific concerns were.

2 with regard to pipes and welds as being
3 included in the contention, that really much more is a
4 matter of I think some concern to the implementation of the
5 regulatory procedure. Suffice it to say the code
6 requirement and generation does add confidence.

7 There seems to be concern about stating
8 contentions that refer specifically to elements of the code
9 that somehow don't refer in time to specific components of
10 the reactor.

11 JUDGE LINENBERGER: Sir, I am sorry. So far I
12 haven't heard you say anything that helps me with the
13 answer to my question. Now maybe you are leading up to it,
14 but I am having trouble following all this. Has the
15 contention been narrowed to express a concern only
16 involving welds as contrasted with the prior version which
17 was broader than that, or has it not been so circumscribed.

18 MR. MERLIN: Okay. It has been circumscribed to
19 include welds.

20 JUDGE LINENBERGER: Okay.

21 MR. MERLIN: But, as I say, and I just want to
22 iterate, the contention has to do with the violation of 10
23 CFR 50 Appendix B which states that a quality assurance
24 program must be tied to the generation of adequate
25 confidence.

1 I mean I don't presume to establish what
2 litigability is, but I do state that this is an element of
3 the code and this is where we feel the applicant has failed
4 in complying to the code.

5 now it is up to your discretion as to the
6 substance of the hearing to determine whether it is
7 litigable, but to the extent that you are going to require
8 that that be circumscribed to the particular features and
9 structures of the plant, then I can try to help you along,
10 but I don't constrain my claim to violations of code to
11 simple corresponding features of the plant.

12 I am saying there is a violation of code and it
13 has been substantiated in the failures of applying
14 appropriate quality assurance procedures in the
15 construction of welds and piping.

16 JUDGE PARIS: Is it your intention to try to
17 prove that the applicant has not met the requirements of 10
18 CFR 50 Appendix B by showing that the QA/QC program with
19 regard to welds was inadequate?

20 MR. MERLIN: Yes, that certainly is
21 substantiating evidence to that effect.

22 Furthermore, as I say, the applicant's own
23 response to the contention which says, if I can paraphrase
24 it and obviously it might not be acceptable, but we have
25 said that quality assurance programs are indistinguishable

1 from the explicit and complete written procedures.

2 JUDGE LINENBERGER: was that yes? I didn't hear
3 you answer Judge Paris' question.

4 MR. MERLIN: I am sorry, yes.

5 JUDGE LINENBERGER: Okay.

6 JUDGE MARGULIES: Does that complete your
7 response?

8 MR. MERLIN: Yes.

9 JUDGE MARGULIES: Does GANE join in the revised
10 Contention 8?

11 MR. TEPER: No. Subsequent to the meeting we had
12 last week, we also changed our Contention No. 8, but not in
13 the same wording that they did. We have provided copies to
14 the other parties and we will be supplying a copy to you.

15 We basically made an addition. I believe last
16 week ---

17 MR. TROWBRIDGE: Oh, a handwritten copy.

18 MR. TEPER: A handwritten copy. We will get a
19 typed copy up to you all so you all will know how to
20 respond. It was basically an addition that tried to limit
21 the scope.

22 GANE basically, to make it real simple,
23 contends that the applicant has failed to enforce a quality
24 assurance program in the construction of Plant Vogtle that
25 provides adequately for the safe functioning of diverse

1 structure systems and components as required by 10 CFR 50
2 Appendix B such that reasonable assurance exists that
3 operatin of the plant will not endanger the public health
4 and safety in that systematic quality assurance
5 deficiencies have existed and continue without resolution
6 in the following areas, and what we have done is named a
7 few just to limit it so we can litigate it.

8 JUDGE PARIS: what have you named?

9 MR. TEPER: Proper welding, vendor surveillance,
10 inspection, testing, implementation of procedures and
11 procurement. Along with that GANE periodically receives
12 letters from different people in the nuclear supply
13 industry with concerns about supplies that are being
14 provided to applicant.

15 Just today we have received a letter from a
16 former employee with the blow control division of Rockwell
17 international. His name is Clinton Sumrall and he has
18 master's degree in nuclear engineering and was a former
19 sales engineer of nuclear equipment in the Flow Control
20 Division of Rockwell.

21 To try to just hurry with this, he says while
22 he was employed by Rockwell he became concerned that
23 balanced disk mainsteam isolation valves with air spraying
24 actuators furnished to numerous nuclear power plants, and
25 that includes Georgia Power, has not been adequately tested

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1 and therefore could create a substantial safety hazard. The
2 lives of thousands of people could be in danger.

3 There are attachments to this. However, as
4 according to procedure, I would like to enter this into the
5 record or provide it to the NRC or the Atomic Safety and
6 Licensing Board.

7 JUDGE MARGULIES: You will need copies for each
8 of the Judges of all of the documents that you wish to hand
9 out and copies for each of the parties.

10 MR. TEPER: Right. I will provide that. I would
11 just like to point out at this time that we are constantly
12 receiving information from people inside the industry as
13 well as once in a while people on the construction site,
14 and it is difficult I know for you as well as the company
15 to respond to new charges.

16 When these charges are brought up we will deal
17 with them the best we can, but a procedure that would help
18 us -- I guess I am asking for some help as to what would be
19 the best procedure to let Georgia Power or let the
20 applicant respond and also let you know what is the
21 procedure.

22 JUDGE MARGULIES: Well, as far as the Licensing
23 Board is concerned, you would have to conform to the Rules
24 of Practice and the case law that explains the Rules of
25 Practice. If the staff wishes to give you some assistance,

1 some direct assistance or advice, you may consult with the
2 staff.

3 MR. TEPPER: Thank you, sir. To sum up the GANE
4 Contention 8, we have named in the basis a whole category
5 of -- basically it came from I&E, inspection and
6 Enforcement inspections on the site where they found
7 problems on the construction site. We named a whole list of
8 them and it is a very broad list.

9 The idea of listing all of this was to show
10 that there are quality control breakdowns at Plant Vogtle.
11 I know on a large construction site with over 9,000
12 employees everything is not going to be done letter
13 perfect, and that is why Georgia Power has attempted to
14 conform with your regulations, NRC regulations, but
15 obviously they are failing in that the NRC continues to
16 identify issues that are going uninspected or are ignored
17 by the applicant and that is what GANE's contention is.

18 JUDGE MARGULIES: Thank you.

19 MR. TROWBRIDGE: Mr. Chairman, let me first
20 respond to CPG's revised contention.

21 The sole example that CPG has given for what
22 they regard as undue attention to written procedure rather
23 than more comprehensive QA, the sole example is the failure
24 to radiograph the heat affected zone beside the weld.

25 I would simply point out to the Board, and

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1 particularly to Dr. Linenberger, that we are under
2 obligation by regulation and by code to do complete UT,
3 ultrasonic testing of all safety related piping, and that
4 includes the heat affected zone and is a very excellent for
5 detecting cracks and defects.

6 I find it more difficult to respond to GANE. I
7 will simply state that the basis provided and the items
8 cited by GANE simply, in our view, do not add up to support
9 for the broad allegation that our construction QA program
10 is inadequate and much less the contention that it mirrors
11 similar situations as Zimmer and Byron.

12 I have tried to divide the various items cited
13 by GANE in support of their contention in the basis into
14 several categories. Some of them fall into the category of
15 several I suggest minor notices of violation, one of which
16 was a severity level four and all of the other ones which
17 were severity level 5. I would suggest that in a
18 construction program of these dimensions that is an
19 excellent QA record.

20 JUDGE PARIS: Mr. Trowbridge, is five more
21 severe than four, or is the other way around?

22 MR. TROWBRIDGE: Then there are cited as further
23 examples of inadequate QA some breakdowns in contractor
24 performance which I submit, as we stated in our response,
25 were actually discovered and corrected by Georgia Power

1 Company and are evidence of the functioning of the QA
2 program and not of deficiencies in it.

3 Lastly, there is a small category of questions
4 about our QA program from the NRC. I submit when you read
5 our response and the nature of the questions, that they
6 have nothing to do with good or bad QA.

7 MR. TEPPER: Mr. Chairman, I would like to
8 respond to that.

9 JUDGE MARGULIES: Just one minute.

10 JUDGE LINENBERGER: I think the Board is running
11 into a problem here that makes this discussion between GANE
12 and the applicant difficult for us to follow, and the
13 reason for that is that it is not clear to this Member of
14 the Board what it is that GANE finds troublesome.

15 Let me explain my problem here. Quality
16 assurance has at least two facets to it, at least two
17 facets, a comprehensive program that addresses all critical
18 features of construction and ultimately operation and
19 maintenance of the plant and, secondly, an applicant
20 organization that dips down into his contractor
21 organizations that assures a proper implementation of that
22 program. Quality assurance gets nowhere without both of
23 those ingredients.

24 In the manner in which GANE stated its
25 Contention a few moments ago, I cannot tell which of

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1 those ingredients GANE has a problem with so far as the
2 Vogtle plant is concerned, and I think it is going to be
3 difficult for GANE and anybody to communicate without an
4 understanding of which of those two facets GANE is
5 challenging in this contention.

6 Can you speak to that first before you speak to
7 Mr. Trowbridge's comment please.

8 MR. TEPER: Yes, sir. A quality assurance
9 program written on paper is not worth the paper it is
10 written on if it is not adequately implemented.

11 Thus, by me questioning the implementation of
12 the quality assurance program of Georgia Power, I am also
13 implicitly questioning the program as it is written.

14 Do that answer it?

15 JUDGE LINENBERGER: Now it does, but it was not
16 at all obvious from what you have said up to this point.

17 MR. TEPER: Okay. In response to applicant's
18 counsel, it is starting to become obvious to me that
19 applicant doesn't deem it important that it has a series of
20 violation level No. 5 violations.

21 I say to the Board that there is a cumulative
22 effect of these violations if concrete is not poured right
23 and if storage of the electrical cabinets isn't stored
24 right. Maybe those are little, tiny problems according to
25 NRC regulations doesn't mean that applicant gets fined. At

1 the same time after a while when you put all these
2 components together, you are going to have a plant that is
3 improperly going to operate, and I submit to you that that
4 is a serious threat to the health and welfare of the public
5 around this area.

6 I believe I just heard counsel say well, we had
7 some problems but they were not very severe. I am asking
8 this Board to have further hearings on quality assurance.
9 As we have seen around the country, there have been more
10 severe specific violations of quality assurance, but I
11 submit that lots of little ones are as dangerous as a major
12 violation. Now I think it needs to be looked into.

13 Now, once again, the sheer magnitude of the
14 construction site means there are going to be problems and
15 that is Georgia Power has tried with, I should say, a great
16 effort for a good quality assurance program. They have
17 attempted. They have been cited by different organizations
18 as having a good one.

19 I once again come back and submit that it seems
20 to me NRC goes on site and does an inspection, however
21 often they do it, and they tend to come up with these minor
22 violations.

23 JUDGE MARGULIES: Mr. Perlis, would you respond
24 to the intervenors' contentions separately.

25 MR. PERLIS: I would like to try. My problem

1 with both contentions is really that I am unclear where the
2 focus is. I don't think there is any question that quality
3 assurance is a litigable area in an operating license
4 hearing. But at the same time this board is not sitting as
5 an enforcement Board and the focus should not be solely on
6 whether violations have taken place in the past.

7 Without trying to muddy the waters too much, I
8 can think of three possible areas the contentions can be
9 directed towards and, frankly, I just don't know which of
10 those three, if any, they are directed towards.

11 One is whether the quality assurance program
12 during operation, and again this is an operating license
13 hearing, will be adequate. The quality assurance program I
14 assume is set out in the FSAR. I mean, there has been no
15 allegation that that program as set up for operation is
16 inadequate. I don't think that is what the contentions are
17 addressing.

18 There are two possibilities in the construction
19 area. One is, and I believe this is what CPG is now getting
20 towards, that a certain area may be unsafe because of
21 quality assurance deficiencies in that area, and I believe
22 they may be making that contention with welding. That I
23 think is approaching an inadmissible contention.

24 If the allegation is that the quality assurance
25 program as it relates to welding was inadequate and

1 therefore the welds at the plant are unsafe and the plant
2 will not operate safely, that is an acceptable contention.
3 I am not sure that that is what CPG is directing their
4 contention at. That is my only question for that
5 organization.

6 The third possibility is the much broader one,
7 and that is whether overall the quality assurance program
8 during construction was an adequate one. I believe that is
9 the contention GANE is getting towards and, unfortunately,
10 they really haven't provided, in my view, enough serious
11 question as to any individual area to warrant what would
12 have to be a very broad inquiry into whether overall there
13 was a functioning quality assurance program or not.

14 I think to even begin on that sort of inquiry
15 one has to look at a specific area where there have been at
16 least allegations of substantial problems rather than
17 going through I&E reports and finding two citations in an
18 area and saying the quality assurance program doesn't work
19 there.

20 I just think for that reason GANE's, it is
21 improperly broad and really doesn't have any basis to
22 support the inquiry that it would have the Board and the
23 parties go into.

24 As I said, I think CPG's is much closer, but I
25 am not sure exactly what they are addressing their

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1 contention towards.

2 MR. FOWLER: I would like to explain that in
3 rewording our contention we were focusing on welds that Mr.
4 Merlin was elaborating. There might be specific violations
5 of the regs pertaining to welds in this sense.

6 He is also saying that sometimes, what he was
7 elaborating on up here was sometimes you can follow the
8 regs and still not come up with an adequate quality
9 assurance that is supposed to assure the NRC and the public
10 that the plant is going to be operated safely, and that is
11 something that a letter from NRC had addressed itself. So
12 that is what he was talking about there. We are focusing on
13 the welds in our contention.

14 JUDGE MARGULIES: Does that help you, Mr.
15 Perlis?

16 MR. PERLIS: In part. It would then tell me what
17 we would be litigating, but it wouldn't tell me where the
18 litigation would lead in the end.

19 Is the contention that the welds themselves
20 are unsafe?

21 MR. FOWLER: Both the welds themselves are
22 unsafe specifically in violations of the regs, plus that
23 the quality assurance program -- do you want to elaborate?

24 MR. MERLIN: I might elaborate. As Judge
25 Linenberger pointed out, I am not talking about guarantees

1 here. We are not claiming the welds are unsafe. What we are
2 claiming is that the quality assurance pertaining to the
3 welding hasn't succeeded, which means establishing adequate
4 confidence.

5 I would like for the NRC staff to not group
6 their response to collectively vis-a-vis GANE and CPG. I
7 began my statement, and I reiterate it, that violations
8 occur. In an endeavor of this magnitude it is beyond belief
9 that there are not going to be errors. I have no qualms
10 with errors.

11 Interestingly enough, you know, it is human to
12 commit errors. The fact that humans are involved in this
13 means that there can be departures from mechanical like
14 procedures and machine readable procedures which in fact
15 circumscribe the ability to detect errors and to correct
16 them. That is all I am saying. I am not saying that, look,
17 there are four violations and it indicates their QA program
18 has failed. So please don't make that grouping.

19 The other thing is that Mr. Trowbridge's
20 response he just made a misstatement. He said our sole
21 example of a failure in QA with regard to welding having to
22 do with the radiographs of the heat affected zone.

23 I just bring to your attention the content of
24 our basis, which in fact elaborates another instance which
25 had to do with the welding of the containment during a

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1 light rain in which there was a procedural dispute between
2 the local quality assurance officers and one who happened
3 to be on site from the NRC.

4 Again, I am not trying to cite this as being in
5 and of itself conclusive of a safety problem, but just
6 correcting for the record Mr. Trowbridge's statement that
7 we concerned ourselves exclusively with the heat affected
8 zone radiographs, which is not true.

9 JUDGE MARGULIES: Is there anything further?

10 MR. TEPER: Yes, I would like to respond. I will
11 agree that GANE is probing the fact that we went through
12 these I&E reports and found violations that the NRC found
13 that Georgia Power did not find.

14 In the search for confidence in safety related
15 areas we had to go through thousands of documents. We
16 didn't go through all of them, but there are certain
17 documents such as intermemos and work-stop orders that
18 Georgia Power has.

19 We believe that a hearing on quality assurance
20 should be started so that during the discovery process we
21 will be able to ask for the work-stop orders to see that
22 Georgia Power's quality assurance has been working.
23 Work-stop orders usually come about when the company's own
24 QA program does work.

25 Well, I have not been provided with work-stop

1 orders. I don't believe there has been a large-scale
2 investigation into whether the problems that came up during
3 work-stop orders have been resolved. That is impossible for
4 the NRC or the intervenors to address because we don't have
5 access to those documents.

6 That is why I believe quality assurance should
7 be a subject of a hearing, as well as the fact that yes,
8 there have been little violations found and maybe there
9 have been other little violations that have not been found
10 by the NRC staff. The fact that there are some that have
11 escaped Georgia Power's attention, there might be others,
12 and that is why, once again, the broad scope of our
13 contention.

14 (Board conferring.)

15 JUDGE LINENBERGER: I feel compelled to make one
16 comment here and I shant elaborate on it. I hope you will
17 listen to it and do some homework.

18 I have heard several of you talk about a
19 quality assurance program that violates the regs. I am not
20 sure I know what that means, but if the word "regs" refers
21 to the contents of a portion of that red and white book
22 that is sitting in front of Mr. Perlis, if that is indeed
23 what is being alluded to, or the brown and white book that
24 GANE is holding, if that is what is being alluded to, that
25 indeed portrays a serious lack of understanding of what

1 quality assurance is about.

2 I think it is incumbent upon the people who
3 have discussed their concerns about the violation of regs
4 being indicative of bad quality assurance to develop a
5 better understanding of what quality assurance is about.

6 That is all I think is appropriate for me to
7 say at this time.

8 JUDGE MARGULIES: If there is nothing further on
9 the contention, we will take a recess until 11:30.

10 (Recess from 11:15 a.m. to 11:30 a.m.)

11 JUDGE MARGULIES: Back on the record.

12 MR. FOWLER: May I make one more statement that
13 will maybe make clear what we are trying to get across
14 about with our quality assurance contention?

15 JUDGE MARGULIES: Certainly.

16 MR. FOWLER: What we are doing here, the
17 violation mentioned in our basis have been cited to show
18 that CPG has no adequate assurance that the welds at Vogtle
19 are safe and, therefore, that the quality assurance program
20 at Vogtle is safe.

21 JUDGE MARGULIES: Thank you.

22 MR. TEPPER: Mr. Chairman, GANE would also like
23 to add that there is a change to GANE's Contention No. 8.
24 There were three paragraphs that were going to be taken out
25 and made into a new contention, GANE Contention 14, and it

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1 has to do with the backup diesel generator.

2 I believe CPG has already turned that into the
3 Board and GANE will likewise remove the identical three
4 paragraphs from its Contention No. 8 and make it a whole
5 new contention.

6 JUDGE MARGULIES: Is there any objection on the
7 part of the applicant?

8 MR. TROWBRIDGE: None.

9 JUDGE MARGULIES: How about staff?

10 MR. PERLIS: None. So that would then be CPG 14
11 and GANE 14?

12 MR. FOWLER: Yes.

13 MR. TEPER: Right.

14 MR. PERLIS: That is fine.

15 MR. JOHNSON: Just one more housekeeping matter
16 from earlier in the day. We now have copies of the
17 statements that we were going to add to our request for
18 waiver and I can distribute them and explain what each is.
19 They include a motion that was passed yesterday ---

20 JUDGE MARGULIES: why don't you distribute them
21 and then explain.

22 MR. JOHNSON: A good idea.

23 (Copies of the document were distributed to the
24 parties.)

25 JUDGE MARGULIES: we should have three copies up

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1 here.

2 MR. JOHNSON: what this includes is a motion
3 that was passed unanimously yesterday by the Georgia Public
4 Service Commission approving a study of the Georgia Power
5 construction program as particularly relating to the need
6 for plant. Their particular concern is whether the plant
7 will eventually be allowed into the rate base which, as we
8 described in the basis for our original contention, could
9 have profound impacts on the company's ability to safely
10 operate the plant.

11 Attached to that is a statement that was given
12 by one of the Commissioners, and he signed a copy of the
13 statement, the original which I have given to the Chairman,
14 describing some of his concerns. His statement was agreed
15 upon by a majority of the Commissioners there at that
16 meeting just yesterday afternoon at about 5 o'clock.

17 Also I have given a notarized letter and
18 attachments from the chief staff person for the Georgia
19 Solar Coalition concerning the availability of solar and
20 conservation measures and how much energy they could
21 provide per household in Georgia.

22 If anyone has any questions on it, you can
23 contact me today or at my office later.

24 MR. PERLIS: Excuse me, Mr. Chairman, may I ask
25 Mr. Johnson a question?

1 JUDGE MARGULIES: Sure.

2 MR. PERLIS: The first two pages of this
3 document, they don't indicate whether it was passed. You
4 say it was passed?

5 MR. JOHNSON: It was passed unanimously.

6 MR. PERLIS: Okay.

7 JUDGE MARGULIES: We go to proposed Contention
8 9. The contention has been altered.

9 MR. TROWBRIDGE: And our response has been
10 altered.

11 JUDGE MARGULIES: Do you wish to change your
12 response?

13 MR. TROWBRIDGE: Yes. I have a statement to
14 make. This Contention 9 concerns applicant's proposal,
15 which is now before the NRC, to make a design change in the
16 plant which would make it unnecessary for Georgia Power
17 Company to install pipe restraints or jet barriers around
18 the primary loop piping. Applicant's proposal to the NRC
19 was supported by a proprietary Westinghouse report
20 justifying the change.

21 Based on last week's meeting with the
22 petitioners we understand that they are skeptical of the
23 change, but do not have enough information in the
24 expurgated version of the Westinghouse report to know
25 whether they object to the change or on what basis.

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1 We agree that the expurgated version does not
2 provide enough information. We have therefore proposed to
3 petitioners that the full report will be furnished to
4 petitioners under a suitable proprietary agreement.

5 If after reviewing the report petitioners decide
6 within a reasonable time to file a contention opposing the
7 change, we will not object to the new contention on
8 timeliness grounds. We will let the Board know what happens
9 and meanwhile suggest that the Board defer action on the
10 present contention.

11 MR. FOWLER: I would like to ascribe to that and
12 say that at first in Georgia Power's response to that
13 contention they answered that applicant's proposal and
14 letters to the Commission contain the same information as
15 would an amendment to the FSAR, and petitioner's assertion
16 that they have insufficient information is frivolous as a
17 matter of law. This document that we were looking at was
18 totally sanitized. We had no way of determining what it
19 actually did say.

20 The applicant is required to provide this
21 information in the FSAR and the PSAR. We didn't have access
22 to the information and so lack of information was not at
23 all frivolous and we need to see that document now.

24 JUDGE PARIS: Well, he has proposed to provide
25 it to you under suitable arrangements.

1 JUDGE MARGULIES: Do you object to the
2 procedure?

3 MR. JOHNSON: Our only concern is that certainly
4 Westinghouse has a right to safeguard proprietary
5 information and we would certainly not disclose that. But
6 we do have the concern that there may be information that
7 that should be public information that is really not
8 proprietary that is within that and we would like to keep
9 open the possibility of at least having the Board review
10 any information that we feel is not proprietary and
11 determine if it could be publicly released rather than
12 saying that we now agree that none of it will be released.

13 MR. MERLIN: I can give a specific example of
14 that to help the Board understand. Again, the statement is
15 that we do not want to divulge proprietary information, but
16 the regulations require that a sufficient amount of
17 information be made I assume public to understand the safe
18 functioning of system.

19 I just wanted to demonstrate or to show an
20 example of the information that we require. It is not of a
21 proprietary nature which I suspect should be made public.

22 This, for example, is the page of the report
23 from the Westinghouse study comparing the results of their
24 model to empirical data.

25 Now my training is in physics, and I did

1 several years's work for the Rand Corporation in Santa
2 Monica. It is hard for me to understand how the performance
3 of a model, a very sophisticated model with empirical data
4 could be construed as being proprietary since there is no
5 way for one to determine the basis of a small set of
6 numbers and any significant details in the construction of
7 a model.

8 It is those things where we disagree with the
9 proposal of the applicant. Proprietary information needs to
10 be protected, but information that should be in the public
11 domain with regard to new design needs to be introduced
12 into the public domain and this is just an example of one
13 such requirement that we feel has to be circulated and
14 understood by groups much larger than the petitioners at
15 this hearing.

16 JUDGE MARGULIES: Would you describe what you
17 handed up for the record.

18 MR. MERLIN: Yes, I would like to actually. It
19 is difficult to describe and I might hold it up.

20 (Laughter.)

21 This is from the Westinghouse report, the title
22 of which I think everyone has. This is a justification of
23 their novel design basis and this is a Figure 3 comparison,
24 omitted, predictions with experimental results. This is one
25 of several major elements of this document that were

1 sanitized or removed based upon a proprietary plan and it
2 is not at all clear that, you know, we are not contending
3 this system isn't safe, and that needs to be understood. We
4 are saying that we have so little information on the
5 functioning of this system that we can't even begin to make
6 an assessment on the safety.

7 JUDGE PARIS: The reporter cannot reproduce what
8 you are holding up on the record unless you describe it.
9 Describe it for her.

10 MR. MERLIN: Okay. It is labeled page 21. The
11 report title is from the Westinghouse report on the
12 circumferential pipe breaks. It is labeled "Figure 3
13 Comparison on -- bracket, empty space, bracket --
14 Predictions with Experimental Results." The body of the
15 page is empty.

16 MR. TEPER: GANE would like to make its
17 statement on this contention where we also will agree to
18 see the proprietary information.

19 It is our assumption that this novel design
20 change will save the applicant millions of dollars in
21 construction costs, the fact that they don't have to put
22 these pipes, basically pipe supports into the plant.

23 It is GANE's observation that Westinghouse has
24 the ability to support the fact that the applicant doesn't
25 need these pipe supports. We contend that it is a way of

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1 saving the utility money because these plants are so
2 expensive and that Westinghouse can come up with any kind
3 of a example of why they might not need it, but we think it
4 is threatening the health and safety of the community.

5 JUDGE MARGULIES: Do you join in CPG's revision
6 of Contention 9?

7 (Pause.)

8 MR. TEPER: Yes, we do. It is hard to determine
9 the appropriateness of a novel design when we don't have
10 the information to determine it.

11 JUDGE MARGULIES: Does staff still feel that
12 there is a contention there?

13 MR. PERLIS: In the absence of the proprietary
14 document, the staff feels there is a contention. Since the
15 document will be provided, we would suggest that the
16 parties be given an appropriate time on the order of 30
17 days to examine the document and either submit a new
18 contention which, if filed within 30 days, would be timely
19 filed or to withdraw the contention if they are satisfied
20 after seeing the Westinghouse information.

21 (Board conferring.)

22 JUDGE MARGULIES: Mr. Trobridge, what sort of
23 proprietary protection agreement are you looking for and it
24 is something that the intervenors can agree to?

25 MR. TROWBRIDGE: They have not seen it yet. This

1 will be an agreement signed by Westinghouse, between
2 Westinghouse and the intervenors. I have just received a
3 copy of the most recent agreement that was used I think in
4 Byron and have not yet transmitted it or fixed it up so
5 that it is suitable for this proceeding.

6 JUDGE MARGULIES: Does the agreement contain
7 anything that in case of a dispute as to what should or
8 shouldn't remain proprietary and how it should be resolved?

9 MR. TROWBRIDGE: I can't be sure in its present
10 form whether it asks the intervenors to acknowledge that
11 the information is proprietary. If it does, that will come
12 out. I am not arguing the intervenors' right to dispute the
13 appropriateness of the proprietary treatment of the
14 information.

15 JUDGE MARGULIES: Are the intervenors satisfied
16 with the procedure?

17 MR. FOWLER: We won't withdraw our contention.
18 We will wait until receiving the document review and the
19 document and then within 30 days either decide to amend our
20 contention or withdraw the contention.

21 JUDGE MARGULIES: I think that is a reasonable
22 approach. Do you agree?

23 MR. TEPER: GANE will also do the same.

24 JUDGE MARGULIES: And you do, too, Mr.
25 Trowbridge?

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1 MR. TROWBRIDGE: Yes.

2 JUDGE MARGULIES: That brings us to proposed
3 CPG Contention 10. There has been no alteration in that
4 contention; is that correct?

5 MR. TROWBRIDGE: There is a small alteration in
6 our response again, Mr. Chairman.

7 JUDGE MARGULIES: Do you wish to go ahead with
8 your changed response?

9 MR. TROWBRIDGE: Yes. We treated this as a
10 collection of subcontentions and numbered them,
11 incidentally, asking that these subcontentions be treated
12 as individual contentions and not the broad statement at
13 the beginning.

14 We objected to several of the subcontentions,
15 including subcontention 7 in our reply.

16 JUDGE MARGULIES: Could you give us the page.

17 MR. TROWBRIDGE: Yes, I am looking for it.

18 (Pause.)

19 MR. JOHNSON: 69.

20 MR. TROWBRIDGE: What is it?

21 MR. JOHNSON: 69.

22 MR. TROWBRIDGE: Seven had to do with hydrogen
23 recombiners. As a result of our meeting with the
24 intervenors, we understand that what they mean by their
25 contention is that the hydrogen recombiners ought to be

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1 tested and environmentally qualified under radiation
2 conditions, and it is not obvious from our FSAR that that
3 is the case. So that we have withdrawn our objection to
4 Subcontention 7 on that understanding.

5 I would like to say to the Board as to this and
6 some of the other subcontentions that our reason for not
7 objecting in cases where we think, and in fact our
8 environmental qualification program complies exactly with
9 what the intervenors would have us do, but we have not
10 objected solely on the ground that that information was not
11 available to them. It is not in the FSAR and there is not
12 that level of detail about all of our environmental
13 qualification methods.

14 This is an example. The hydrogen recombiners
15 were indeed tested under radiation conditions and we
16 propose to furnish documentation to petitioners on this and
17 probably several other subcontentions showing that we have
18 indeed done what they would have us do and, if they are
19 satisfied, I hope they will withdraw the subcontention, but
20 meanwhile we have allowed them.

21 JUDGE MARGULIES: Yes.

22 MR. DEUTSCH: I would like to address that.

23 JUDGE MARGULIES: Who is speaking and for which
24 organization?

25 MR. DEUTSCH: Howard Deutsch for CPG. Naturally

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1 if the information wasn't available to us and wasn't in any
2 report or anything that Georgia Power issued, we wouldn't
3 know about it, and we still don't. We have never received
4 any specific information that says that their testing
5 program is not as outlined in the PSAR, which was issued,
6 what, some six months ago.

7 So we on that basis concluded that their
8 testing program and the equipment that was outlined as
9 being environmentally qualified was as such in a major
10 document that they issued recently.

11 Of course we will look at whatever they have to
12 say in the documentation that addresses these issues, but I
13 think that beyond that there are some important questions
14 here of why are these methods being changed so quickly at
15 this point, and it must indicate that they have some grave
16 doubts about their environmental qualifications program,
17 the fact that there are changes that are not in the PSAR
18 that are being done now.

19 MR. TROWBRIDGE: I said nothing about changes.

20 MR. DEUTSCH: What is that?

21 MR. TROWBRIDGE: I said nothing about changes in
22 our methods. I said that the PSAR does not spell out in
23 detail each of the methods for qualifying various pieces of
24 equipment. We do have qualification packages for individual
25 pieces of equipment and we do have documentation as to what

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1 the methods are, but that amount of detail just doesn't go
2 into the FSAR, either into ours or into anybody else's.

3 JUDGE MARGULIES: Would it be appropriate to
4 treat proposed Contention 10 in the same manner as proposed
5 Contention 9?

6 MS. FOWLER: I think the change that Mr. Deutsch
7 is referring to is that Georgia Power did let us know that
8 the early Limitorque operators that they had failed, and
9 these are now being replaced in the containment building.
10 That is the changes in environmental qualifications that
11 Mr. Deutsch is referring to, the changes that have
12 occurred. We are just worried about these happening over
13 and over again.

14 MR. DEUTSCH: I was led to believe at the
15 premeeting that one of the reasons why weren't objecting to
16 some of these is that some of the methods had been changed
17 and that they were now complying with the type of test
18 methods that I thought should be used. That was what in
19 part I was led to believe at that meeting. So that there
20 are substantial changes occurring in their qualification
21 program at this time.

22 MR. TROWBRIDGE: I don't know of any changes in
23 the method, and I am trying to think what it is that we
24 discussed. We did tell you that the Limitorque valves
25 inside containment were found not to be qualified and we

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1 are replacing them. That much we did tell you, but I don't
2 think we talked anything about changes in methods.

3 MR. DEUTSCH: I guess it is just a matter of
4 what we are talking about, for example, the integrated dose
5 versus dose rate considerations. That is not specified
6 anywhere in the FSAR. It only specified the integrated
7 dose. Nowhere that I saw does it mention that the dose rate
8 is an important phenomena to consider.

9 Now I can't see why that would not be mentioned
10 in the FSAR. That is supposed to be quite a comprehensive
11 document. I mean it is some 25 or 30 volumes long, and why
12 an important test method is not even mentioned, I only can
13 assume that they are in the process of changing that to say
14 that is now they are testing it. That was my basis for
15 saying that.

16 JUDGE MARGULIES: Would it be appropriate to
17 treat proposed Contention 10 in the same manner as proposed
18 Contention 9?

19 MS. FOWLER: Yes, sir. There are some points,
20 some of the environmental qualifications we are interested
21 where no data is going to be supplied to us. So there are
22 some issues that we really aren't talking to now, but if we
23 can see that data or documentation, we will either decide
24 to withdraw our contentions or let Georgia Power know that
25 we are going to keep them in.

1 JUDGE MARGULIES: And you will do that within 30
2 days?

3 MS. FOWLER: Yes, sir.

4 JUDGE MARGULIES: And how about GANE, do they
5 find that procedure acceptable?

6 MR. TEPER: Yes, we do.

7 JUDGE MARGULIES: The staff?

8 MR. PERLIS: Well, Mr. Chairman, the staff in
9 its response originally responded to the contention as a
10 whole and not to 11 subcontentions. If there is going to be
11 a 30-day period, we would like the opportunity to respond
12 to the 11 subcontentions as set out by the applicant, if
13 that is going to be how the contention will be handled.

14 JUDGE MARGULIES: Is there any objection to that
15 procedure, Mr. Trowbridge?

16 MR. TROWBRIDGE: Would you mind stating again
17 what it is?

18 MR. PERLIS: Originally the staff opposed this
19 contention on the grounds that it was just too broad and
20 vague and suggested that it be divided into specific
21 subparts, and that if it did, certain portions of it might
22 be admissible.

23 We would like the opportunity to go through the
24 11 subcontentions that you have identified in writing and
25 just express our position on this and we can do that in a

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1 very short period of time.

2 MR. TROWBRIDGE: I have no problem with that.

3 MR. PERLIS: We will get that to the petitions
4 well before the 30-day period runs.

5 (Board conferring.)

6 JUDGE MARGULIES: Will the intervenors approach
7 the contention on the basis of the 11 subcontentions
8 outlined in applicant's response?

9 MS. FOWLER: Yes, sir.

10 MR. TEPER: GANE also, Your Honor.

11 JUDGE MARGULIES: Thank you.

12 (Board conferring.)

13 JUDGE MARGULIES: We next come to CPG's proposed
14 Contention 11. There has been an amendment.

15 MR. TROWBRIDGE: Mr. Chairman, we have objected
16 to some subcontentions and we are still objecting to those
17 subcontentions.

18 JUDGE MARGULIES: Yes.

19 MR. FEIG: Mr. Chairman, do you have a time
20 proposed for breaking for lunch?

21 JUDGE MARGULIES: We were thinking about
22 recessing about 12:30.

23 MR. TEPER: Could GANE make the request that we
24 adjourn possibly within 10 minutes for scientific purposes.
25 We have a scientific phenomena that I think members of the

1 scientific would like to observe that is going to take
2 place.

3 JUDGE LINENBERGER: Do you think the cloud cover
4 might interfere with that scientific phenomenon?

5 (Laughter.)

6 JUDGE PARIS: As the environmental scientist on
7 the Board, I wish to caution all of you not to look
8 directly at the sun through anything. Either watch it on TV
9 or make yourself a sunscope, a box with a pin hole in it
10 with a light sheet of paper opposite the pin hole.

11 JUDGE MARGULIES: We can recess for lunch at
12 this point. We will take a slightly longer than usual lunch
13 so that the intervenors can have those document reproduced
14 so we will be able to take them up following lunch.

15 We will recess until 1:30.

16 MR. TEPER: Thank you.

17 (Whereupon, at 12:05 p.m., the special
18 prehearing conference recessed, to reconvene at 1:30 p.m.
19 the same day.)
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AFTERNOON SESSION

(1:30 p.m.)

1 JUDGE MARGULIES: Please come to order.

2
3 Mr. Teper, do you want to distribute those
4 documents?
5

6 MR. TEPER: GANE's letter is presently being
7 copied and it should be back in the room in 10 minutes.

8 JUDGE MARGULIES: Okay. It is the matter of the
9 letter ---

10 MR. TEPER: It was referring to quality
11 assurance.

12 MR. FEIG: To No. 2 and No. 7.

13 JUDGE MARGULIES: Right.

14 MR. FEIG: That is being typed up and should be
15 here any second.

16 JUDGE MARGULIES: Okay. We will next move on to
17 CPG proposed Contention 11. There has been an amendment. Do
18 you wish to be heard?

19 MS. FOWLER: Yes, sir. We amended the language
20 of the contention and narrowed it. We are just considering
21 the Vogtle steam generator system as constituting an undue
22 risk to public health. Our basis remains the same.

23 Is there anything you would like to add?

24 MR. DEUTSCH: Well, there is not too much in
25 Georgia Power's response to this. They mention that they

1 have certain ways of treating the water that are addressed
2 in their FSAR, and I agree with that.

3 But also in their FSAR they say some other
4 things that still lead us to have doubts about the steam
5 generator and specifically corrosion. For example, it says
6 in the FSAR 5.4.2-9 "Recent operating experience, however,
7 has revealed areas on secondary surfaces where localized
8 corrosion rates are significantly greater than low general
9 corrosion rates."

10 So in the area both intergranular stress
11 corrosion and tube wall thinning were experienced in
12 localized areas. Though they are saying that some of our
13 contentions based on intergranular stress corrosion or
14 thinning of tubes are not valid in general, they do admit
15 in their FSAR that in certain localized cases that there is
16 thinning and intergranular stress corrosion. So this we
17 still feel is an area of concern.

18 They specifically said that most of the
19 problems that we talked about in terms of steam tube
20 integrity were answered by their all volatile treatment of
21 the water as opposed to phosphate treatment which severely
22 exacerbates this problem.

23 However, they do say in the FSAR again that the
24 ATV, the all volatile treatment, should minimize the
25 possibility for reoccurrence of intergranular stress

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1 corrosion. So going on the basis of what they are saying
2 about this specific plant and their specific types of
3 treatment, I think there are still some areas of concern.

4 In our contention we do talk about what would
5 be some of the risks if a steam tube rupture accident did
6 occur, and it has been calculated, and we have the
7 documentation in here, that under the present conditions
8 that the steam tube rupture accident could possibly
9 simulate a loss of coolant accident and lead to attendant
10 problems.

11 So I think we still feel that this potentially
12 is a major problem and there are specific things at Plant
13 Vogtle that are not completely addressed in the FSAR.

14 JUDGE PARIS: Mr. Deutsch, were these problems
15 that you were citing, you were paraphrasing the FSAR for
16 plant Vogtle?

17 MR. DEUTSCH: Yes.

18 JUDGE PARIS: Are these corrosion problems
19 occurring in the steam generators there now?

20 MR. DEUTSCH: It is not in operation as far as I
21 know.

22 JUDGE PARIS: Well, as you were speaking it
23 sounded as though differential corrosion was occurring at
24 different places in the steam generator. You were not
25 talking about plant Vogtle.

1 MR. DEUTSCH: Well, I was quoting directly from
2 the FSAR.

3 JUDGE PARIS: what is it talking about?

4 MR. DEUTSCH: I can't tell exactly what they are
5 calking about, but presumably it is recent operating
6 experience of plants that would be very similar or exactly
7 similar to what they are planning on building at
8 other plants.

9 JUDGE PARIS: At ocher plants. I see. Thank you.

10 JUDGE MARGULIES: Mr. Teper, do you agree to the
11 amendment? Do you concur in the amendment of the
12 contention?

13 MR. TEPER: I believe there was an agreed
14 change to the contention at the last meeting. We cited
15 specifically the regulation that we believe the applicant
16 is in violation of, that being 10 CFR 50.34B, 50 Appendix A
17 and 50 Appendix B.

18 JUDGE MARGULIES: So you do concur in the
19 amendment and that is the way it presently reads,
20 applicant's failure to consider defects in the Vogtle steam
21 generator system constitutes an undue risk to public health
22 and safety in violation of 10 CFR 50.34B, 50 Appendix A and
23 50 Appendix B?

24 MR. TEPER: Yes, sir.

25 JUDGE MARGULIES: Do you wish to be heard, Mr.

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1 Trowbridge?

2 MR. TROWBRIDGE: Mr. Chairman, I would like the
3 privilege of coming back to this. We heard nothing about
4 this in our meeting with the intervenors, but I would like
5 an opportunity to examine it and perhaps discuss with the
6 engineers here the passages cited in the FSAR.

7 JUDGE MARGULIES: Mr. Perlis.

8 MR. PERLIS: The staff originally objected to
9 this contention primarily on the grounds that it wasn't
10 focused on the Vogtle facility.

11 For the first time now we have now heard
12 information that appear to focus it on the Vogtle facility.
13 Unlike Mr. Trowbridge, I don't have the engineering support
14 here today and I don't think I will be in a position to
15 respond to the new information we have heard at this point.

16 JUDGE MARGULIES: When do you believe you will
17 be able to respond?

18 MR. PERLIS: When I see the transcript or if I
19 could get something in writing from CPG I imagine within a
20 week.

21 JUDGE MARGULIES: Is there any objection to that
22 procedure?

23 MR. TROWBRIDGE: In that case may we also
24 respond.

25 JUDGE MARGULIES: Is there any objection to

1 giving applicant 10 days to respond?

2 MS. FOWLER: No, sir.

3 JUDGE MARGULIES: There being no objection, that
4 procedure will be followed in regard to proposed
5 Contention 11.

6 JUDGE LINENBERGER: Mr. Perlis, before we move
7 on, however, the earlier as well as the most recent version
8 of Contention 11, if I am not mistaken, alleges that the
9 staff's position was that it had not concluded whether a
10 proposed revision would have an overall net increase or
11 decrease in plant risk.

12 The most recent allegation with respect to the
13 staff's position occurs on page 29 of the ---

14 MR. PERLIS: Page 25.

15 JUDGE LINENBERGER: I am sorry. I was looking at
16 the first one, the 4/11/84 submittal, and page 25, yes, of
17 the recent one.

18 Now my question to you is, first, is that
19 quotation, "The revision would have no overall net increase
20 or decrease in plant risk," is that properly attributable
21 to the staff and, if it is, does that mean the staff has
22 not had time to reach a decision or does it mean that the
23 staff has given studied consideration to the matter and
24 declines to take a position? I cannot tell from
25 intervenor's characterization what is the staff position

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1 there.

2 MR. PERLIS: If I might have a moment.

3 (Pause.)

4 MR. PERLIS: We believe the last sentence is
5 correct, and the staff did not conclude whether the
6 revision would have an overall increase or decrease in
7 plant risk. We are not sure about the rest of it and, if
8 you like, we will respond to that as well in our next
9 filing.

10 I can't answer your question at this point.

11 MR. MILLER: But the staff has had enough time
12 to look at it and the staff has reached a conclusion on it.

13 JUDGE LINENBERGER: All right, fine. I guess
14 that is really all I want to know. You are not just saying
15 you haven't had enough time so you are not ready.

16 MS. MILLER: No, that is not the case.

17 JUDGE LINENBERGER: It has been looked at and a
18 position has been taken.

19 MS. MILLER: Yes.

20 JUDGE LINENBERGER: Thank you. That is all I
21 need to know for now.

22 (Board conferring.)

23 JUDGE MARGULIES: We next move on to proposed
24 Contention 12. There has been an amendment. Hydrochloric
25 acid has been eliminated and chlorine gas has been

1 substituted.

2 Do you wish to comment on that, Ms. Fowler?

3 MS. FOWLER: The basis remains the same.

4 MR. JOHNSON: Except for that change.

5 JUDGE MARGULIES: Mr. Teper, do you concur in
6 this change? Do you join in this change?

7 MR. TEPER: Yes. GANE would like to replace
8 every cite that says hydrochloric acid with chlorine gas.

9 We would like to point out at this time that
10 for many years the economy of Burke County was based on
11 farming and we think that any addition of salt releases
12 into the atmosphere which eventually deposits onto the
13 surrounding farm community will have a great impact on the
14 ability of the farmers in the area to make a living.

15 As it is, I believe they are having a great
16 deal of trouble. As soon as the construction stops at
17 Vogtle, that county is going to be in a lot of trouble. So
18 we think the salt issue needs to be an issue for further
19 research.

20 JUDGE LINENBERGER: well, the Board hears your
21 words, and to paraphrase what you said, "any addition," and
22 I will switch that to any additional amount of salt
23 deposition will have a serious effect on the farmers.

24 Now I really have to question whether you meant
25 that literally. Are you saying that one pound per acre per

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1 year of additional salt deposition is going to be
2 devastating to the farmers, or are you saying that a
3 hundred pounds per acre per year is going to be
4 devastating? When you say any additional amount, that
5 leaves it very vague and makes it difficult to be
6 considered as a basis for a contention.

7 MR. TEPER: I would have to turn that over to
8 the people who worked on that specific contention. We have
9 somebody here who does know quite a bit about that. I
10 believe he works with CPG.

11 MS. FOWLER: I think Mr. Deutsch can clear that
12 up.

13 MR. DEUTSCH: I don't know if I can clear it up
14 completely, but one thing that bothered us considerably was
15 that at the construction stage hearing there was a
16 calculation entered in of 305 pounds per acre per year
17 within a certain radius of the plant, and actually we agree
18 that that decreases as you go out farther and farther.

19 But then at the same time it was stated by
20 Georgia Power that because of additional engineering data
21 and new models for salt drift emissions that they revised
22 that estimate from 305 pounds down to about 20 to 30. I
23 mean I don't know exactly what they did and it wasn't
24 stated exactly how they did that, but that seems like a
25 very unusual situation where just with a new model you have

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1 a power of ten difference or so in the amount of
2 contaminant.

3 So it seemed like a very drastic revision, and
4 recently I have been informed by NRC that they are
5 considering at least the possibility that that calculation
6 might have to be redone.

7 MS. FOWLER: Which calculation?

8 MR. DEUTSCH: The 305 pound versus the 20 or 30
9 pounds per acre per year.

10 MS. MILLER: Well, the NRC staff was questioning
11 the 305 pound value.

12 MR. DEUTSCH: One other thing. At that time at
13 least it was admitted that salt drift emissions of that
14 order of magnitude or about 300 pounds per acre per year
15 could possibly be a very serious environmental problem.

16 MR. TROWBRIDGE: Mr. Chairman, let me deal first
17 with the salt and then the chlorine gas.

18 With respect to the salt it is correct that at
19 the construction permit stage that a little over 300 pounds
20 was the calculation. It was taken into account at the
21 construction permit stage as an environmental impact and
22 there are no circumstances other than a reduction in the
23 estimate which would justify reopening environmental issues
24 at the operating license stage.

25 We have cited in our response a number of cases

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1 for the proposition that unless there is new significant
2 information at the operating license stage, you don't
3 readdress environmental impacts addressed at the
4 construction permit stage.

5 As to the chlorine gas, our response of course
6 was based on the original version of hydrochloric acid, but
7 basically our response now to chlorine gas would be the
8 same, that the contention defies the fundamental laws of
9 chemistry.

10 As is indicated in our environmental report, we
11 will have about 10 parts per million of chlorine in the
12 cooling tower system and one part out of that ten will be
13 free or available chlorine and the other will be a chlorine
14 compound.

15 Chlorine is readily soluble in water and the
16 saturation point is something in the order of 3,750 parts
17 per million. There would be no chlorine gas generated and
18 released until that saturation point was reached, and we
19 are talking about that 1 in 375 of the saturation level.

20 MR. DEUTSCH: I would like to respond to that.

21 JUDGE MARGULIES: Okay, go ahead.

22 Are you finished, Mr. Trowbridge?

23 MR. TROWBRIDGE: Yes.

24 MR. DEUTSCH: With that type of argument there
25 would be no salt released either because salt is very

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1 soluable in water and has a much, much lower vapor pressure
2 than chlorine.

3 So simply stating that it wasn't at the
4 saturation point is not sufficient. It is known that salt
5 is released, and simply that type of argument in itself is
6 not sufficient to say that ---

7 MR. TROWBRIDGE: The contention here is chlorine
8 gas.

9 MR. DEUTSCH: I said based on our arguments
10 there would be no salt released either.

11 MR. TROWBRIDGE: I did not talk about a salt
12 gas. Salt would very well be in the drift and there will be
13 some.

14 MR. DEUTSCH: Well, there could be chlorine in
15 the drift, too.

16 MR. TROWBRIDGE: That may be, but that is not
17 your contention.

18 JUDGE MARGULIES: Mr. Perlis.

19 MR. TROWBRIDGE: Let's see if we can't define
20 the issue a little bit better here. Your contention talks
21 of the release of chlorine gas.

22 MR. MERLIN: He is saying your physical argument
23 is not correct, and he is just saying that on the basis of
24 a similar argument then salt shouldn't be a problem. He is
25 not saying that salt is the issue. He is saying that based

1 upon your argument that even salt wouldn't be a problem,
2 but clearly it is and so your argument is at fault. I think
3 that is the statement.

4 MR. DEUTSCH: There is a potential for elemental
5 chlorine to be released. If you live around the plants---

6 MR. TROWBRIDGE: The difference between this is
7 whether we are talking about ---

8 JUDGE MARGULIES: You are creating a problem for
9 the reporter. Just one at a time now.

10 Go ahead, Mr. Trowbridge.

11 MR. TROWBRIDGE: The difference between this is
12 the difference between elemental chlorine and chlorine gas.

13 MR. DEUTSCH: Well, I don't see that that is a
14 big issue myself. If there is chlorine there, there is
15 chlorine there. They are both the same element and we are
16 talking about whether it is dissolved in some water mist or
17 whether it is totally free of water or what is the
18 difference?

19 MR. TROWBRIDGE: I am sorry. It was hydrochloric
20 acid before and then it was chlorine gas and now are you
21 making a third change?

22 MR. DEUTSCH: No. I am not trying to change it
23 to a new chemical form. Chlorine is chlorine. Whether you
24 want to call it chlorine gas or elemental chlorine it is
25 still chlorine. I am not talking about some new element or

1 new compound. What is the distinction? I fail to see the
2 distinction.

3 MR. TROWBRIDGE: May I have a moment please.

4 (Pause.)

5 JUDGE MARGULIES: Go ahead, Mr. Trowbridge.

6 MR. TROWBRIDGE: Let me try again. We still
7 contend that CL₂, chlorine gas, will not be released. There
8 will be in the drift some small amount of chlorine
9 compound. I understand that HOCl is the likely ---

10 MR. DEUTSCH: Hyperchlorous acid.

11 MR. TROWBRIDGE: This phenomenon was addressed
12 at the construction permit stage again. It is covered in
13 the FES at the construction permit stage and with the staff
14 saying I believe that the effect would be insignificant.

15 JUDGE MARGULIES: Can the staff give us any
16 assistance?

17 MR. PERLIS: Very doubtfully. The only point the
18 staff would like to make on this contention is that Section
19 51.23E of our regulations sets forth the requirements for
20 covering material in an operating license environmental
21 report.

22 The relevant requirement in this case is that
23 it has to be information that was not considered at the
24 construction permit stage. Both the salt and the chlorine
25 gas appears to have been covered at the construction permit

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WASHINGTON, D.C. 20006

(202) 293-3950

1 stage.

2 In that case, unless there are some significant
3 new information, it need not, and indeed should not be
4 covered again.

5 It is our position that these items both were
6 covered earlier, that no significant new information has
7 been presented and that they should not be covered again.

8 JUDGE MARGULIES: The intervenor indicated that
9 the staff was going to make a recalculation. Is that so?

10 MR. PERLIS: The staff I believe is looking at
11 another calculation, but again Mr. Trowbridge was correct
12 that that calculation involved whether the 305 figure,
13 which was available at the construction permit stage is too
14 great or not.

15 Insofar as it is relevant to this contention,
16 any figure less than 305 could not possibly involve a
17 greater harm to the environment, and the staff
18 recalculation, as I understand it, is directed towards
19 whether the 305 figure is overly conservative.

20 JUDGE MARGULIES: Is there anything further on
21 this contention?

22 MR. TROWBRIDGE: Let me give the citations for
23 the Board. We have addressed the questions to the staff on
24 the calculation of the salt deposition in Amendment No. 3
25 to our environmental report at the operating license stage.

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(202) 293-3950

1 The section of the FES to which I referred
2 shortly ago about chlorine levels in the drift is Section
3 5.5 of the construction permit stage FES at page 5:15 and
4 which concludes that "The staff expects that the effects of
5 deposition of drift on the surrounding terrestrial
6 ecosystems will be negligible.

7 JUDGE MARGULIES: We next go to proposed
8 Contention 13. It appears to be identical with that
9 previous filed; is that correct?

10 MS. FOWLER: Yes, sir, and we agree that we are
11 going to wait on the emergency plans of the counties
12 involved and CPG will have 30 days in which to respond to
13 those emergency plans. GPC won't contest our filing that
14 contention and amending our contention as a late filed
15 contention.

16 JUDGE MARGULIES: And what is staff's position?

17 MR. PERLIS: The staff has no objection to that,
18 but I think we should clarify what document is going to be
19 the triggering point for filing contentions. As I
20 understand it, we are talking about off-site emergency
21 plans and frequently there are a number of different drafts
22 of off-site emergency plans that are produced.

23 MR. TROWBRIDGE: We have a target, which has
24 been discussed with the staff for revising our emergency
25 plans. The target date I believe is October 1. That is the

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(202) 293-3950

1 document I am talking about and the next time we put in a
2 considerable revision of the section on emergency planning.

3 JUDGE LINENBERGER: Excuse me, sir, but that
4 document would address on-site emergency, right?

5 MR. TROWBRIDGE: It may address on site and it
6 will also address off site.

7 JUDGE LINENBERGER: It will also address off
8 site. Thank you.

9 MR. PERLIS: I don't have any objection
10 necessarily to that idea. It did strike me upon looking at
11 the contention that much of it deals with information that
12 I would expect to be available in off-site emergency plans.
13 I don't know what detail it is going to be covered in in
14 the on-site plans.

15 As I recall, this contention was dealing with
16 one actual emergency response of Burke and Richmond
17 Counties.

18 JUDGE MARGULIES: That is what the letter says
19 of May 27th, that CPG would refile Contention 13 upon the
20 release of Richmond and Burke County emergency plans
21 expected sometime this fall. So you and Mr. Trowbridge are
22 talking about two different documents.

23 JUDGE PARIS: Ms. Fowler, does your contention
24 relate to off-site emergency plans only?

25 MS. FOWLER: Yes, sir, it is on site.

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1 JUDGE PARIS: All right. Thank you.

2 MR. TROWBRIDGE: Our October 1 document will
3 describe, as I understand, the county plans.

4 MS. FOWLER: When we talked last week, they
5 understood that we were talking about off site, and that
6 would be available to us on October 1 and that we would
7 have 30 days in which to respond.

8 There was some disagreement on the part of the
9 staff. I think at first there was a suggestion by the NRC
10 staff that we might want to wait until the NRC had had a
11 chance to comment on that. I don't know. Are you aware of
12 that?

13 MS. MILLER: That wasn't a suggestion. That was
14 a comment that was thrown out for discussion. It was a
15 neutral type of comment?

16 MS. FOWLER: How do you feel about that, Mr.
17 Perlis?

18 MR. PERLIS: I wasn't at the meeting last week
19 which puts me at a disadvantage. As long as the off-site
20 plans will be covered in the October 1 submittal, I think
21 that would be sufficient. I just don't want to get to
22 October 1st and find out that not enough information is
23 available then.

24 We certainly have no objection to deferring the
25 off-site emergency planning issues until something is

1 available on off-site planning. If it will be in the
2 October 1st document, then I think that is the best way to
3 proceed.

4 JUDGE MARGULIES: We will look for the
5 information to be in the October 1st document.

6 MR. TROWBRIDGE: That is a target date.

7 JUDGE MARGULIES: Yes.

8 MR. TROWBRIDGE: Of course, if that date should
9 slip at all, then the 30 days.

10 JUDGE MARGULIES: Certainly.

11 MR. TEPER: GANE also eagerly awaits this
12 document.

13 JUDGE MARGULIES: we next come to proposed
14 Contention 14 in which GANE and CPG both concur.

15 MS. FOWLER: Yes, sir. What we did here is I
16 think we originally included TDI in our discussion of
17 quality assurance. So we took that out and made a separate
18 contention of it. I understand that Georgia Power is not
19 going to contest it.

20 MR. TROWBRIDGE: That is correct. We have no
21 objection to the contention.

22 JUDGE MARGULIES: Mr. Perlis, do you wish to be
23 heard?

24 MR. PERLIS: Yes. The staff has no objection to
25 that contention.

1 JUDGE MARGULIES: Mr. Teper, do you have those
2 documents to distribute now?

3 MR. TEPER: She is still typing somewhere. We
4 had to find a typewriter.

5 (Board conferring.)

6 JUDGE MARGULIES: Did you also have another
7 document which amended a contention?

8 MR. TEPER: Yes. We had a letter to an amendment
9 to Contention 8 on quality assurance.

10 JUDGE MARGULIES: Well, that is something also
11 that we should have distributed before this session is
12 over.

13 MR. TEPER: Right. That is being copied and also
14 two other contention amendments. We now have GANE 1 through
15 4 I believe to address.

16 (Pause.)

17 JUDGE MARGULIES: We will next proceed with
18 GANE's proposed Contention No. 1.

19 Mr. Teper, having reviewed applicant's and
20 intervenor's response, do you wish to change or add
21 anything to your proposed contention?

22 (Pause.)

23 MR. TEPER: No, we do not. There are no changes.

24 (Board conferring.)

25 JUDGE LINENBERGER: The Board would like to

1 inquire of GANE a clarification with respect to the intent
2 of GANE 1 or the scope of GANE 1. The Board sees the
3 possibility of two separable topics being addressed in GANE
4 1, one topic dealing with whether there has been a proper
5 quantification of radioactive releases and the other topic
6 being whether there has been a proper interpretation of the
7 impact of those releases. Those are indeed separable
8 topics.

9 The Board specifically asks GANE at this point
10 what is the scope of their contention with respect to
11 whether to include one or both of those topics and, if it
12 is only one, which one?

13 MR. TEPER: GANE maintains that we question the
14 accuracy of the expected releases of radionuclides into the
15 environment that the applicant has determined in their
16 FSAR. We also question the potential effects of these radio
17 nuclides that will be released into the environment. If the
18 Board so pleases, GANE would be willing to make it more
19 than one contention.

20 We thought for the hearing process we at the
21 time thought it would be best to put these two together.

22 MR. FEIG: we are looking at all the statistics
23 and trying to assess these for ourselves. We don't have the
24 staff and the engineering and the scientific
25 qualifications, I guess you could say, to really assess

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1 this kind of data and we have made every effort that we
2 could through volunteers and doing what we could to assess
3 the numbers that are available.

4 From our readings and from our own assessments
5 it just seems that there are levels that are in question.
6 we feel that the questionable levels quantitatively have
7 perhaps serious impacts and I think that one definitely has
8 something to do with the other. I think they do work
9 together in this particular contention.

10 JUDGE LINENBERGER: GANE has said two things.
11 One that proposed Contention 1 challenges the quantitative
12 determine of the amount of releases as well as challenging
13 the impact of those releases.

14 GANE has further said that it is willing to
15 split the contention into two parts, and the Board sees no
16 reason for making two contentions out of it.

17 Finally, whereas the Board appreciates having
18 the matter clarified as to the scope of the contention, I
19 must say that this Board member has a real problem finding
20 how the discussion of the basis for this contention really
21 shores it up enough to make anything admissible out of it.

22 I don't see any place where your worries about
23 either one of these topics has any meat on the bones that
24 would make your worries applicable to the Vogtle plant.

25 The Board would really like to hear why you

1 think what you have written justifies our favorably ruling
2 on the admissibility of this contention. We are having
3 a problem seeing that.

4 I mean really tell us why in terms of specifics
5 that relate to Vogtle and don't give us vague statements of
6 John Goffman, vague statements about cesium levels at other
7 places and statements about things that are not explicitly,
8 to your knowledge, applicable to Vogtle.

9 MR. FEIG: It is apparent that Vogtle is not
10 operating and we have to assess these numbers as relating
11 what other information is available and most of that
12 information to us relates to other facilities.

13 Let us take just a second here and we are going
14 to look at some of these things in particular and see if we
15 can get some more specifics for you.

16 (Pause.)

17 MR. TEPER: GANE contends that because of the
18 plant specific geographic location approximate to other
19 nuclear facilities that the potential damage from a
20 radionuclide release from Vogtle is cumulative, being that
21 the fact that a certain facility across the river releases
22 amounts of tritium ---

23 JUDGE LINENBERGER: Excuse me, sir, but that is
24 explicitly covered or discussed in your Contention 2. Let's
25 stick with Contention 1 here for right now. We don't want

1 to press you too far. I just didn't see how you have come
2 to grips with Vogtle related matters, but I am perhaps
3 pressing farther than is justified at this time.

4 I will leave this up to the Chairman, but maybe
5 he wants to go now to the applicant's position on this.

6 JUDGE MARGULIES: I will give the representative
7 of GANE a chance to complete his statement.

8 MR. TEPER: Okay. To finalize what we stated in
9 our basis for the contention, we stated that the cumulative
10 effects of both terrestrial and other living creatures in
11 the Vogtle area are affected by the postulated releases
12 from Plant Vogtle and we don't believe the applicants
13 stated specifically enough what the impact from the Vogtle
14 releases will do to that which is living near the plant.

15 JUDGE MARGULIES: Mr Trowbridge.

16 MR. TROWBRIDGE: Mr. Chairman, this is one of
17 the more frustrating contentions. Between the FSAR and our
18 environmental report we have provided in great detail our
19 estimates of releases, our estimates of the doses,
20 including various food and other pathways. We have tables
21 comparing those doses with Part 20 and with Appendix I, and
22 we were not told one word of what is wrong with those
23 calculations or those doses.

24 Now taking the other side of the health
25 effects, it is not customary nor required by the NRC

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1 regulations for applicants to convert doses into health
2 effects. That is normally done by the staff as required by
3 the regulations in their FES.

4 But in this particular case we are talking
5 about an FES at the operating license stage. The staff did
6 consider health effects at the construction permit stage.
7 No one has suggested that there is a significant change
8 since the construction permit, and I see no reason why the
9 staff need reconsider health effects at this point.

10 Certainly, however, the complaint is that we
11 haven't done so and I suggest that the regulations do not
12 require it.

13 JUDGE MARGULIES: Mr. Perlis.

14 MR. PERLIS: The only thing I would add to that
15 is in terms of the assessment of the impacts. It is not
16 clear to me whether the intervenors are challenging the
17 Commission's regulations ---

18 JUDGE MARGULIES: would you use the microphone.
19 Mr. Teper is having some difficulty.

20 MR. PERLIS: It is not clear to me whether the
21 intervenors are challenging the Commission's regulations
22 which do set out limits in both Part 20 and Appendix I to
23 Part 50.

24 I think if they are not challenging the
25 quantification and the quantifications call within the

1 Commission's regulations, then by definition they are
2 challenging the regulations and that is not permitted in an
3 operating license hearing.

4 MR. TEPER: Is it GANE's understanding that the
5 petitioner, Georgia Power, does not have to worry about the
6 health effects of the radioactive releases from the plant?

7 MR. TROWBRIDGE: If you are trying to quote that
8 Georgia Power is unconcerned with doses or radioactive
9 releases, that is an incorrect statement.

10 I am saying that the regulations are quite
11 specific for a very good reason. We are supposed to
12 calculate releases and doses for a specific plant at a
13 specific location and we do that.

14 Now the health effects are generic for all
15 plants and such and such a dose has such and such potential
16 health effect and it doesn't make any difference whether it
17 is this plant or another. So that is left by the
18 regulations for the staff to fill in and they do it on a
19 consistent basis for all plants.

20 JUDGE LINENBERGER: By the way, Mr. Perlis, this
21 is a topic that in one form or another we presume will be
22 addressed in the FES.

23 MR. PERLIS: Absolutely, yes.

24 JUDGE LINENBERGER: Analogous to your projection
25 this morning of a publication date for the SER, can you

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1 anticipate a publication date for the FES?

2 MR. PERLIS: The draft environmental statement
3 should be issued, September 26, 1984 is the current date.
4 Then of course, the NRC will receive comments, address
5 those comments and the final environmental statement is
6 scheduled for March 26th, 1985.

7 JUDGE PARIS: Mr. Perlis, do you know if that
8 document will consider the cumulative effects of Vogtle
9 releases and Savannah River project releases?

10 MR. PERLIS: I can't answer that at this point.
11 I just don't know.

12 JUDGE PARIS: Do you know if the cumulative
13 effect from the project Vogtle plant and SRP was considered
14 at the construction permit stage?

15 MR. PERLIS: I believe it was.

16 JUDGE LINENBERGER: Can somebody verify for the
17 Board, not opinion, but indeed verification, that at the
18 time of the Vogtle CP hearing was the "L" reactor in
19 operation?

20 MR. TROWBRIDGE: No.

21 MR. JOHNSON: No, it was not. That is not one of
22 our contentions, but the "L" reactor has been shut down
23 since the late 60's.

24 JUDGE LINENBERGER: Okay. Thank you.

25 MR. TEPER: I think maybe to clarify this issue

1 a little bit, if we move to GANE Contention No. 2 maybe we
2 might be able to deal with this.

3 A lot of the concern expressed by GANE relating
4 to radioactive releases and effects on pregnant women and
5 on the dairy industry in the area, I think it can be
6 addressed also in GANE No. 2. So we will see.

7 JUDGE MARGULIES: Are you ready to address GANE
8 No. 2.

9 MR. TEPER: Yes, we are.

10 JUDGE MARGULIES: Do you have the documents? I
11 am beginning to sound like a broken record.

12 MR. TEPER: I am sorry about that.

13 (Pause while the documents are distributed.)

14 MR. FEIG: I would like to add to GANE's basis
15 for its contention in Contention 2. First of all, a letter
16 to Dixie Lee Ray dated April 16th, 1974, she was the
17 Chairman of the Atomic Energy Commission, from W. R.
18 Stratton, Chairman of the Advisory Committee on Reactor
19 Safeguards, pages 2 and 3, and this quotes:

20 "Proximity of the Atomic Energy Commission's
21 Savannah River plant and the Barwell Nuclear Fuel Plant
22 makes it important to have effective emergency arrangements
23 to deal with unusual circumstances that may be of
24 interrelated safety significance to the three plants.

25 "The applicant has indicated that he will

1 establish an emergency plan in cooperation with other
2 nuclear installations to ensure emergency response demanded
3 by events in the immediate area.

4 Consideration should be given by the Atomic
5 Energy Commission to periodic evaluation of the combined
6 routine liquid and airborne radionuclide releases from
7 these two plants and the Vogtle Plant as they may affect
8 the health and safety of the public."

9 The main reason that we bring that up at this
10 time is because we feel that this is a very important
11 issue, the fact that the Savannah River plant exists in
12 close proximity to Plant Vogtle and that there are some
13 very serious questions about the releases, the regular
14 unannounced releases of radioactive materials into the air
15 and into the water and the environment around the Savannah
16 River plant.

17 We have someone else with us today, Dr. William
18 Lawless. He can come up and also speak to some of these
19 issues.

20 JUDGE MARGULIES: We do have the letter from Mr.
21 Lawless to Mr. Feig of May 29th, 1984, and would it add
22 anything to what is contained in that letter?

23 MR. FEIG: Right, and I wonder if you have any
24 questions. If you would like to ask him some questions
25 about the cumulative effect, he could up and speak to

1 those.

2 JUDGE MARGULIES: Well, give us an opportunity
3 to read the documentation.

4 JUDGE LINENBERGER: But before we get into that
5 subject, let's get back to the topic you were just
6 discussing, namely, correspondence with ACRS and AEC in
7 which ACRS points out the importance of AEC making certain
8 evaluations and comparisons. Let us now go from that letter
9 to the statement of your contention in which you challenge
10 that the applicant has failed to make certain evaluations
11 and comparisons.

12 Now do you cite the ACRS to AEC letter as a
13 basis for placing certain responsibility on the applicant,
14 whereas that letter really talks about that responsibility
15 being placed on AEC, or what is the nexus from that letter
16 and your Contention 2 where they are addressed to two
17 different parties in terms of responsibilities?

18 MR. FEIG: We are fairly convinced that the
19 applicant has not had, or they do not have information
20 available to them. At the time of the FSAR they did not
21 have it available to make an assessment of the total
22 cumulative impacts of both facilities.

23 New information has become available, some of
24 which is included in the new "L" reactor environmental
25 impact statement which has just come out I think in the

1 last week, as well as information that was withheld in
2 secret documents at the Savannah River plant and perhaps
3 even dated as far back as 1977 or '76 that have just been
4 made available to the public recently.

5 So a lot of this information we feel is very
6 pertinent and has not been assessed by Georgia Power and it
7 could not have been assessed. It is our opinion that it is
8 something that must be litigated or at least a special
9 hearing must be heard to determine what kind of impacts if
10 any releases from Plant Vogtle occur.

11 As we use for an example, if there were an
12 accident at both facilities, who is to determine whose is
13 putting what into the air at the same time, and that
14 situation must be assessed.

15 JUDGE PARIS: Is this new information on
16 releases that has become available since the construction
17 permit state for Vogtle?

18 MR. FEIG: Yes.

19 JUDGE PARIS: Does it indicate that the releases
20 from SRP are greater than those estimated at the time of
21 the construction permit for Vogtle?

22 MR. FEIG: Yes.

23 (Board conferring.)

24 MR. FEIG: Mr. Chairman?

25 JUDGE MARGULIES: Yes.

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1 MR. FEIG: I believe Mr. Lawless can respond to
2 some of your questions pertaining to earlier studies of the
3 SRP.

4 JUDGE MARGULIES: Let's take a short period of
5 time to read the distribution and then we will get into it.

6 Let's take a ten-minute recess.

7 (Recess.)

8 JUDGE MARGULIES: Back on the record.

9 Do you wish to respond, Mr. Trowbridge, and we
10 would appreciate you giving your comments on whether there
11 is new information and, if you can, what that new
12 information shows or how it pertains to your response.

13 MR. TROWBRIDGE: All right. This is Contention 2
14 we are on now. I will indicate the extent of new
15 information, but I do want to respond in part to Dr.
16 Linenberger.

17 I think, Dr. Linenberger, that you are quite
18 correct that the regulations do not place on applicants the
19 responsibility for the cumulative effects. The fact is we
20 addressed them. At the construction permit stage we
21 addressed the cumulative effects taking into account
22 Savannah River and other nearby facilities based on annual
23 reports, based on the Barnwell environmental statement and
24 based on any other information we could get about the
25 releases from Savannah River.

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1 The cumulative effects were also covered by the
2 staff in its FES and the word was insignificant or
3 negligible, but in any event it was a very small cumulative
4 impact. And going back to my thesis, except for new
5 circumstances, it would not be necessary to repeat that
6 cumulative effect at the OL stage.

7 There is a new circumstance perhaps in that the
8 "L" reactor was proposed to reopen and it was closed at the
9 time of our construction permit, although some of the data
10 that we used went back to periods when the "L" reactor was
11 in operation, some of the materials we used in estimating
12 the impacts from Savannah River.

13 With respect to the reopening of the "L"
14 reactor and treating that for the moment as a significant
15 new circumstance, it was our suggestion, our thesis and our
16 response that this is a proposal that comes after the
17 Vogtle proposal and is one in which DOE rather than NRC
18 should take up the question of cumulative effects.

19 I don't think that is the only possible answer
20 to this question. I think, although Mr. Perlis indicated he
21 didn't know what the staff was going to do, that it would
22 be quite possible for the staff to discuss cumulative
23 effects again, including the "L" reactor, in its OL, but it
24 ought to do so simply by referencing the DOE FES.

25 Consistent with CEQ regulations in case law,

1 DOE is the obvious lead agency. They obviously have
2 information that we don't have, particularly some of the
3 classified, and I think under established case law it is
4 quite proper for the NRC to rely on any new impacts which
5 DOE attributes to the "L" reactor, and that we ought not to
6 be litigating Savannah River releases in this proceeding.

7 I should add, as GANE has already pointed out,
8 that we now do have a final environmental statement from DOE
9 on the "L" reactor and it does indeed cover cumulative
10 effects. Section 5.2 of that FES had cumulative impacts and
11 covers Savannah River and Vogtle and other potential
12 facilities in the area. They do have cumulative impacts and
13 they are not large.

14 I thought I heard, I think it was Mr. Teper,
15 say that they have come out with higher cumulative impacts
16 than were estimated in the staff FES at the time of our
17 construction permit. I think on balance that is not
18 correct. I think there is a higher tritium estimate and
19 other estimates are lower.

20 MR. TEPER: Mr. Chairman, I have just heard a
21 number of responses to our contention. Part of that
22 response was something to do with maybe DOE ought to be
23 looking into cumulative effects.

24 Well, I don't know if the surrounding community
25 wants to play ping pong with this issue, but the fact is

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1 that there are going to be five reactors over at this
2 Savannah River plant without containment buildings. These
3 are not your commercial reactors and this is a whole
4 different ball game.

5 I don't know if NRC wants to leave it for DOE
6 to worry about and DOE leave it for the NRC, and the people
7 who end up worry about it are the folks who live around the
8 plant or down river, the people who eat the fish and the
9 people who drink the milk.

10 The Department of Energy didn't even want to do
11 an environmental impact statement at the beginning. Every
12 politician it seems like in Georgia and South Carolina had
13 to scream bloody murder just to get them to do an
14 environmental impact statement. It was a court order.

15 Since 1974 whenever the initial construction
16 application was put in there has been all kinds of
17 information that has come out about accidental releases
18 that, to applicant's credit, there is no way they could
19 have had that information at that time.

20 I just think to put the public at ease and to
21 let the NRC or everybody know what is happening with
22 cumulative effects there has to be further inquiry into
23 this and there seems no question to the credibility of
24 this.

25 MR. FEIG: There is one other point I would like

1 to make.

2 JUDGE LINENBERGER: Let me just stick to that
3 point for a moment because I think I hear you saying
4 something very interesting, but, if I understand you
5 correctly, very much outside of this Board's scope of
6 responsibility.

7 I think what you are saying is things maybe all
8 right because there has been an assessment by DOE, albeit
9 court required, but so be it, there is it. There has been
10 assessment but the public doesn't understand this and,
11 therefore, we had better litigate this question so the
12 public does understand it.

13 Well, if there has been an assessment by DOE
14 that gives satisfactory results, there is nothing to
15 litigate and the Board has no responsibility to just make
16 blanket public relations statements to the public about the
17 status of things.

18 So it is not clear to me what point you are
19 really making there.

20 MR. TEPER: I am afraid you missed the point on
21 that one.

22 JUDGE LINENBERGER: Probably so.

23 MR. TEPER: The Department of Energy final
24 environmental impact statement only addressed the
25 Department of Energy facility. It did not take into

1 consideration Vogtly.

2 MR. TROWBRIDGE: That is not correct.

3 MR. TEPER: If the Vogtle nuclear plant is
4 licensed, you are going to be adding potential releases to
5 the releases already from the Savannah River plant.

6 JUDGE MARGULIES: I don't think Mr. Teper is
7 asking us to make an independent evaluation of the DOE
8 facility separate and apart from this proceeding.

9 MR. PERLIS: Mr. Chairman, may I be heard on
10 this matter?

11 JUDGE MARGULIES: Certainly.

12 MR. PERLIS: It seems to me that there is only
13 one possible contention that can come out of this area and
14 I don't think we have it here. The only new information
15 that I am aware of is the "L" reactor.

16 If the cumulative effects contention is to be a
17 valid one, it must allege that when you take the Savannah
18 River and the "L" reactor and whatever other reactors that
19 there are in this area other than Vogtle you have "X"
20 impact. With Vogtle you will have some greater impact, and
21 it is that incremental impact from the Vogtle facility
22 which will cause some harm.

23 Fortunately or unfortunately, there are many
24 figures available dealing with the releases from Vogtle,
25 from Savannah River and from the "L" reactor.

1 If in fact GANE believes there will be some
2 incremental harm from Vogtle that is not present from the
3 other reactors, this Board and this agency doesn't have
4 licensing authority over the other reactors, and we have to
5 accept them as a given for this hearing. The only thing this
6 hearing can concern itself with is the operation of Vogtle.

7 The figures are out there. If it is believed
8 that the cumulative figures will produce some harm, I think
9 it was incumbent upon GANE to show the figures and explain
10 what harm would flow from them and that just hasn't been
11 done here.

12 MR. FEIG: At this time I would like to call Mr
13 Lawless up here because he does have information that does
14 state that there are serious impacts and that any addition
15 perhaps, and I will let him speak to this, could have a
16 serious impact on the environment.

17 JUDGE MARGULIES: Is there any objection?

18 MR. TROWBRIDGE: If Mr. Lawless can provide
19 further basis for this other than argue health effects on
20 the merits, I am afraid we may stray from the purpose of
21 this hearing.

22 May I again correct Mr. Teper. The Savannah
23 River "L" reactor FES does indeed consider the cumulative
24 impacts, including the Vogtle facility.

25 MR. TEPER: May we bring Mr. Lawless up at this

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1 time?

2 JUDGE MARGULIES: Yes, you may. We are not
3 interested in getting into the merits, but we would be
4 interested to hear as to whether there are additional
5 impacts that were not figured in.

6 MR. TEPER: Mr. Lawless, could you introduce
7 yourself and state the positions you have held.

8 MR. LAWLESS: My name is Phil Lawless and I am a
9 professional engineer. I used to work at the Savannah River
10 plant and I worked there for about six years and left in
11 the middle of last year in August of 1983.

12 The issue, as I understand it, cumulative
13 effects, is whether or not, according to the staff of the
14 NRC, whether or not additional releases will add to an
15 additional accumulation such that standards will be
16 exceeded.

17 The published releases from the Savannah River
18 plant indicate that doses at the plant boundary of the
19 Savannah River plant will be five to six percent of
20 background, which in itself sounds very good.

21 But it is hard to understand all of the
22 information that is in the EIS. For instance, whereas
23 calculated releases are only five to six percent of
24 background, that is to say calculated doses from the
25 releases, at the plant center, the Savannah River plant

1 burial ground water monitored in the burial ground has a
2 background average of 150 pica curies per milliliter, which
3 is seven times the drinking water standard.

4 Now this is mostly from stack releases or
5 airborne emissions that have settled onto the burial ground
6 and have been picked up and monitoring wells, as opposed to
7 actual tritium releases from waste in the burial ground.
8 Actual tritium releases, for instance, in the burial ground
9 itself go up to about 200,000 times the drinking water
10 standard. So the background is different. Nonecheless, the
11 background does exceed the drinking water standard.

12 Moving out from plant center to Parr Pond,
13 which is a very large lake about two-thirds the distance
14 from plant center, the average tritium concentration in the
15 water is 27,000 pica curies per liter which is again in
16 excess of the drinking water standard.

17 So even though releases at the plant boundary
18 are five to six percent of background, it must be compared
19 with measured amounts of radioactivity on the plant.

20 For instance, the releases are only calculated
21 and they are releases that are considered to be equated
22 into doses for the maximum hypothetical man or the maximum
23 hypothetical individual uptake, whereas the plant center
24 measurement and Parr Pond measurement are actual
25 measurements and these are far in excess of the drinking

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1 water standard.

2 So it appears that for the tritium releases
3 alone at the plant boundary instead of providing a dose
4 update of five to six percent of background, you may be
5 providing a dose that is in excess of what should be
6 allowed.

7 In addition to that, the Savannah River, and
8 this is a quote that I will provide that is coming out of
9 the "L" EIS from CTS, the Savannah River plant off-plant
10 effluent releases from cesium discharges into the
11 downstream swampland range, and this is the quote, "range
12 from 42 to 670 millirem per year for constant exposures,"
13 and the off-plant exposures are supposed to be held to 25
14 millirem per year or less.

15 Then from a different source, there were found
16 on the plant boundary, the northwest boundary in 1982 five
17 turtles with a maximum uptake in one of the turtles at
18 20,000 pica curies of strontium 90.

19 So the Savannah River plant statement that the
20 calculated releases result in a maximum calculated dosage
21 of only five to six percent of background or that which
22 would result from background can be misleading.

23 The tritium excesses that are on plant right
24 now, turtles that have been found on the plant boundary and
25 cesium that is already off the plant and going downstream

1 from the Savannah River plant all seem to indicate that
2 additional releases from any nuclear facility in the area
3 will be detrimental to the health of individuals living in
4 the area.

5 JUDGE MARGULIES: What was the source of that
6 measurement?

7 MR. LAWLESS: Which one?

8 JUDGE MARGULIES: The second measurement that
9 you gave us.

10 MR. LAWLESS: Cesium or the tritium, the 150
11 pica curies per milliliter?

12 JUDGE MARGULIES: You named them.

13 MR. LAWLESS: Let me run through them.

14 JUDGE MARGULIES: Okay.

15 MR. LAWLESS: 150 pica curies per milliliter,
16 that is an internal plant report and I can give you the
17 citation on that, and that has not been put into the public
18 domain except recently and it is now publicly available in
19 Aiken, South Carolina. The Parr Pond levels of 27,000 pica
20 curies per liter is in the "L" EIS. The information about
21 the turtles, as I understand it, will be in an upcoming
22 DPSPU report. It has not been published, but it has been
23 attested by the plant. It has been testified in court and
24 the plant has attested to it. The calculated releases that
25 are equal to that five or six percent background, that is

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1 in the "L" reactor EIS also.

2 It seemed to me from reading the "L" EIS that
3 most of the concerns that addressed plant Vogtle had to do
4 with water drawdown and they dealt with the Tuscaloosa
5 water usage more than anything else.

6 One of the things that is pointed out in the
7 "L" EIS, but not very well, but with the supporting
8 document it is pointed out very well, is that the
9 Tuscaloosa Aquifer has been contaminated with chlorinated
10 hydrocarbons. One of the concerns is that the
11 contaminations from underneath the seepage basin will be
12 moving in a southwesterly direction and then more westerly
13 and outcropping before the City of Augusta.

14 There is concern that additional wells cannot
15 take some of these contaminations, and I don't know how far
16 they will extend.

17 Unless you have any questions, those are the
18 only comments I have.

19 (Board conferring.)

20 JUDGE MARGULIES: Thank you, Mr. Lawless.

21 MR. LAWLESS: Thank you.

22 MR. TROWBRIDGE: Mr. Chairman, two quick
23 observations. DOE does issue annual reports and does
24 measure releases at the stack and there are calculated
25 doses, but there are also measured releases.

1 I would like also to point out that, as
2 indicated in our environmental report, Georgia Power
3 Company as well as Savannah River, but Georgia Power
4 Company has been doing background measurements for some
5 time, and if there were large impacts from Savannah River
6 into the river they would have been detected. Their
7 background levels are reported in our environmental report.

8 MR. LAWLESS: Yes, it is true that many of the
9 releases from the Savannah River plant are published, but
10 it is difficult to get a good handle on it because most of
11 the releases are published in what is known as a DPSPU
12 series and there are two. One is titled "Environmental
13 Monitoring Results in the Savannah River Plant Vicinity,"
14 and the other one is titled with the same title at the
15 Savannah River plant.

16 For the most part these are the releases that
17 the public has been privy to and the releases at the
18 Savannah river plant are interesting because many of them
19 are substantially lower than are reported when compared
20 against internal plant reports.

21 JUDGE MARGULIES: Do you have anything, Mr.
22 Perlis?

23 MR. PERLIS: Nothing further.

24 MR. FEIG: I would like to add to that that the
25 State Environmental Protection Division of the Department

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1 of Natural Resources also does regular annual monitoring
2 and they some serious concerns and have made statements to
3 that effect in the environmental impact statement.

4 Also with concern to Trowbridge's statement
5 that they would consider looking at the environmental
6 impact statement, you have to go a little bit further
7 perhaps in doing that because there may be some
8 modifications necessary in the monitoring process that
9 would have to be done immediately as opposed to just taking
10 a look at that environmental statement and saying that it
11 is okay.

12 We feel that perhaps something else has to be
13 done and we haven't had time to really study those
14 specifically. That EIS just came out last week.

15 (Board conferring.)

16 MR. FEIG: Mr. Chairman, we would like to
17 perhaps amend our contention to where we would like to have
18 the opportunity at least to really assess this
19 environmental impact statement since it hasn't been
20 available to anyone. We would like to see if you would allow
21 some extra time in the next perhaps 10 days to assess that
22 and have some expert look at that and really try to study
23 the impacts and perhaps add to this contention after
24 studying the results.

25 JUDGE MARGULIES: Is there any objection to

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1 that?

2 MR. TROWBRIDGE: There may be, Mr. Chairman.
3 GANE always has the privilege of filing a late or amended
4 contention and citing good cause for doing so.

5 I would want to be very sure in this case that
6 the information that they are talking about was not already
7 in last September's draft environmental statement before I
8 would ever agree to this.

9 MR. TEPER: That sounds fair.

10 MR. FEIG: That is okay.

11 MR. PERLIS: Mr. Chairman, the only other
12 precautionary note I would add is that again I think we
13 would all be well served if the focus was on the Vogtle
14 facility and not just on what the "L" reactor may be
15 admitting by itself. We shouldn't be that concerned with
16 the "L" reactor standing alone.

17 JUDGE MARGULIES: Would you relate the "L"
18 reactor to Vogtle?

19 MR. FEIG: Well, it is really the total Savannah
20 River plant that we have concern with. I mean there are
21 over 30 million gallons of high-level nuclear waste buried
22 underground there that have an incredible impact on the
23 environment that we don't feel the impacts of those have
24 been also included in this whole assessment.

25 JUDGE PARIS: We understand your concern with

1 the Savannah River project, but we must be concerned with
2 the increment that the Vogtle plant will add to the
3 Savannah River.

4 JUDGE MARGULIES: You would address that as a
5 totality.

6 MR. FEIG: Right.

7 MR. TEPER: Mr. Chairman, I believe the focus of
8 this whole contention is the incremental effect of Plant
9 Vogtle. The fact is how can you add the incremental to the
10 body when the body has not been assessed, and since this
11 report has just been out for a week, I don't believe it has
12 been overwhelmingly assessed as to the incremental effect
13 to Plant Vogtle.

14 JUDGE MARGULIES: And the focus of the
15 additional information will be on this report that came out
16 within the past several days or week?

17 MR. TEPER: And an analysis of it by people
18 familiar with the surrounding area being the Savannah River
19 plant and Vogtle.

20 MR. TROWBRIDGE: Mr. Chairman, I think that any
21 such supplement should be filed in the form of an amendment
22 to the contention with an opportunity on our part to
23 respond.

24 JUDGE MARGULIES: I think that is a fair
25 method of presentation. Rather than 10 days, we will give

1 you 15 days and give you a little additional time. You
2 don't want to cut yourselves short, and we will give
3 applicant and staff an opportunity to respond.

4 MR. FEIG: Okay.

5 MR. TEPER: Thank you.

6 JUDGE MARGULIES: The response will be within
7 the normal response time provided by the Rules of Practice.

8 (Board conferring.)

9 JUDGE MARGULIES: We next come to GANE's
10 proposed Contention No. 3.

11 MR. TEPER: GANE at this time would like to
12 introduce another GANE member. We weren't able to introduce
13 him this morning because we had to bring him in from
14 Atlanta. If the Board and the petitioner does not object,
15 we would like to introduce Semour Shaye who is a master's
16 level psychologist who will speak on psychological effects
17 of the plant.

18 (Board conferring.)

19 JUDGE MARGULIES: We have no objection for the
20 individual to be introduced, but the matter of importance
21 is the Commission's rule not to entertain such a contention
22 unless the situation entails a concurrent accident or it
23 presupposes that there is an accident, and if there had
24 been an accident such a contention would be permitted to be
25 entertained.

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1 So it would serve no useful purpose for the
2 individual that you wish to introduce to provide us with
3 any further information considering the Commission's rule,
4 but you may introduce the individual.

5 MR. TEPPER: GANE would like to cite that not
6 only is the potential of an accident I believe the concern
7 but as well the operation brings about the psychological
8 fear in question. I understand that this has been
9 litigated, and the way GANE operates, because we are not an
10 multi-billion utility, we basically farm out our
11 contentions. We have different people who volunteer to take
12 on a different contention and they can address the
13 questions. So at this time we will go ahead and introduce
14 Mr. Snay and he can speak to the contention.

15 JUDGE MARGOLIES: Well, it will serve no
16 purpose. He will have the opportunity. We will take limited
17 appearances in this proceeding in which the public can
18 voice their opinions on various aspects and are not
19 limited. They can speak in a very wide ranging area, and
20 even though there might be a prohibition on a particular
21 subject matter in terms of the evidentiary hearing at the
22 limited appearance session, you may present people who can
23 address those issues.

24 So it would be more appropriate for him to
25 appear at the limited appearance session, but you may

1 introduce him as other parties have introduced their people
2 in support of their positions. So if you would introduce
3 him and have him stand you may do that for the record.

4 MR. TEPER: And he is not going to be able to
5 speak to the contention at this time?

6 JUDGE MARGULIES: That is correct.

7 MR. TEPER: Do you intend on having a further
8 evidentiary hearing on this contention?

9 JUDGE MARGULIES: We will not rule on the
10 contention at this point, but we would be interested at
11 this point if you could have someone speak on the legal
12 prohibition from discussing such a contention in our
13 hearing.

14 JUDGE PARIS: You see, Mr. Teper, we are
15 prohibited from from admitting this contention, except
16 under those circumstances that Judge Margulies mentioned.
17 Therefore, any argument that you put forward at this time
18 relating to the contention should address why we or how we
19 might admit the contention in the face of this Commission
20 rule.

21 MR. TEPER: At this time GANE would like to
22 amend Contention No. 3 to include that the petitioner
23 contends that applicant violates NEPA.

24 MR. TROWBRIDGE: Mr. Chairman, that applicant
25 violates NEPA?

1 MR. TEPER: The National Environmental Policies
2 Act.

3 MR. TROWBRIDGE: which is not applicable to
4 applicant but to the agency.

5 MR. PERLIS: Mr. Chairman?

6 JUDGE MARGULIES: Mr. Perlis.

7 MR. PERLIS: I will try and clear this up. The
8 problem, as the Board has already alluded to, is that the
9 Commission, as you say, has a policy statement which
10 prohibits consideration of these contentions.

11 If GANE wishes to challenge that policy
12 statement, it may go to the Commission. In fact, it would
13 have to go to the Commission. Changing the wording of this
14 contention to allege a violation of NEPA which, as I read
15 it, that is already in their contention, won't solve the
16 problem.

17 The problem is the Commission has said these
18 contentions should not be heard, and if GANE nonetheless
19 wishes the contention to be heard, it must go to the
20 Commission and get their approval first.

21 JUDGE MARGULIES: That pretty well summarizes
22 it, Mr. Teper.

23 MR. TEPER: Could we have one minute, please.

24 (Pause.)

25 MR. TEPER: I would like to introduce Mr. Shaye

1 and he will address the legal point of addressing the -- is
2 that the problem? Legally I understand the Board is not
3 supposed to address the issue of psychological fear.

4 JUDGE PARIS: Mr. Perlis says you have to go to
5 the Commission if you want to litigate it.

6 JUDGE MARGULIES: All of this stems from a
7 Supreme Court decision.

8 MR. TEPER: I understand that, the Pane Case, is
9 that correct?

10 JUDGE MARGULIES: That is correct, and as it
11 stands it stands as a bar and it will serve no purpose to
12 address us. If you want to introduce him and let him make
13 his presentation at the time for limited appearances, he
14 would certainly be welcome.

15 MR. TEPER: Thank you. I don't think it will be
16 necessary right now.

17 JUDGE MARGULIES: We next move to proposed
18 Contention 4 which deals with electromagnetic radiation
19 from the power lines. Do you wish to be heard further, Mr.
20 Teper, based on what applicant and the staff have responded
21 to the proposed contention?

22 MR. TEPER: GANE stands on its contention.

23 JUDGE MARGULIES: Does applicant have anything
24 further?

25 MR. TROWBRIDGE: Yes, Mr. Chairman. The

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1 transmission line impacts were considered at the
2 construction permit stage, both by the applicant in its
3 environmental report and by the staff in its FES. As such,
4 in our view, there would have to be significant new
5 information or circumstances that would warrant further
6 consideration at this stage.

7 The only suggestion that we find for new
8 information are references by GANE to several studies or
9 pieces of testimony or statements. In reverse order, they
10 refer to the Helliwell postulation that electromagnetic
11 radiation will be injected into the earth's magnetic ducts
12 and speculate from there without any supporting basis or
13 citation to authority that interaction of radiation with
14 electrons will produce X-rays and ultraviolet light and
15 then skin cancers.

16 I can only say, as indicated in our response,
17 this is inconsistent with Helliwell's own communications
18 filed in the New York Public Service Commission proceeding.

19 The reference to Carl Morgan's congressional
20 testimony, the substance of that testimony had solely to do
21 with ionizing radiation and not electromagnetic radiation.

22 And GANE's statement with a carefully placed
23 quotation mark "There is evidence that non-ionizing
24 radiation may be multiplying so rapidly in the human
25 environment that they result in health hazards in some

1 areas before we are sufficiently aware of the magnitude of
2 the problem."

3 That is not a fair paraphrase of what Professor
4 Morgan had to say in his Congressional testimony. What he
5 had to say we quote in full on this point at page 30,
6 footnote 22 of our response where he states in passing that
7 there may be, out there is not evidence that they exist.

8 Lastly, there is Dr. Marina. I do not think in
9 view of the treatment of his testimony, both by the New
10 York Public Service Commission, which rejected the
11 testimony, the substance of it, or by the Susquehanna
12 Licensing Board, which also rejected the thesis of Dr.
13 Marina, I do not think that constitutes a significant new
14 circumstance to justify this contention.

15 MR. TEPER: GANE would like to inquire of the
16 applicant if studies were done for the powerlines to
17 Florida as well, the 500 KV powerlines? I don't believe
18 those were addressed and that is a new development.

19 (Pause.)

20 MR. TROWBRIDGE: I don't understand the
21 relationship of the Florida powerlines to Vogtle, but I
22 think a simple answer is that they also are 500 KV lines
23 and the electromagnetic effects would be the same whether
24 or not they are connecting with Vogtle.

25 MR. TEPER: The only thing I can add to GANE's

1 basis, and we will have to let it stand at that, is the
2 reports from farmers driving their tractors underneath high
3 intensity wires where they sometimes are physically knocked
4 off their tractors, and that is in that contention.

5 JUDGE MARGULIES: Could you tell us what the
6 reference is to Florida powerlines?

7 MR. TEPER: Can I have one minute, please.

8 (Pause.)

9 MR. TEPER: Mr. Chairman, it is my understanding
10 that during the construction permitting stage there were
11 only three lines emanating from Vogtle to different points
12 within Georgia. Since that time there is a new line, 500 KV
13 line that goes to Florida, and I don't believe that was
14 addressed in the construction permit stage.

15 JUDGE PARIS: From Plant Vogtle?

16 MR. TEPER: From Plant Vogtle. Am I correct?

17 MR. TROWBRIDGE: I am told that is incorrect.

18 MR. TEPER: So there are no powerlines from
19 Plant Vogtle to Florida?

20 MR. TROWBRIDGE: That is correct.

21 JUDGE MARGULIES: It would be appropriate to
22 take a 15-minute recess at this point.

23 (Recess.)

24 JUDGE MARGULIES: Back on the record.

25 We are returning to CPG's proposed Contention

1 7. It doesn't appear as if there are any changes to that
2 originally submitted.

3 Do you have anything further, Ms. Fowler?

4 MS. FOWLER: No, sir.

5 JUDGE MARGULIES: How about you, Mr. Teper?

6 MR. TEPER: No, sir.

7 JUDGE MARGULIES: Mr. Trowbridge.

8 MR. TEPER: Excuse me, Mr. Chaicman. The reason
9 I believe we initially delayed on GANE Contention No. 7 was
10 to present the testimony of Mr. Lawless concerning
11 groundwater. We would like to submit for the Board's
12 observation the letter that was sent from Mr. Lawless to
13 Mr. Feig as part of the oasis for the groundwater
14 contention, GANE Contention No. 7.

15 JUDGE MARGULIES: That is the letter of May
16 29th, 1984?

17 MR. TEPER: Yes, sir.

18 JUDGE MARGULIES: Mr. Trowbridge.

19 MR. TROWBRIDGE: Two things. I am not going to
20 repeat our arguments in the response, but I would urge the
21 Board to look at the materials we supplied on groundwater
22 and note the absence of any basis in the contention for
23 disputing what we had to say.

24 I am also a little puzzled by the relationship
25 of Mr. Lawless's letter to this contention. It doesn't have

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1 anything to do with contamination of groundwater from
2 Vogtle, which I thought was the subject of this contention.
3 It has to do with on-site contamination at Savannah River.

4 MR. FEIG: It was our concern that the on-site
5 contamination at Savannah River does have an impact on the
6 groundwater at Vogtle. So it is our contention that this
7 letter would relate to that.

8 MR. PERLIS: Mr. Chairman?

9 JUDGE MARGULIES: Yes, Mr. Perlis.

10 MR. PERLIS: If I may, this is the same problem
11 we appear to have had with GANE 2. It may be that the
12 burial of waste at Savannah River will have an effect on
13 the groundwater underneath Vogtle, but we are here only
14 interested in whether Vogtle will have an impact on the
15 groundwater underneath Vogtle.

16 Everything in Mr. Lawless's letter deals with
17 the burial of waste on a site which I don't believe is
18 going to be occurring at the Vogtle site. Certainly if it
19 is occurring there, it would be news to the NRC.

20 (Laughter.)

21 MR. FEIG: Well, in our assessment of the
22 environmental impact statement we would have to look at the
23 effects of the Savannah River plant on the Tuscaloosa
24 Aquifer and also any additional impacts that Plant Vogtle
25 would have, and I don't think it it would have ever been

1 possible to assess all of the impacts that Vogtle would
2 nave had given the fact that we have been without certain
3 information, as stated in the environmental impact
4 statement.

5 So as far as that is concerned, it seems to us
6 that this information is relative to Plant Vogtle as far as
7 how Vogtle will impact the total groundwater of the
8 Tuscaloosa Aquifer.

9 MR. TEPER: Mr. Chairman, I would like to make
10 an observation at this time. It seems to me that every time
11 the staff responds that they don't understand what this has
12 to do with Plant Vogtle because we are talking about the
13 Savannah River plant, it is my understanding that if the
14 incremental contribution from Vogtle puts the area over the
15 limit of risk to health and safety, that should be a
16 concern. Just because the plant does not violate in and of
17 itself doesn't include the surrounding environment.

18 I am astonished at what continues to be the
19 staff reponse, or the insensitivity to the concerns of the
20 environment. I mean, it is constantly this well, that
21 doesn't concern us, but I think it does. I mean if we want
22 to talk about this plant sitting somewhere by itself, we
23 can do that, but it is not.

24 MR. PERLIS: I wasn't suggesting that it was. I
25 agree with Mr. Teper that the NRC is interested in the

1 cumulative effects. Where I disagree with Mr. Teper is we
2 haven't found in this contention any indication of how
3 Vogtle will affect the groundwater beneath the site at all.
4 There is no indication of how any contamination will get
5 from Vogtle into the groundwater.

6 All we know now is that the Savannah River
7 plant has contaminated some groundwater or may contaminate
8 some groundwater within the vicinity of the Savannah River
9 plant. It is that focus that I maintain is not within the
10 purview of this agency.

11 If GANE can show what the cumulative effects
12 from Vogtle are on the groundwater underneath Vogtle, that
13 is of concern to this agency and I don't mean to maintain
14 that it is not.

15 JUDGE MARGULIES: Judge Paris has some
16 questions.

17 JUDGE PARIS: This relates to what Mr. Perlis
18 was just talking about.

19 Mr. Trowbridge, on page 43 of your response you
20 say that "water movement indicates that spillage at the
21 plant site would eventually find its way to Matthis Pond
22 where it could be intercepted," and you cite the CPER.

23 Then you say, "Moreover, the time of a
24 migration of a spill to Matthis Pond would be controlled by
25 the permeabilities of the soil and it is estimated to be on

1 the order of 350 years," and you again cite the CPER.

2 What spillage is talked about there, and this
3 sounds like it is moving through the groundwater. Is it
4 right? Is it moving through an aquifer and, if so, what
5 aquifer?

6 MR. TROWBRIDGE: As I understand it, there is an
7 upper aquifer that I think is not the source of drinking
8 water. At the site itself and north of the site I believe
9 is the direction of the runoff of the groundwater movement
10 or of the aquifer movement. There is a clay mari very thick
11 before you get to the next aquifer which does serve as a
12 source of drinking water.

13 Now I don't know if I have answered the
14 question. Maybe I lost the question.

15 JUDGE PARIS: Did spillage refer to routine
16 spillages or a hypothetical aquifer.

17 MR. TROWBRIDGE: No. If there were a spillage
18 this is what would happen.

19 JUDGE PARIS: How far away is Matthis Pond from
20 the site?

21 MR. TROWBRIDGE: I understand it is on the site.

22 JUDGE PARIS: Okay. Thank you. That helps.

23 JUDGE LINENBERGER: Mr. Trowbridge, what is a
24 mari, m-a-r-l?

25 MR. TROWBRIDGE: I think it is a neavy clay.

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1 JUDGE LINENBERGER: That is your understanding
2 of what it is, a heavy clay?

3 MR. TROWBRIDGE: Clay and limestone, but in the
4 crossword puzzles it is just clay.

5 (Laughter.)

6 MR. TEPER: Is that mari impermeable?

7 MR. TROWBRIDGE: Yes.

8 MR. TEPER: To radioactive isotopes?

9 MR. TROWBRIDGE: Yes. Who cares whether they are
10 radioactive.

11 MR. TEPER: I am eating the stuff. I care.

12 JUDGE LINENBERGER: Now continuing one further
13 point here, we were talking about let's say an accidental
14 spillage at the plant site presumably on the ground
15 somewhere where it was not planned that there would be a
16 spillage. This spillage finds its way to Matthis Pond which
17 is also on site, and end of the sentence says where at
18 Matthis Pond or Mallard Pond, where the spillage could be
19 intercepted.

20 Now I would like to understand what that means.
21 Does it mean that if the spillage found its way to Matthis
22 there is no natural way for it to percolate into an aquifer
23 that would concern anybody, or does it mean that when the
24 spillage finds its way to Matthis Pond at that point the
25 applicant will do something special to intercept it to

1 prevent it from doing anything further?

2 MR. TROWBRIDGE: Since we took these words
3 directly out of the PSAR, I am going to have to consult the
4 author of them.

5 (Pause.)

6 MR. TROWBRIDGE: My understanding is that there
7 is a stream from Matthis Pond into the Savannah River and
8 that any flow would get to Matthis Pond and its stream and
9 go into the Savannah River as opposed to going further and
10 perhaps finding at some point a pervious layer that it
11 could get into ground water.

12 JUDGE PARIS: You mean you are saying that the
13 water from Matthis Pond flows in a stream to the Savannah
14 River and doesn't get into the groundwater?

15 MR. TROWBRIDGE: That is what I am saying. I
16 think it does not get into the lower water, the Tuscaloosa
17 Aquifer.

18 JUDGE MARGULIES: Is there anything further on
19 that contention?

20 MR. TEPER: Can I inquire if it would reach the
21 upper level aquifer?

22 MR. TROWBRIDGE: That is the ground water flow
23 through this upper aquifer. That is the aquifer I am
24 talking about, the upper aquifer.

25 MR. TEPER: Mr. Chairman, I am a little bit, not

1 confused, but I am amazed at the reply that in order to
2 stop the contamination to the groundwater that the
3 contaminants would be drained off to the Savannah River.

4 Is that what the response was?

5 MR. TROWBRIDGE: Just a moment.

6 (Pause.)

7 MR. TROWBRIDGE: The answer is yes, if there
8 were a spill at the site that got into the upper aquifer it
9 would go to Matthis Pond and into the Savannah River and it
10 would take about 350 years.

11 MR. TEPER: It being the presupposed
12 contamination at certain levels.

13 MR. TROWBRIDGE: Yes, but at a very slow rate of
14 flow, of movement in that upper aquifer.

15 MR. TEPER: Thank you.

16 JUDGE MARGULIES: That completes our review of
17 the proposed contentions.

18 The next matter of consideration is future
19 scheduling. I ask the question is it appropriate to go
20 attempt to establish future scheduling at this point in
21 that there are so many different filings that we are going
22 to await?

23 MR. TEPER: Excuse me, Mr. Chairman. I wanted to
24 make a clarifying point at this time. There was a powerline
25 that has been built subsequent to the construction permit

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1 that talked about three different series of powerlines.

2 The powerlines to Florida that I was referring
3 to have been built, or are in the process of being built
4 from Plant Hatch to Florida, but it is a new grid and we
5 are presupposing that this will be carrying power from
6 Vogtle.

7 So, thus, the new 500 KV lines from Hatch to
8 Florida have never been addressed in any kind of
9 applications for Hatch or for Vogtle. So I just wanted to
10 make that clarifying point.

11 Thank you.

12 JUDGE MARGULIES: Mr. Trowbridge.

13 MR. TROWBRIDGE: Mr. Chairman, on the matter of
14 schedule, I do think it is probably premature to be trying
15 to set hearing schedules. They will be controlled I think
16 by the issuance of an FES, by the issuance of an SER and
17 perhaps by a review of emergency plans.

18 We would hope and would propose that as soon as
19 the staff review is complete, that we proceeding the
20 hearing on any contentions in that area.

21 I do have a matter of scheduling which I would
22 like to discuss, and that is I have proposed a stipulation
23 of parties on discovery ~~plans~~, and I am not sure whether
24 we need to adjourn for a discussion of it or whether it is
25 acceptable.

1 MS. FOWLER: It is fine with us.

2 MR. TEPER: It is fine with us.

3 JUDGE MARGULIES: In the nature of a milestone?

4 MR. TROWBRIDGE: Yes. Would you like me to read
5 it?

6 JUDGE MARGULIES: No. I think if you would just
7 distribute it that would be sufficient.

8 MR. TROWBRIDGE: All right.

9 (Copies of the schedule were distributed to the
10 parties.)

11 (The schedule follows:)

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STIPULATION OF PARTIES ON DISCOVERY SCHEDULE

1. There will be two rounds of discovery consisting of an initial round of discovery requests and responses and a follow-on round of requests and responses. Additional discovery shall be had only as provided in paragraph 6 below.
2. All initial round discovery requests shall be served within 60 days after the date of the Licensing Board's order allowing the contention to which the discovery request is addressed.
3. Responses to initial round discovery requests, shall be served within 30 days after service of the request.
4. Follow-on discovery requests shall be served within 120 days after the Licensing Board's order allowing the contention to which the request is addressed.
5. Responses to follow-on discovery request, shall be served within 30 days after service of the request.
6. Further discovery shall be had only (a) by agreement of the affected parties or (b) by order of the Licensing Board for good cause shown.

1 JUDGE MARGULIES: Is the discovery schedule
2 acceptable to all of the parties?

3 MS. FOWLER: Yes.

4 MR. TEPER: Yes, it is.

5 JUDGE MARGULIES: The staff?

6 MR. PERLIS: Yes, Mr. Chairman.

7 JUDGE MARGULIES: We next have the matter of the
8 establishment of a library in Atlanta. Have steps been
9 taken to establish such a library?

10 MR. PERLIS: As I understand it, there will be
11 set up a Public Document Room, some form of Public Document
12 Room at the Region II office of the NRC in Atlanta.

13 Both the NRC technical staff and I believe the
14 utility's technical staff have already both intervening
15 parties on their mailing list for documents that flow
16 between the staff and the utility. Transcripts will be put
17 in this Document Room in the region.

18 As to what other documents will be available,
19 that remains to be worked out.

20 MS. FOWLER: Initially we had requested maybe
21 access to the computer. Have you all looked into that?

22 MR. PERLIS: We haven't had a chance to look
23 into that.

24 MR. TEPER: GANE would like to request at this
25 time that along with the normal transcripts and

1 communications between the parties that the PSAR and the
2 construction application and permit be included, and
3 possibly any I&E enforcement documents. And we would also
4 like access to the Region II interlibrary which has the
5 NUREGs, or a suggestion as to how we can have access to the
6 NUREGs that come out and the ones that have been out, as
7 well as any studies.

8 It is kind of late in the stage to get to this,
9 but it would help.

10 MR. PERLIS: I will be discussing that with the
11 Public Document Room people back in Washington and with the
12 region. I would like to say, however, that I don't know how
13 far the NRC is legally allowed to go in terms of whether
14 this constitutes providing financial assistance. We will
15 voluntarily do whatever we are capable of doing.

16 JUDGE PARIS: Well, if you think that the staff
17 will be able to accomplish this before discovery begins, it
18 might save some discovery requests.

19 MR. PERLIS: Certainly the transcripts will be
20 there. As to what other documents, I don't know when or if
21 or what documents will be a part of this document room, and
22 I have not talked with anyone in the region in terms of
23 whether they want to make their own library available.

24 MS. FOWLER: I would like to clarify to the
25 Board one of the things that we suggested at our

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1 conference last week is that we have access to the
2 Washington computer by way of modem and that is something
3 that I think Mr. Bordenick is looking into. What we will be
4 able to see there is what kind of documents are available,
5 and then those that we need we can order from the Public
6 Document Room in D. C. It would be much more cost effective
7 to NRC and they wouldn't have to have all of those
8 documents actually down in the Public Document Room. We
9 would just ask for those that we needed.

10 JUDGE PARIS: Is this the NRC library computer?

11 MR. PERLIS: It used to be run by Terra it is
12 now run by another company, but it is the document
13 retrieval system.

14 MR. TROWBRIDGE: As I understand it, the
15 computer access suggested is not just the documents in this
16 docket but to all of the documents or indexes of the
17 documents in the Public Document Room.

18 MR. JOHNSON: Mr. Chairman, by accessing the
19 computer that already exists in the Public Document Room,
20 it is merely an index of the documents in the Public
21 Document Room. There is not a separate index for the
22 documents directly relevant to Plant Vogtle, which is what
23 we are of course most interested in.

24 MR. PERLIS: Mr. Bordenick is research that
25 request. He is up on Long Island this week, but we should

1 know in the next week or two what we will be able to
2 provide.

3 JUDGE MARGULIES: Well, it seems this requires
4 further consultation between the parties and it seems
5 everyone is attempting to be cooperative and we expect the
6 conferring between the parties will continue in an attempt
7 to resolve these matters.

8 MR. TEPER: May I suggest that that be done on a
9 timely basis.

10 MR. TROWBRIDGE: Mr. Chairman, I am not
11 positive. We have supplied at this point copies of our
12 FSAR, ER and amendments to the petitioners. When they
13 become admitted as intervenors, we will be supplying them
14 with copies of all of correspondence relating to this
15 docket between us and the NRC, and not just the amendments.

16 I am not certain in my mind about
17 correspondence that may have already have taken place that.
18 We have not up to this point been supplying copies of all
19 correspondence that might relate to Vogtle, but we will do
20 so.

21 JUDGE MARGULIES: What documents are available
22 in the Waynesboro Public Document Room, if you know?

23 MR. JOHNSON: The I&E reports are there, the
24 correspondence between the company and the construction
25 permit hearing transcripts are on microfiche there.

1 MR. PERLIS: I don't know the answer to that.

2 JUDGE PARIS: Did you finish the list, Mr.
3 Johnson? You were doing a very good job.

4 MR. JOHNSON: I don't think I finished the list,
5 but those are the things that I remember from having spent
6 a couple of days there. I might point out that during this
7 proceeding there were numerous references to the
8 construction permit and, unfortunately, the fact that
9 Vogtle is 150 miles from our headquarters, it is limiting
10 as to how much access we can get to such as the
11 construction permit which might have resolved a few of our
12 shortcomings from the fact that we didn't have the time to
13 go through it.

14 MS. FOWLER: And that brings us to one more
15 matter which is where are we going to locate these future
16 hearings? Can we address that right now because in our
17 original petition to intervene we addressed that?

18 JUDGE MARGULIES: we can address it at this
19 time. Are there any new arguments? It was argued quite
20 vigorously and extensively in your prior filings. Is there
21 anything new?

22 MS. FOWLER: I would just like to clarify and
23 say that we aren't saying that hearings shouldn't be held
24 down here. we do think hearings should be held here and we
25 think that the public down here, we know they are concerned

1 and they want to understand the issues that are involved.

2 In fact, we do think hearings should be held
3 here. The public down here can participate in NPDS water
4 quality permits that the power company is going to have to
5 get before they can start operation. They can come to these
6 hearings.

7 What we contend is that most of the public here
8 is not going to come to the hearings on the technical
9 issues. So what we propose is that those issues be heard up
10 in Atlanta. That is where the two intervenors are located
11 and that is where a lot of the state officials who are
12 interested in this, like our Environmental Protection
13 Division of the Department of Natural Resources and our
14 Public Service Commissioners are located.

15 Then those issues that might have more public
16 input with local officials testifying like on the emergency
17 response plan, they are more appropriately held down here,
18 and those would probably be the hearings where the public
19 is most likely to attend anyway.

20 JUDGE MARGULIES: Mr. Trowbridge.

21 MR. TROWBRIDGE: I think we have pointed out, as
22 evidenced by I think the attendance here today at this
23 meeting, there is a great deal of local interest and I
24 think in all phases of the hearing. I don't reason for
25 departing from the traditional pattern of holding hearings

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1 in the area of the plant.

2 I would re-emphasize again that in terms of
3 burden that there are a great many people from the company
4 here that will be, not the same persons, but there will
5 always be a great many people, and they will be coming from
6 the Vogtle site. That is where the Project Management is
7 now located. It has been consolidated at the site, and that
8 is where our people are and where our documents are and
9 they get to and from a hearing room on short notice so they
10 don't have to be in the room at all times waiting as they
11 might have to if we were some distance.

12 I think we should not be burdened with having
13 to go to Atlanta.

14 JUDGE MARGULIES: Mr. Perlis.

15 MR. PERLIS: Well, without belaboring the
16 obvious primary reason, hearings are held publicly is so
17 that the public may attend. I also suspect that Ms. Fowler
18 may be correct in that after a while, especially if the
19 hearings are very technical in nature, public attendance
20 may drop. That tends to be a frequent occurrence at
21 NRC hearings.

22 If public attendance is going to be very small,
23 then I think it is proper for the Board to consider the
24 convenience of the parties, and it seems obvious that the
25 utility has one preference and the intervenors have

1 another. As to the staff, we are amenable to holding
2 hearings in any location.

3 I would suggest though that it might be a good
4 idea to start the hearings near the plant site to see if
5 there is much local interest. If there is, I think the
6 hearings should be near the site. If local interest proves
7 not to be that great, then I think the Board could rightly
8 weight the balance of the interests of the two parties
9 here.

10 MS. FOWLER: One thing I would like to point
11 out, when we were talking about the audience today, I think
12 most everybody agrees that most of these people in the
13 audience are company people rather than local people who
14 live around the plant and who are unaffiliated with the
15 company. And I have maintained that a lot of the agencies
16 that represent the public, like we here are representing the
17 public in the intervention process, we are located in
18 Atlanta.

19 Also the government agencies whose mandate is
20 to protect the public are the Environmental Protection
21 Division, and they are also located in Atlanta and it is
22 going to be a lot easier for them to attend these meetings,
23 especially if they are prolonged, if the hearings are held
24 in Atlanta.

25 MR. TEPER: Mr. Chairman, I would like to add to

1 that the fact that a number of us who have been working on
2 behalf of the intervenors are not high-priced lawyers from
3 Washington, D. C. or Atlanta or big-paid utility executives
4 or on the payroll of any kind of company. A number of us
5 have taken years at unpaid expense to go wherever hearings
6 might be to try to present a different side of the story.

7 I think it is only incumbent upon the NRC to
8 hear that other side of the story and at best hear it so
9 that the people who have been trying to present that story
10 do not have to do it at a great expense. It is to the point
11 where we take days off from work and travel great distances
12 and stay wherever we can, and we are lucky if people will
13 put us up in their houses because we can't afford fancy
14 hotels.

15 If it is credible to me the fact that we can put
16 up any kind of contentions or the basis for the
17 contentions when we have to go through great stress to
18 present our side of the story.

19 I think once again it is incumbent upon the NRC
20 to allow us greater access to the process unless you just
21 want to cut intervenors out altogether. Basically when you
22 put us under stressful conditions, that is what you are
23 doing. You are cutting the public out from the process of
24 licensing these plants.

25 JUDGE MARGULIES: Mr. Trowbridge.

1 MR. TROWBRIDGE: Mr. Chairman, in reference to
2 Ms. Fowler's remark, I would like to suggest to the
3 Chairman that he ask for a show of hands as to how many
4 local persons have survived this much of the hearing.

5 JUDGE PARIS: She said they were company
6 employees I thought.

7 How many of you are from Atlanta?

8 (Show of hands.)

9 JUDGE PARIS: How many of you are from this
10 area?

11 (Show of hands.)

12 JUDGE PARIS: How many abstained.

13 (Snow of one hand.)

14 (Laughter.)

15 MS. FOWLER: I think this is really a serious
16 matter about who is representing the public here, and that
17 is something that I believe in some of the affidavits that
18 the company submitted that people from cities around said
19 that the public wanted to attend these and we don't see the
20 public here today.

21 Is the public going to come to these highly
22 public issues? That is what we have to determine.

23 JUDGE MARGULIES: We are going to reserve the
24 decision as to where future hearings should be held, but we
25 feel that Mr. Perlis has presented a well-reasoned approach

1 and it will probably provide guidance for us in making the
2 determination.

3 We do have the matter in which both CPG and
4 GANE have identical contentions. Has GANE and CPG gotten
5 together or do they expect to get together in terms of
6 consolidating the contentions and determining who will be
7 the lead intervenor on those contentions?

8 MR. TEPER: Excuse me. GANE would like to know
9 what exactly is meant by lead intervenor, if you can
10 explain that.

11 JUDGE MARGULIES: well, the thing is that it
12 would serve no useful purpose to take an identical
13 contention and have each intervenor present an identical
14 case. So it would be a matter of sharing the contentions
15 among you and choosing one of the intervenors to go
16 forward on the particular contention and act as counsel for
17 that individual contention.

18 MR. JOHNSON: Yes, sir. We had discussed this on
19 the ones on which we did not differ and certainly we will
20 be glad to work together and have one of the parties
21 provide a lead role on that.

22 As we had many clear on the amendments, many of
23 the contentions that were identical earlier are no longer
24 identical and the particular ones will make their own
25 presentations on those.

1 JUDGE MARGULIES: It is something that you don't
2 nave to make a decision at this point on, but it is
3 something that you should consider and at the appropriate
4 time we should be advised.

5 Is there anything further that requires
6 consideration at this special prehearing conference?

7 Mr. Delaigle: Mr. Chairman.

8 JUDGE MARGULIES: Yes, sir.

9 MR. DELAIGLE: This statement can be on or off
10 the record, either one. I am Ray Delaigle, Chairman of the
11 Board of County Commissioners of Burke County.

12 JUDGE MARGULIES: This is on the record.

13 MR. DELAIGLE: Well, I would like to offer the
14 facilities at Burke County for two or three reasons for
15 holding future hearings.

16 One is Burke County is the most poverty area
17 within the area, and we have citizens down there that
18 cannot travel to Atlanta. Even if they were physically
19 able, they are not financially able.

20 Also, the immediate area from the adjoining
21 counties would be Screven County, Bulloch County, Jefferson
22 County, Marion County and Jenkins County. They all could
23 participate. So we ask you to consider that. The facility
24 has good acoustics, heating, air conditioning, lighting and
25 whatever.

1 JUDGE PARIS: Does it have more room for the
2 Judges?

3 MR. DELAIGLE: Yes. There is seating for 500.
4 (Laughter.)

5 JUDGE MARGULIES: What type of building is this,
6 sir?

7 MR. DELAIGLE: It is Civic Center like, an
8 auditorium.

9 MR. TEPER: And they will provide hotel rooms
10 and transportation and the like?

11 (Laughter.)

12 JUDGE MARGULIES: We will consider it, sir.
13 Thank you.

14 (Board conferring.)

15 JUDGE MARGULIES: Judge Linenberger has several
16 questions that he would like to ask.

17 JUDGE LINENBERGER: At one point the Chairman
18 referred to these are the Linenberger contentions. They
19 aren't really.

20 JUDGE MARGULIES: I didn't.

21 JUDGE LINENBERGER: Correction. The Board is
22 mindful of the fact that Georgia Power is facing into what
23 they would like to think is an operational phase for the
24 Vogtle Plant and the operational phase carries with it some
25 considerations rather distinct from the construction phase.

1 The Board is not aware as of today what is the
2 makeup of the present ownership of the Vogtle Plant. We are
3 aware that there had been an amendment to the application
4 submitted that requested a change in financial sharing of
5 Vogtle costs and we don't know as of today whether that
6 proposed amendment has been approved.

7 These are things that we would like to know the
8 answer to in due time if this proceeding goes to a hearing.

9 Further, and I am leading up to a question to
10 the staff, there must be somewhere in existence some kind
11 of a joint ownership agreement that would spell out what
12 are the operational and maintenance requirements and
13 responsibilities amongst the various owners.

14 Now then let me say that human nature being
15 what it is, and the safety of a proposed operating nuclear
16 plant being of the magnitude of concern that it is, it is
17 certainly important for someone to know that this joint
18 ownership agreement does not in any way contain provisions
19 that might compromise the safety of the plant when it goes
20 into operation.

21 It is easy to envisage conditions of ownership
22 agreement that could compromise safety. The specific
23 question to the staff is has the staff considered this
24 matter and looked at the ownership agreement in this light?

25 I am not asking for the results of your

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1 deliberation. I am only asking have you?

2 MR. PERLIS: I believe Ms. Miller could speak to
3 that now if you would like.

4 MS. MILLER: Yes we have. The sole
5 responsibility for operation, construction and maintenance
6 on the Vogtle facilities is with Georgia Power. In assessing
7 the sale of five percent, which took place several months
8 ago of the plants, we were looking at this because Georgia
9 Power in selling that five percent has under 50 percent
10 ownership in the two plants and we were asking the same
11 questions that you are asking, Judge Linenberger.

12 There is no provision in this sale by them
13 having under 50 percent that would affect the safety of the
14 operation. As long as Georgia Power owns at least 15
15 percent of those plants, they will maintain sole
16 responsibility for all the aspects I have already
17 mentioned.

18 JUDGE LINENBERGER: Very good. I don't mean this
19 to sound in any sense deprecating of your comments, but
20 those are indeed nice sounding words to say that Georgia
21 Power has sole responsibility for certain things such as
22 maintenance and such as decisions about operation.

23 On the other hand, it is frequently the case
24 that when a plant starts to operate the sunk costs at the
25 time of start of operation have considerably exceeded what

1 the joint owners anticipated originally those costs might
2 be.

3 Now then let's get the plant into operation and
4 let's have Georgia Power say to these co-owners look,
5 fellows, if it is going to be prudent utility practice,
6 whatever that term means, that at the next fuel outage we
7 plug some condenser tubes, and the co-owners will say it
8 sounds good, Georgia Power, but that is going to cost us
9 money. Now why don't you just wait until you are forced by
10 regulation or forced by safety considerations to plug those
11 tubes. Don't go charging us money for things that don't
12 have to be done now.

13 Well, the agreement says Georgia Power has sole
14 responsibility. That is fine, but if the co-owners say we
15 ain't paying for it, I question what value Georgia Power's
16 sole responsibility is.

17 Well, I just throw these thoughts out because
18 they are potentially important, and I don't know whether
19 there is a problem here.

20 A complete change of subject. This Board does
21 not have copies of the applicant's operating license phase
22 environmental report, nor of the applicant's final safety
23 analysis report. We should like to request that one copy of
24 each be sent to the Board at its Bethesda address, please.

25 MR. TROWBRIDGE: I am sure we can do that. I was

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1 under the mistaken impression that Licensing Boards
2 normally were able to obtain a copy from the many copies we
3 supplied to the staff, but it that is not the case ---

4 JUDGE LINENBERGER: We care not where it comes
5 from. All I know is our ---

6 MR. TROWBRIDGE: We will send it unless Mr.
7 Perlis tells us that he has arranged for it to be sent.

8 JUDGE LINENBERGER: Furthermore, I would like to
9 explain something here. Many requests such as this result
10 in 15 nice full binders and a big bale of loose paper that
11 contain the amendments to date. Now the Board wants to make
12 it clear that we are not interested in any bales of loose
13 paper at this point. That will come later soon enough, I am
14 sure. But let's have whatever you send us now, including
15 amendments, all together in the binders, if you will,
16 please.

17 MR. TROWBRIDGE: All right.

18 (Board conferring.)

19 JUDGE MARGULIES: How does the stipulation of
20 the parties on the discovery schedule tie into the FES and
21 the SER?

22 MR. TROWBRIDGE: It depends, in my view, on
23 whether there is new information. That is going to be the
24 big test. We are not going to waste time disagreeing over
25 discovery requests where there is a legitimate new

1 information basis for it. We will come to the Board, if
2 necessary, for more important disagreements.

3 JUDGE MARGULIES: Yes.

4 MS. FOWLER: I have a request and two questions.

5 First, CPG requests that we be put on the
6 mailing list of all correspondence going between the
7 company and NRC at this time rather than wait upon the
8 rulings since discovery starts at that time.

9 Two more questions.

10 One, do you all have any idea what is the
11 timeframe of your decision and then, second, you mentioned
12 limited appearances and there are several groups up in
13 Atlanta who are interested in that. When should we tell
14 them that they can start thinking about making limited
15 appearances? Is that at a particular phase of the hearings?

16 JUDGE PARIS: Usually it runs concurrently with
17 with the evidentiary hearing.

18 MS. FOWLER: But since they aren't tied to the
19 evidentiary hearing and you can bring in more matters than
20 are considered in the evidentiary hearing, like if somebody
21 wanted to talk about psychological impacts, at what stage
22 would they bring that in? Does it not matter?

23 JUDGE PARIS: Any time. We don't establish an
24 itinerary of topics or a schedule of topics.

25 JUDGE MARGULIES: Anything can come in at the

1 limited appearances and they generally start at the
2 beginning of the evidentiary hearings.

3 MS. FOWLER: Okay.

4 JUDGE PARIS: But we like to do it during the
5 evidentiary hearing periods so that counsel for staff and
6 counsel for applicant will be available and can attend.

7 (Board conferring.)

8 MR. FEIG: What about your time frame for
9 responses?

10 JUDGE LINENBERGER: Are you talking about a
11 prehearing conference order?

12 MR. FEIG: Yes.

13 JUDGE MARGULIES: No. 1, we have to await the
14 filing of additional documents. I think some of the are due
15 to come in a month from now or approximately a month from
16 now and we should come out with a special prehearing
17 conference order probably 30 days thereafter, sometime
18 within that time frame.

19 MR. TROWBRIDGE: Would it not be possible, Mr.
20 Chairman, there are a couple of items like the proprietary
21 agreement, let's say, could the Board not rule on the other
22 contentions leaving that one aside?

23 JUDGE MARGULIES: I would still not like to
24 restrict us by a time limit of less than 30 days after the
25 documents come in.

1 MS. FOWLER: I think that makes our request for
2 addition on the mailing list even more important.

3 MR. TROWBRIDGE: I was about to add that your
4 request is granted and beginning tomorrow we will send you
5 copies.

6 MR. TEPER: GANE would also like to be included.

7 MR. TROWBRIDGE: Yes, we will do that.

8 MR. TEPER: Mr. Chairman, I would also like to
9 submit at this time, and I thought this was passed out, but
10 this was the letter that I read from concerning quality
11 assurance. I thought it was passed out earlier. That was
12 concerning the individual who worked at one of the
13 suppliers.

14 (The document was distributed to the parties.)

15 MR. TROWBRIDGE: Mr. Chairman, I am not now
16 going to make a request of the Board, but we have received
17 several pieces of paper that have been added as bases for
18 concussions, plus some new information spoken into the
19 transcript.

20 It may be that we will ask leave of the Board
21 to supplement our responses on the basis that it is not
22 reasonable to read and digest and discuss these with our
23 technical people.

24 JUDGE MARGULIES: I think that is a reasonable
25 request in terms of the documents that were passed out

TAYLOE ASSOCIATES

1625 I STREET, N.W. - SUITE 1004

WASHINGTON, D.C. 20006

(202) 293-3950

1 today or were first made known of today, yes.

2 There being nothing further ---

3 MR. TEPER: One more point.

4 JUDGE MARGULIES: Okay.

5 MR. TEPER: I would like to point out the
6 possible historic occurrence that just happened. I believe
7 this might be one of the last hearings as such in the
8 history of the nuclear industry in the fact that the
9 nuclear industry seems to have fallen on some sorts of hard
10 times. So I just thought it was incumbent upon me to point
11 that out at this time.

12 JUDGE MARGULIES: There being nothing further,
13 the hearing is closed.

14 (whereupon, at 4:50 p.m., the special
15 prehearing conference was closed.)

16 - - -

17 REPORTER'S NOTE:

18 Because Intervenor CPG did not have enough copies of the
19 following documents, they will be mailed to Tayloe Associates
20 and then delivered to the Commission:

- 21 1. Affidavit of Dennis Cruch, Georgia Solar Coalition
- 22 2. Signed statement of Ford Spinks, Georgia Public
23 Service Commission
- 24 3. Motion passed by 5-0 vote of Ga. PSC re; construction
25 review and financing.

CERTIFICATE OF PROCEEDINGS

This is to certify that the attached proceedings before the
NRC COMMISSION

In the matter of: Georgia Power Company et al.

Date of Proceeding: 30 May 1984

Place of Proceeding: Augusta, Ga.

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

Mary C. Simons

Official Reporter - Typed

Mary C. Simons
Official Reporter - Signature

April 16, 1974

Letter to Dixie Lee Ray, Chairman of the Atomic Energy Commission from
W. R. Stratton, Chairman of the Advisory Committee on Reactor Safeguards,
pp. 2-3.

"Proximity of the AEC's Savannah River Plant and the Barnwell Nuclear Fuel Plant makes it important to have effective emergency arrangements to deal with unusual circumstances that may be of interrelated safety significance to the three plants. The applicant has indicated that he will establish an emergency plan in cooperation with the other nuclear installations to ensure effective emergency response as demanded by events in the immediate area. Consideration should be given by the AEC to periodic evaluation of the combined routine liquid and airborne radionuclide releases from these two plants and the Vogtle plant as they may affect the health and safety of the public."

May 29, 1984

Danny Feig
GANE Representative
1130 Alta Avenue NE
Atlanta, GA 30307

Dear Danny,

In response to your request, I have reviewed the literature on nuclear waste and have found the following:

- 1.) DOE Savannah River has found SR-90 vegetative uptake to be a significant problem when not controlled; "Vegetation radiating 2100 mrad/hr at 5 cm was detected growing over backfilled burial trenches during the summer of 1965."¹ The maximum uptake in 1968 vegetation was 790 pCi/g of SR-90.¹ Dupont calculations indicate vegetative uptake may produce a surface SRP Burial Ground contamination of 20 rem/y;² federal guidelines used by DOE restrict such releases to 500 mrem/y whereas the NRC restricts to 25 mrem/y.^{3,4} However, when the NRC regulations became final, the SRP data had not been public;⁵ it has been postulated that vegetative uptake can be the limiting pathway at some sites as well as vegetative/animal intrusion;⁵ the NRC regulation is deficient in these considerations.⁵

The NRC class C waste, the most radioactive waste, is regulated by requirement to be buried below 5 meters below the surface.⁴ Nonetheless, Class A and B waste and even Class C waste has not been demonstrated to be free of the biotic vectors noted above. Before additional burdens of radioactive waste are added to the environment, the NRC should so demonstrate the safety of 10 CFR Part 61 regulated waste.

- 2.) The NRC allows solid wastes that are radioactive and possibly hazardous to be disposed in trenches that, once closed, constitute intimate contact with the soil.⁴ The NRC requires the minimization of water percolating into closed trenches containing radioactive waste, but does not require water collection through sumps monitoring all water passing through the closed trenches.⁴ The use of unlined trenches without requirements for collection of all meteorological water may be a violation of the EPA Resource Conservation and Recovery Act (RCRA). Before additional burdens of radioactive, hazardous or mixed wastes are added to the environment, these issues should be resolved.
- 3.) The Department of Energy requested the NRC in 1982, during the 10 CFR Part 61 Rulemaking, to raise the transuranic waste lower control limit from 10 nCi/g to 100 nCi/g. In response to the DOE and other commentators, "the Commission has reevaluated the analysis for disposal of waste containing transuranic nuclides...disposal limits for class C waste have been raised to 100 nCi/gm for long lived alpha emitting transuranic nuclides."⁴ The DOE experience, however, with transuranic nuclides indicated that DOE Burial Grounds

Danny Feig
May 29, 1984
Page 2

exceeded drinking water standards for both Pu 238 and Pu 239, and this was known to the DOE at the time the DOE requested the NRC to ease its proposed standards.¹ Even though the monitoring well-water is not presently accessible for public water consumption, the fact that drinking water standards were broken indicated significant alpha nuclide migration while under the 10 nCi/g limit at DCE Defense radioactive waste burial grounds. Before additional radioactive waste burdens are added to commercial burial grounds, this issue should be addressed.

If I can be of additional assistance to you, please let me know.

Sincerely,

William F. Lawless,
Former Senior Project Engineer
Nuclear Waste Management Branch
Department of Energy, Savannah River Plant

P.O. Box 12172
Augusta, GA 30904

References

1. Fenimore, J.W., The Assessment of Solid Low-Level Waste Management At The Savannah River Plant Dupont Rep. No. DPST-77-300 (1977). p. 40-41.
2. J. Wiley, "Savannah River Laboratory Dose to Man Model", Proceedings of the Third Annual Information Meeting, DOE Low Level Waste Management Program, November 4-6, 1981, New Orleans, LA, DOE Rep. ORNL/NFW-81/34, 305, (1981).
3. Radioactive Waste Management, DOE Order 5820.2 (1984).
4. 10 CFR Part 61 Licensing Requirements For Land Disposal of Radioactive Wastes, Federal Register, Vol. 47, No. 248 (1982).
5. Symposium on Low-Level Waste, NRC Rep. NUREG/CP-0028, CONF-820911 (1983).

Danny: this could fit under NEPA issues (p. 20, paragraph 1) or somewhat under cumulative effects (p. 22) but only weakly under the last.

This is a generic issue that indirectly applies to Vogtle. The NRC nuclear waste regulation (10 CFR Part 61) regulates commercial nuclear generated waste such as will be generated by Vogtle. The NRC regulation is deficient for vegetative uptake; does or may not apply for the EPA RCRA regulations and all NRC regulated burial grounds may be in violation of RCRA; and possibly may be deficient in their lower central limit for transuranic waste.

The argument is this: additional radioactive wastes generated by power plants add to the unresolved issues of vegetative uptake, possible RCRA violations, and transuranic waste. New power plants (nuclear) should not be licensed (or allowed to be built) until this issue is addressed.

Robert A. Seethaler
President

Flow Control Division
400 North Leighton Avenue
Pittsburgh, Pennsylvania 15208

(412) 247-3333
Telex: 866241
Cable: ROCKWL INT PGH

December 17, 1982

Mr. Clinton L. Sumrall
Apartment 4-H
600 Dalrymple Road N.W.
Atlanta, GA 30328

Dear Mr. Sumrall:

Preliminary evaluation has been completed on the recommendations made in your letter of November 2, 1982.

As you know, in practice the design of the products in question has proven capable of operation under maximum adverse conditions of seismic loading, pipe bending, line rupture flow, etc. The design is deemed satisfactory for use in nuclear facilities.

All valves and valve parts supplied by Rockwell meet or exceed the requirements of the procurement documents. These requirements have been established to assure reasonable integrity within the environment of the products' intended use.

In addition to the procurement requirements, Rockwell has met or exceeded engineering standards which are generally applicable to the manufacture of the valve and valve parts.

The history of valves now in field use has confirmed the reliability of the manufacturing procedures Rockwell follows. Valves now in operation in nuclear facilities have in the aggregate completed millions of hours of use without evidencing the possibility of an incident to which your concerns are directed.

While the design, manufacture, testing and inspection of these components have proven reliable, their integrity is periodically confirmed through regularly scheduled on-line testing at nuclear facilities.

In considering these facts, there appears to be no support for the opinion that Rockwell has failed to notify the NRC of a reportable deficiency under 10 CFR 21. Rockwell is not aware of any defect nor does your letter give cause to believe that there exists a defect in its valves which would create a substantial safety hazard required to be reported under NRC regulations.

Mr. Clinton L. Sumrall
December 17, 1982
Page 2

A copy of your letter has been forwarded to the Director, Office of
Inspection and Enforcement, U. S. Nuclear Regulatory Commission.

Very truly yours,



R. A. Seethaler

/pac

May 29, 1984

Danny Feig
GANE Representative
1150 Alta Avenue NE
Atlanta, GA 30307

Dear Danny,

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The NRC class C waste, the most radioactive waste, is regulated by requirement to be buried below 5 meters below the surface.⁴ Nonetheless, Class A and B waste and even Class C waste has not been demonstrated to be free of the biotic vectors noted above. Before additional burdens of radioactive waste are added to the environment, the NRC should so demonstrate the safety of 10 CFR Part 61 regulated waste.

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Danny Feig
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If I can be of additional assistance to you, please let me know.

Sincerely,

William F. Lawless,
Former Senior Project Engineer
Nuclear Waste Management Branch
Department of Energy, Savannah River Plant

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The argument is this: additional radioactive wastes generated by power plants add othe the unresolved issues of vegetative uptake, possible RCRA violations, and transuranic waste. New power plants (nuclear) should not be licensed (or allowed to be built) until this issue is addressed.

November 2, 1982

Mr. D. R. Beall, President
Rockwell International Corporation
600 Grant Street
Pittsburgh, Pennsylvania 15219

Dear Mr. Beall:

As a citizen concerned with the welfare of the public, I try to stay abreast of problems involving nuclear power safety. Although nuclear power has become an established energy source, extreme care must still be taken to safeguard public health and safety. By having a master's degree in nuclear engineering and by being a former sales engineer of nuclear equipment in the Flow Control Division of Rockwell International, I feel that I am qualified to comment on problems involving nuclear power safety.

While employed by Rockwell I became concerned that balanced disk main steam isolation valves with air/spring actuators furnished to numerous nuclear power plants by Rockwell had not been adequately tested and therefore could create a substantial safety hazard in the event of an accident. The lives of thousands of people could be in danger. Please refer to Attachment 1 for an explanation of the deficiencies and Attachment 2 for a partial listing of the power plants involved.

Although this letter deals with balanced disk main steam isolation valves with air/spring actuators, similar problems exist with other types of main steam isolation valves and power actuated seismically active valves in general.

Applies to all active components

Personnel at Rockwell are aware that certain parts in the valve upper structure and actuator in the Rockwell design are very critical to the proper operation of the valve; however, the integrity of the material of these parts in each valve has not been verified by nondestructive examination and material traceability. Apparently they are taking the position that they are meeting the minimum requirements of the ASME Boiler & Pressure Vessel Code and the necessary qualification testing and analysis that is required by the U.S. Nuclear Regulatory Commission (NRC) and do not intend to perform additional testing. It appears that they are more concerned with profits than the safety of the public.

Mr. D. R. Beall, President
Rockwell International Corporation
November 2, 1982
Page 2

Federal regulations (10 CFR 21) require that deficiencies be reported. To my knowledge Rockwell has not advised the NRC, as required by sections 21.1 and 21.21, that these parts are critical to the operation of the valve and that by not providing nondestructive examination and material traceability these parts might be defective and could fail and create a substantial safety hazard. While employed by Rockwell I voiced my concerns but was told that I should confine my activities to those in my job description and forget this matter if I valued my future with the company. Failure to report a deficiency is a violation as specified in section 21.61.

Since I am no longer associated with Rockwell I am now free to notify the proper parties of my concerns. I feel that Rockwell has an obligation to rectify the entire situation so that the population surrounding these plants will be protected. If your company does not intend to take proper corrective action that is satisfactory to all concerned, I will then notify organizations such as the Critical Mass Energy Project and Georgians Against Nuclear Energy so that the NRC and the utilities can be contacted and so that the public can be informed through the news media of the entire situation.

Please let me have your response within two weeks.

Sincerely,

Clinton W. Bennett

CLW:bjt
enclosures

Application of Section III

Main steam isolation valves are very critical to the safe shutdown of a nuclear power plant during an emergency. These are large valves that are installed in steam lines with diameters from 16" to 36". They are designed and manufactured in accordance with class 1 or class 2 requirements of the ASME Boiler & Pressure Vessel Code, Section III. Hereafter this code will be referred to as Section III. Also, these valves are classified as seismically active.

Realizing that materials are sometimes defective, Section III requires that pressure retaining parts be subjected to nondestructive testing, such as radiographic, liquid penetrant and magnetic particle examination, to verify the integrity of the material. Also, material traceability is required. Pressure retaining parts are those that directly contain the fluid pressure such as the body, bonnet, stem and disk. Since Section III is a pressure vessel code and is concerned primarily with pressure retaining (boundary) items, parts comprising the valve upper structure receive much less attention. Nondestructive testing is not required for these parts even though they perform critical functions during valve operation.

There are two seismic categories of valves, nonactive and active. A nonaction valve must only retain pressure boundary integrity during a seismic occurrence. Opening or closing is not required. An active valve, in addition to retaining pressure boundary integrity during a seismic occurrence, must also operate to either close or open the valve. Since active valves are very necessary to the safe shutdown of a nuclear plant in an emergency, the U.S. Nuclear Regulatory Commission (NRC) mandates that they be subjected to qualification testing and analysis to demonstrate that a particular valve design will operate during upset conditions.

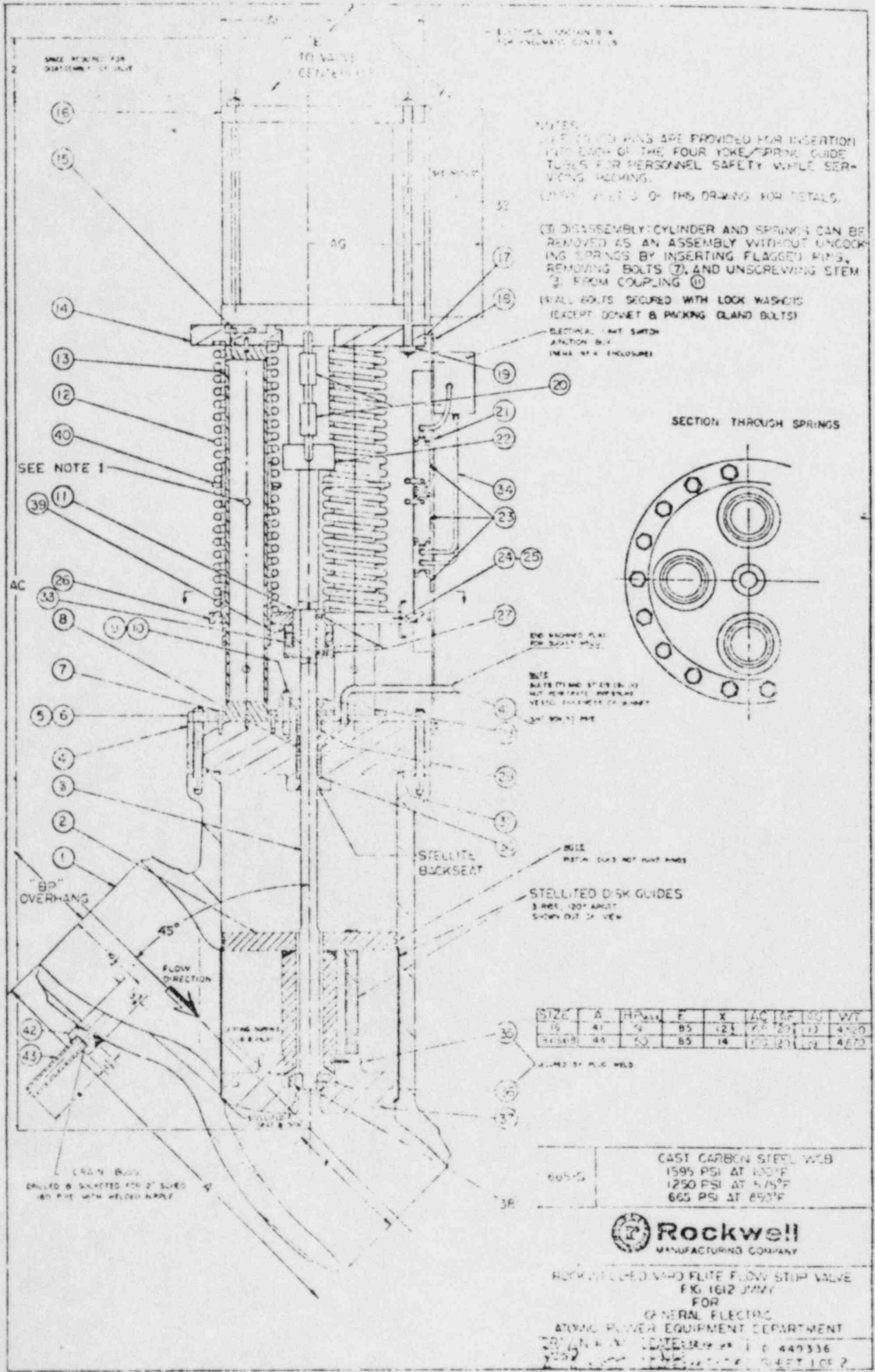
What we now have with these main steam isolation valves is a complete valve assembly and actuator design that has been qualified to assure operability; however, verification of material integrity of individual parts and welds on each valve has been limited to pressure retaining parts even though there are items in the upper structure and actuator that are very critical to valve operation. Failure of one or more of these parts during an accident that involved a seismic occurrence could create a substantial safety hazard just as disastrous as the failure of a pressure retaining part. Some of these parts on a Rockwell balanced disk main steam valve with an air/spring actuator are:

1. yoke/spring guides
2. springs
3. operator mounting flange
4. spring flange
5. bolts connecting the yoke to the bonnet
6. coupling that connects the spring flange to the stem
7. pneumatic valve that releases air from the actuator
8. hydraulic speed control device

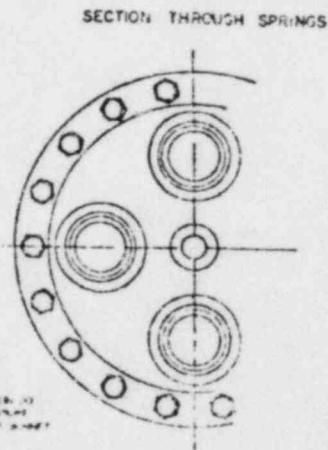
The old expression that a chain is only as strong as its weakest link certainly applies here. In fact, there are numerous links that might have defects. The only way to absolutely assure that these valves will operate during a seismic occurrence is to subject the additional parts to nondestructive testing with complete documentation and to provide material traceability.

Nuclear Plants with Rockwell Balanced Disk Main
Steam Isolation Valves

| <u>Country</u> | <u>Plant</u> | <u>Utility</u> |
|----------------|----------------|--|
| United States | Vermont Yankee | Vermont Yankee Nuclear Power Corp. |
| United States | Cooper | Nebraska Public Power District |
| United States | Brunswick | Carolina Power & Light |
| United States | Clare Arnold | Iowa Electric Light & Power |
| United States | Shoreham | Long Island Lighting |
| United States | Fitzpatrick | Power Authority, Port of New York |
| United States | Arkansas | Arkansas Power & Light |
| United States | Zimmer | Cincinnati Gas & Electric |
| United States | Hatch | Georgia Power Co. |
| United States | LaSalle | Commonwealth Edison |
| United States | Hanford | Washington Public Power |
| United States | Bailey | Northern Indiana Public Service |
| United States | Davis-Besse | Toledo Edison & Cleveland Electric Illuminating |
| United States | Crystal River | Florida Power Corp. |
| United States | North Anna | Virginia Electric & Power |
| Finland | Lovisa | IVO |
| Japan | Fukushima | Tokyo Electric |
| Taiwan | Guifeng | Taiwan Power |
| Taiwan | Kuo Shiang | Taiwan Power |
| France | Flamanville | E. D. France |
| Japan | Tokai | JAPCO |
| Mexico | Laguna Verde | |
| Spain | Condor | |



NOTES:
 (1) FLAGGED RIMS ARE PROVIDED FOR INSERTION INTO END OF THE FOUR YOKE/SPRING GUIDE TUBES FOR PERSONNEL SAFETY WHILE SERVING PACKING.
 (2) REFER TO SET C OF THIS DRAWING FOR DETAILS.
 (3) DISASSEMBLY: CYLINDER AND SPRINGS CAN BE REMOVED AS AN ASSEMBLY WITHOUT UNCOILING SPRINGS BY INSERTING FLAGGED RIMS, REMOVING BOLTS (7), AND UNSCREWING STEM (3) FROM COUPLING (10).
 (4) ALL BOLTS SECURED WITH LOCK WASHERS (EXCEPT DOWNLET & PACKING GLAND BOLTS).
 (5) ELECTRICAL LIMIT SWITCH ACTION BY 4 ENCLOSED.



END MACHINED FLAT FOR SHUTTLE WELD
 NOTE: BOLTS (7) AND (8) ARE TO BE USED WITH PERMISSIBLE WORKING YIELD STRESS OF 60,000 PSI.
 3/4" SHUTTLE WELD
 NOTE: RETAIN DISK NOT HUNT RIMS
 STELLITE BACKSEAT
 STELLITE DISK GUIDES
 3 ROWS, 120° ARC
 SHOWN OUT OF VIEW

| SIZE | A | H ₁ | F | X | AC | AF | CG | WT |
|-------|----|----------------|----|-----|-----|----|----|------|
| 16 | 41 | 5 | 95 | 121 | 75 | 20 | 13 | 4550 |
| 1658B | 44 | 5.5 | 85 | 14 | 100 | 20 | 14 | 4670 |

FLARED BY PLUG WELD
 6050
 CAST CARBON STEEL WEB
 1595 PSI AT 100°F
 1250 PSI AT 575°F
 665 PSI AT 850°F



ROCKWELL VALVE AND FLITE FLOW STOP VALVE
 FIG. 1612 JMVV
 FOR
 GENERAL ELECTRIC
 ATOMIC POWER EQUIPMENT DEPARTMENT
 440336
 5-6 FT. 100 P.

LIST OF MATERIALS
QUANTITIES ARE FOR ONE VALVE

WHERE A S T M SPECIFICATIONS ARE INDICATED THE LATEST REVISION APPLIES

| PIECE NO. | NAME | NO REQ'D | MATERIAL | SPECIFICATION | EDWARD MS NO. |
|-----------|--------------------------|----------|---|--------------------------------|---------------|
| 1 | body | 1 | cast carbon steel | ASTM A216 Grade WC8 | 102 |
| 2 | piston assembly | 1 | forged carbon steel | ASTM A105 Grade 2 | 111 |
| 3 | stem | 1 | 410 Ct., 205 BHN Max. | AMS 5609 | 217 |
| 4 | bonnet | 1 | forged steel | ASTM A105 Grade 2 | 111 |
| 5 | bonnet stud | 18 | alloy steel bolting | ASTM A540 Grade B23 | 236 |
| 6 | nut | 18 | steel | ASTM A194 Grade 2H | 127 |
| 7 | bolt | 24 | alloy steel | AISI 4000, 4100, 8600, or 8900 | 205 |
| 8 | lantern ring | 1 | C. Dr. carbon st. stellited | ASTM A-103 Grade C-1018 | 120 |
| 9 | gland stud | 2 | alloy steel bolting | ASTM A193 Grade B7 | 203/604 |
| 10 | nut | 2 | steel - Cd. Pl. | ASTM A194 Grade 1 | 124/604 |
| 11 | coupling | 1 | alloy steel | AISI C4140 | 236 |
| 12 | spring | 8 | st./Deqa-st./vinyl St. St. Flake coating | AISI 5160 | 176 |
| 13 | yoke/spring guide | 4 | seamless cr. st./Moly coated | ASTM A106 Grade B | 118/608 |
| 14 | mounting flange | 1 | carbon steel | ASTM A-315 Grade 70 | 115 |
| 15 | bolt | 12 | alloy steel | AISI 4000, 4100, 8600, or 8900 | 205 |
| 16 | pneumatic cylinder | 1 | steel | Sheffer | 999 |
| 17 | spacer | 1 | Seamless carbon steel | ASTM A106 Grade B | 118 |
| 18 | bolt | 3 | alloy steel | ASTM A-354 Grade BD | 206 |
| 19 | nut | 4 | steel | ASTM A-194 Grade 1 | 124 |
| 20 | hydraulic control valves | 2 | steel | Monitrol | 999 |
| 21 | limit switch support | 1 | carbon steel | ASTM A366 | 116 |
| 22 | hydraulic cylinder | 1 | steel | Sheffer | 999 |
| 23 | limit switches | 6 | steel | Nanco No. SL-3 DP-DT | 999 |
| 24 | limit switch actuators | 2 | carbon steel | ASTM A366 | 116 |
| 25 | bolt | 2 | alloy steel | ASTM A-354 Grade BD | 206 |
| 26 | spring flange | 1 | carbon steel | ASTM A-515 Grade 70 | 115 |
| 27 | set screw | 4 | steel | AISI 4037 | 205 |
| 28 | packing gland | 1 | heat treated steel | ASTM A-105 Grade 2 | 135 |
| 29 | packing rings | 10 | high temperature packing | John. Crane 187-IX | 508 |
| 30 | junk ring | 1 | C. Dr. Carbon St. -Stellited | ASTM A-103 Grade C-1018 | 120 |
| 31 | bonnet gasket | 1 | stainless steel and asbestos | spiral wound | 518 |
| 32 | Pneumatic Control System | 1 | | Numatics | 999 |
| 33 | Spacer | 1 | seamless carbon steel | ASTM A-106 Grade B | 118 |
| 34 | electrical cable | 6 | Chromalox Pyrotencax | Type MI Cable | 999 |
| 35 | Disk lock pin | 1 | C. Dr. carbon steel | ASTM A-103 Grade C-1018 | 120 |
| 36 | stem disk pin | 1 | C. Dr. carbon steel | ASTM A-103 Grade C-1018 | 120 |
| 37 | disk | 1 | forged alloy steel-stellited | ASTM A-182, Grade F11 | 227 |
| 38 | stem disk | 1 | forged alloy steel-stellited | ASTM A-182, Grade F11 | 227 |
| 39 | universal ring | 1 | alloy steel | AISI C-4140 | 236 |
| 40 | spring divider | 4 | C. Dr. Carbon Steel | ASTM A-103 Grade C-1018 | 120 |
| 41 | pipe nipple | 1 | seamless carbon steel | ASTM A-106 Grade B | 118 |
| 42 | drain boss | 1 | C. Dr. carbon steel | ASTM A-103 Grade C-1018 | 120 |
| 43 | pipe nipple | 1 | seamless carbon steel | ASTM A106 Grade B | 118 |

LIST OF MATERIALS FOR
FIG. 1612 JMMY VALVE

 **Rockwell**
MANUFACTURING COMPANY

| | | | | | | | | |
|----------------|------|-------|------------|------------------|-------------|----------------|-----|------------------|
| TYPED BY MH | DATE | CHK'D | APP'D J | DATE 12/16/63 | SPEC. IDENT | SHT. 2 of 2 | REV | ORG. D-449336 |
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