

Regulatory Docket File

UNITED STATES ATOMIC ENERGY COMMISSION



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IN THE MATTER OF:

CONSOLIDATED EDISON COMPANY OF NEW YORK, INC.

(Indian Point Station, Unit No. 2)

Docket No. 50-247

**RETURN TO REGULATORY CENTRAL FILES  
ROOM 018**

Place - Croton-on-Hudson, New York

Date - 12 January 1972

Pages. 4594 - 4751

Regulatory Docket File

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UNITED STATES OF AMERICA  
ATOMIC ENERGY COMMISSION

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In the matter of:

CONSOLIDATED EDISON COMPANY OF  
NEW YORK, INC.

(Indian Point Station, Unit No. 2)

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: Docket No. 50-247

Springvale Inn,  
Croton-on-Hudson, New York.

Wednesday, 12 January 1972.

The above-entitled matter came on for further  
hearing pursuant to recess.

BEFORE:

SAMUEL W. JENSCH, Esq., Chairman.

DR. JOHN C. GEYER, Member.

MR. R. B. BRIGGS, Member.

APPEARANCES:

(As heretofore noted.)

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C O N T E N T S

<u>WITNESS:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>
John Lawler ) Gerald Lauer ) Harry Woodbury)	4689			
William J. Cahill, Jr.	4703	4712		
Bertram Schwartz	4716			

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P R O C E E D I N G S

1  
2 CHAIRMAN JENSCH: Please come to order.

3 I believe last evening the Applicant indicated he'd  
4 be ready to proceed with some further evidence.

5 MR. TROSTEN: Yes.

6 Mr. Chairman, the Applicant will be presenting  
7 additional testimony today in regard to the benefits to be  
8 derived from a testing license. We also intend to present  
9 additional testimony with regard to certain of the environ-  
10 mental effects of the testing operation.

11 Mr. Chairman, I would like to request --

12 MR. KARMAN: Pardon me. I just received a message  
13 there's an urgent call for me. Could I take three or four  
14 minutes?

15 CHAIRMAN JENSCH: Yes. At this time we will be in  
16 informal recess. We won't take a formal recess. We'll wait  
17 until you return.

18 (Pause.)

19 CHAIRMAN JENSCH: Mr. Karman has returned. Will  
20 you proceed?

21 MR. TROSTEN: Yes.

22 I was suggesting, Mr. Chairman, that we address  
23 ourselves first to the conference type aspects of the present  
24 session, because Applicant would like to ask for a brief  
25 recess -- three quarters of an hour after we conclude with

1 the conference type aspects---in order to confer with our  
2 witnesses prior to introducing further direct testimony.

3 I also wanted to call the Board's attention to the  
4 fact that in response to Mr. Briggs' question yesterday about  
5 the reactor pressure vessel we are seeking to have one or  
6 more Westinghouse witnesses available to the Board later this  
7 afternoon to respond to Mr. Briggs' question, and we ask the  
8 Board's indulgence in this respect so that we can have the  
9 appropriate people here to respond to the question and be  
10 certain that we can be responsive to what Mr. Briggs has  
11 asked for.

12 CHAIRMAN JENSCH: Well, if the session doesn't  
13 last that long maybe we can work out some arrangement to have  
14 it submitted in writing. If the people get here, fine; if  
15 they don't we don't want to sit waiting for their indefinite  
16 arrival.

17 MR. TROSTEN: Yes, I understand, Mr. Chairman.

18 One thing we could do, perhaps, if the Board is not  
19 willing to await their arrival perhaps -- I guess Mr. Briggs  
20 would be the best judge of this -- we might want to schedule  
21 a special session to consider this.

22 MR. BRIGGS: I believe we could, but it seems to  
23 me that they could provide an answer in writing that would  
24 be satisfactory.

25 MR. TROSTEN: All right, fine. Thank you.

1           CHAIRMAN JENSCH: I didn't quite understand your  
2 suggestion of a conference session. What is it -- do you want  
3 to have a recess to talk to your witnesses before you start  
4 any presentation this morning? Is that it?

5           MR. TROSTEN: Any evidentiary presentation, that's  
6 correct, Mr. Jensch. The reason why I'm suggesting this is  
7 the Board mentioned yesterday that it wanted to consider  
8 certain matters pertaining to official notice.

9           There are other aspects of the proceeding -- proced-  
10 ural aspects of the thing -- that it would be worthwhile for ,  
11 us to discuss today. I'm referring particularly to the matter  
12 of findings and conclusions and closing the hearing record  
13 so that the parties can proceed to take all those steps that  
14 are necessary to bring the record to a state of completion for  
15 the Board's consideration of a fifty percent testing license.

16           CHAIRMAN JENSCH: We will discuss all those matters.  
17 It might be well to start with that.

18           In the meantime, I don't know who could be talking  
19 to or finding out what your witnesses are planning to present,  
20 but we would rather not take a witness preparatory session  
21 out of the hearing time for today.

22           If you have talked to your witnesses or know what  
23 they are able to present this morning let's go ahead with  
24 them right on the stand, or whatever you desire.

25           MR. TROSTEN: What I would like to do, Mr. Chairman,

1 as I say, I would like to have a brief period for further  
2 discussion with the witnesses before we actually go on the  
3 stand.

4 CHAIRMAN JENSCH: I understand.

5 MR. TROSTEN: And for this reason I would like to  
6 ask that we not go forward with the evidentiary presentation  
7 for approximately three-quarters of an hour. We are prepared  
8 to discuss anything else that the Board wants to take up this  
9 morning.

10 CHAIRMAN JENSCH: Well, we'll see if we can work  
11 it in. My thought is I do not want to take out of hearing  
12 time for matters -- I don't know what you were doing last  
13 night and this morning, but I know you are crowded for time;  
14 we all are -- my thought was we do not want to take up hearing  
15 time which is quite valuable while you talk to your witnesses,  
16 which you are of course entitled to do.

17 But let us see what we can do as we go along.

18 We'll start out with official notice, perhaps, this  
19 morning.

20 Let me make a partial statement in that regard, and  
21 both Mr. Briggs and Dr. Geyer will have some particular  
22 aspects of it to consider with you.

23 Let me discuss, if I may, some aspects of matters  
24 which have been set forth in the briefs and some matters which  
25 may warrant further consideration.

1           The official notice rule of the Commission is  
2 unusual. It does have its use in other agencies which have  
3 rules somewhat similar. But it's that one line in the rule  
4 that probably provides the greatest amount of difficulty, and  
5 that is that line that says that, "Any party may oppose a  
6 request that official notice be taken, and every party  
7 adversely affected by the decision is afforded an opportunity  
8 to controvert the fact."

9           I think some of the presentations that have been  
10 made so far have emphasized that an official notice rule, like  
11 a judicial notice rule, must be related solely to those  
12 facts which are universally accepted -- the sun will come up  
13 in the morning -- something that is quite well recognized.

14           If the administrative rule, the kind of which we  
15 have here for the Atomic Energy Commission, is intended to  
16 relate solely to such a transaction as the sun will come up  
17 in the morning then this further provision that judicial  
18 notice or official notice may be taken of any fact within  
19 the knowledge of the Commission as an expert body, and that  
20 a party would have an opportunity to controvert that fact,  
21 would have little use.

22           So something must be intended by that additional  
23 provision of permitting recognition of certain events or  
24 instances which have occurred and which, though they may be  
25 disputed, opportunity is given to parties to controvert those

1 facts.

2 Now, it's that phase of it that gives me a little  
3 concern, and I don't want to exclude from mention the quality  
4 of briefs that we have received. I made some reference to  
5 the Staff brief; I wish the Staff brief had covered a little  
6 more of this phase of it -- this one line; what does that mean,  
7 that a party can controvert the fact? Does that mean that  
8 official notice may be taken on something more than just that  
9 the sun will rise in the morning?

10 I want to mention that I think the other briefs  
11 by the parties are very good too, and the brief by the  
12 National Resources Defense Council emphasized the necessity  
13 in all proceedings of having the right of cross-examination  
14 which, to my mind, is a very fundamental, a very necessary  
15 part of whether it be a judicial or administrative proceeding.

16 Perhaps my inference is incorrect, but I had the  
17 impression that what the National Resources Defense Council  
18 was saying was that that phase of it -- controverting facts --  
19 may not be enough for due process, and that the right of  
20 cross-examination must be provided in some way.

21 If these laboratory reports to which the Environ-  
22 mental Defense Fund and the Citizens' Committee have directed  
23 our attention require that cross-examination be provided, then  
24 it looks like we're perhaps either on a tour to the laboratories  
25 or we are going to try to catch them at the rule-making

1 proceeding.

2 But there are other aspects of these laboratory  
3 reports, and I am anxious, from the interpretive point of view  
4 of this rule, to ascertain if there are any decisions by the  
5 administrative agencies which have a rule something like  
6 this at the Atomic Energy Commission, as to what do they mean  
7 by the opportunity to controvert the fact of which official  
8 notice has been taken, such fact being within the knowledge  
9 of the Commission as an expert body.

10 Now, the Staff has pointed out that a laboratory  
11 report prepared by a contracting agency does not necessarily  
12 mean that those developments in the laboratory are automatically  
13 within the mind or the knowledge of the Commission as an  
14 expert body. It may be that there should be some formal  
15 recognition or adoption by the Commission of laboratory  
16 reports in some way before those developments can be  
17 considered to be within, as the rule provides, "the knowledge  
18 of the Commission."

19 Now whether that has been accomplished or not by  
20 the fact that the Commission has made some emergency core  
21 cooling criteria or issued interim emergency core cooling  
22 criteria, or has set up a rule-making proceeding, whether  
23 those two in combination, or either one or both, would  
24 constitute the kind of recognition by the Commission of the  
25 existence of these facts the interpretation of which may be

1 very different than the laboratory experimenters. But  
2 nevertheless it indicates that there's been some recognition  
3 by the Commission beyond the scope of just a laboratory  
4 report.

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1 Now there are disclaimers, I believe, in every  
2 laboratory report from the contractor under contract to the  
3 Atomic Energy Commission. That this is not a report therein  
4 identified does not necessarily mean that the Commission  
5 adopts any part of it, or whatever be the language. But we  
6 are a little beyond that stage for some of these laboratory  
7 reports because of the fact that the Commission has acted in  
8 reference to them, either by Interim Emergency Core Cooling  
9 Criteria or by the rule-making proceeding.

10 So does that mean that we have overcome the objec-  
11 tion or, rather, the suggestion of difficulty that the Staff  
12 points out in its brief, that laboratory reports alone are  
13 not sufficient to say that the fact is within the knowledge of  
14 the Commission? That phase is not covered in any of the  
15 briefs and I don't know that we're going to find anything,  
16 but it is a factor, I think, that the Board is going to con-  
17 sider.

18 Now if the suggestion of the Natural Resources  
19 Defense Council is as I infer it is, there is a very serious  
20 question here as to how adequate cross-examination has been  
21 provided for by the rule and indirectly thereby, there is a  
22 very serious "due process" question. Then I think it may  
23 indicate, at least in the mind of the Natural Resources De-  
24 fense Council, that this part of the official notice rule is  
25 not valid and that it should not be used as a controlling

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1 guide for direction and taking official notice.

2           However valid that contention might be, a regulatory  
3 group such as the Atomic Safety and Licensing Board must  
4 accept the regulations as written. We hear that suggestion  
5 applied in many other types of situations where, whatever be  
6 the Board's view of the matter, if a regulation specifically  
7 covers the transaction then the Atomic Safety and Licensing  
8 Board must conform to that regulation in all respects.

9           So if the Natural Resources Defense Council is  
10 suggesting that this provision enabling the party adversely  
11 affected to controvert the fact is not valid, it does not  
12 assist this Board because this Board would have to give force  
13 to the language of the regulation as written.

14           Which brings us back to the problem that I tried to  
15 state at the outset, that something must be intended, some-  
16 thing must be thought to be provided and be expected to be  
17 carried out, and if there are technical facts within the know-  
18 ledge of the Commission, official notice may be taken thereof  
19 and the person who disputes those facts will have an oppor-  
20 tunity to controvert them.

21           Now the language is specific in the regulation deal-  
22 ing with facts, not interpretations, and it may be that many  
23 of the laboratory reports they have considered within the  
24 knowledge of the Commission may have interpretations which  
25 cannot be accepted within the scope of this "official notice"

eb3

1 rule.

2 So I think we are dealing then solely with facts.  
3 secondly within the knowledge of the Commission and thirdly,  
4 such facts as would be of such a character to enable the  
5 party adversely affected to prove the contrary if he desires.

6 I am anxious, and I will endeavor to research this  
7 situation as to whether that particular part of the rule has  
8 found any expression in other administrative agency decisions.  
9 There are, I think, at least two other agencies that have  
10 language in "official notice" rules somewhat like this of the  
11 Atomic Energy Commission.

12 Now that is my problem.

13 Mr. Briggs has some problems he would like to men-  
14 tion.

15 MR. BRIGGS: I guess this first is not really a  
16 problem. Mr. Jensch mentioned the disclaimers that are in-  
17 cluded on reports. It seems to me that several times the  
18 Applicant and the Staff have mentioned the report of the Task  
19 Force on Emergency Core Cooling, and I am not sure all copies  
20 are the same but there is the legal notice that is the dis-  
21 claimer.

22 Not only that but this particular report has a  
23 special disclaimer on it which says that "The views expressed  
24 in the report do not necessarily represent those of the  
25 United States Atomic Energy Commission, its Divisions or its

eb4

1 Offices."

2 This seemed a little bit unusual to me. If it is  
3 generally concluded that the position stated in the report  
4 supports the position that the Applicant and the Staff have  
5 taken, but that's beside the real point here that I was con-  
6 cerned with.

7 I have taken some time to look at least quickly  
8 through some of the reports that we have been asked to take  
9 official notice of and it seems to me that it will be impor-  
10 tant for the Intervenors to point out what point they wish to  
11 make by our taking official notice of each one of the reports  
12 and in some way, how this report supports their position.

13 For instance, let's take AML-6548 which is the  
14 Baker-Just report. As I remember Mr. Ford's cross-  
15 examination, one of the points he seemed to be making was  
16 that this report dealt with molten Zircaloy; that it was  
17 important to know Nussult numbers and things like this in  
18 calculating mass transfer coefficients.

19 And this suggested that possibly the Baker-Just  
20 relationship was inapplicable in this case.

21 As I look at the report, there are two parts to  
22 the Baker-Just report. There is a part in which the mass  
23 transfer through the gas film around the molten drops con-  
24 trols the rate of reaction, the rate of metal-water reaction,  
25 if you wish.

eb5 1 And then there is a second part of the report  
2 where a relationship is proposed, a parabolic law is proposed  
3 for the situation when an oxide film has formed on the molten  
4 metal and the metal may then actually be solidified and then  
5 it is this relationship that is used in calculating the metal-  
6 water reactions for the Indian Point 2 plant.

7 And not only is the relationship shown but there  
8 are some data shown, not Baker-Just data but other data,  
9 shown at temperatures I believe as low as 1800 degrees  
10 Fahrenheit which the authors say support their relationship.

11 So the question then becomes one of what is it in  
12 this particular report that the Intervenors wish us to con-  
13 sider if we should take official notice of it?

14 There are other reports which contain mixtures  
15 of analysis, data, and I suppose in some cases, speculation.  
16 For instance, ORNL-TM-3263 is a bi-monthly progress report  
17 from Oak Ridge National Laboratory. We were asked to take  
18 official notice of pages 1 through 28. Pages 2 through 6,  
19 for instance, have an analytical procedure worked out. There  
20 are no data there.

21 Pages 7 through 14 contain analysis plus data.  
22 Pages -- I believe it is -- Yes, pages 15 through 20 contain  
23 description of a blowdown test with a seven-rod bundle in  
24 Lawson's apparatus. I believe Lawson's experiments and his  
25 apparatus have not been mentioned in the cross-examination

eb6

1 or in any of the evidence that was provided in the record.

2 So one is inclined to ask, what is it in this part  
3 of the report, for instance, that the Intervenors would like  
4 for us to look at?

5 So I think my problem is that I would like for more  
6 specific reference to be given to the parts in the reports  
7 that we are to take official notice of, and some relationship  
8 between these parts of the report and the Intervenors' con-  
9 clusions or concerns.

10 CHAIRMAN JENSCH: Let me just add one further  
11 problem that I think has been emphasized by Mr. Briggs in his  
12 statement.

13 While we do commend the parties for their endeavor  
14 throughout the hearings to develop mechanisms by which each  
15 party can easily proceed in the presentation of evidence,  
16 there are certain effects that develop when some of the acti-  
17 vities in the proceeding that relates to the fact  
18 that there has been a waiver by many of the parties of the  
19 use of these reports as a basis for cross-examination.

20 And the reference both by the interrogator and by  
21 the witnesses to several of these reports show that if this  
22 record -- and assume this for a moment -- were to be reviewed  
23 by a group other than just the Atomic Safety and Licensing  
24 Board or the Appeal Board or the Commission -- if a review  
25 were made of this record, there are references in the transcript

eb7

1 to documents and some reviewing group might say, "Well, let's  
2 take a look at those documents. They've been used by the  
3 parties all throughout the hearing."

4 And yet when formal inclusion of the content of  
5 these documents is considered and there is objection at that  
6 late time to a reference to the documents, I think the kind  
7 of partial record that we have here in this proceeding, I  
8 think that raises some separate problems.

9 Let me go a little step farther, and I don't mean  
10 to develop another range of subjects but of course the offi-  
11 cial notice that we are talking about is related to the  
12 emergency core cooling system and in the responses by the  
13 parties here, the Board would like to have the parties con-  
14 sider this statement by me at least as a layman -- perhaps I  
15 don't say it correctly from a technical point of view, but we  
16 are considering here solely one -- let me say initial endeavor  
17 by the Applicant in reference to this plant and that is for a  
18 testing license.

19 I has been my imporession -- and I ask to be  
20 corrected not only by my technical associates but by all the  
21 parties here -- that the emergency core cooling system in the  
22 proposed testing operation and under the conditions described  
23 by the Applicant, the emergency core cooling system serves a  
24 different purpose and has a different -- maybe this isn't the  
25 word -- "capability" than is required for a full power or

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1 long-time power operation.

2 Now as the Applicant has calculated the tempera-  
3 tures for this testing operation, it may be in a temperature  
4 concern much different than a higher power or full power or  
5 long-time power operation.

6 Furthermore, the rods, the fuel rods may not de-  
7 velop, as I understand the calculations by the Applicant,  
8 may not have the pressures within them that would lead to any  
9 bursting for the period of time contemplated for a testing  
10 operation at the temperatures calculated by the Applicant,  
11 and all of which may mean that there would not be a large  
12 fission product inventory that developed during the proposed  
13 testing operations which, of course, would be the basis for the  
14 contention of any large release of radioactivity.

15 Now the Board is anxious to learn from the Inter-  
16 venors wherein this record -- wherein the evidence in this  
17 record disputes those calculations by the Applicant in refer-  
18 ence to temperature and pressure and fission product inven-  
19 tory which would indicate in this record that the same con-  
20 cerns are present for testing operations as for higher power,  
21 long-time operation or full-power operation.

22 As we understand the contention which will be made  
23 by the Citizens' Fund for the Protection of the Environment,  
24 they feel that there is a very distinct similarity in tempera-  
25 tures and pressures and fission product inventory in the

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testing operation and in the higher power, long-time operation, and the record must show that to support that contention.

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1 Now, we don't expect the Intervenors to identify  
2 the record of this today of where their contentions can be  
3 supported in that record, but we do request Intervenors to  
4 submit documentary material by way of brief or summary that  
5 will give us specific transcript page, documentary reference or  
6 other reference in the record for data to support their contentions  
7 in reference to the concerns for the testing operation as  
8 calculated and proposed by the Applicant.

9 With that, I believe the Board has exhausted its  
10 statement at the moment of official notice and the parties are  
11 invited to comment, discuss, dispute, inform.

12 Proceed.

13 MR. TROSTEN: Mr. Chairman, I am prepared to discuss  
14 the various comments that the Chairman made here and I do want to  
15 make a summary statement of our position.

16 CHAIRMAN JENSCH: We would be glad to have a further  
17 brief.

18 MR. TROSTEN: Fine, we would be glad to do that.

19 With regard to the matter of what the meaning of  
20 the statement in the regulation on official notice is that  
21 says that a party may controvert the fact by exceptions to an  
22 additional decision and that a party must have an opportunity  
23 to controvert a fact of which official notice is taken --

24 CHAIRMAN JENSCH: If advance notice has not been  
25 given.

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1           There are two exceptions in the decision. I think  
2 the opportunity to controvert the fact can be done in the  
3 hearing process if an indication is given that official notice  
4 will be taken.

5           MR. TROSTEN: The basic position we taken,  
6 Mr. Chairman, and which we believe is borne out by the history  
7 of the adoption of the official notice regulation is that  
8 this provision was included in the regulation to assure that  
9 a party against whom official notice is to be taken, so to  
10 speak, has the opportunity at all times to controvert a fact  
11 of which official notice is taken.

12           This does not mean that the official notice may be  
13 taken on facts which are not well known, which are very, very  
14 specific. It means that even if official notice is taken of  
15 a fact and even if that fact is relatively noncontroversial,  
16 then it is not permissible for a body to officially notice  
17 that fact and have that fact relied upon by the tribunal unless  
18 the party who chooses to controvert that fact is at all times  
19 given an opportunity to show to the contrary.

20           This is put in here as a basic procedure and  
21 safeguard to assure that at no time will a party be prejudiced  
22 by the fact that official notice has been taken without him  
23 being given an opportunity to show to the contrary.

24           CHAIRMAN JENSCH: We'll give you that assurance  
25 now because we would so intend. If official notice were taken

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1 and the Board is not making a decision, but if official notice  
2 were to be taken the opportunity to controvert the fact would  
3 be given to any party to this proceeding, and you may be  
4 assured that you would do that.

5 So you may dismiss that as a problem in your  
6 consideration.

7 MR. TROSTEN: Well, Mr. Chairman, there's another  
8 very fundamental aspect of this that we are attempting to make  
9 clear throughout our brief and that is that the right to  
10 cross-examine is not sufficient in our opinion to safeguard  
11 the Applicant's basic rights.

12 We have objected to the taking of official notice  
13 on several grounds. One of the basic grounds has been the  
14 very problem that Mr. Briggs and the Chairman have averted  
15 to today and that is that the scope of the documents of which  
16 official notice is requested to be taken is so broad and so  
17 vague that it would impose an absolutely unconscionable burden  
18 upon the parties, the Board in this proceeding for the Applicant  
19 in the first instance to be required to go through all of this  
20 and try to figure out what is significant and what is not sig-  
21 nificant and have to come forward with evidence to the contrary  
22 when no one really knows what we're supposed to go through.  
23 Well, that's one basic problem we have with it.

24 If the Citizens' Committee were to very specifically  
25 indicate, which is a point that Mr. Roisman and I have been

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1 arguing about in the past, exactly what facts official notice  
2 is to be taken of, I really think that we could have gotten  
3 faster on this point and we could have gotten to the heart of  
4 the problem that is troubling the Board, the Citizens'  
5 Committee and ourselves.

6 Now, the other basic problem we have other than the  
7 vast scope, some 2,000 pages of documents that the Board is  
8 asked to take official notice of, is the fact that we feel that  
9 merely cross-examining the offeror of this document may not be  
10 enough. He has to be put on the stand so that he can himself, spon-  
11 sor the evidence; the Citizens' Committee has got to be able  
12 to find a witness who is actually competent to sponsor this  
13 evidence.

14 Our being able to cross-examine, our being able to  
15 come forward and show something to the contrary is really not  
16 adequate.

17 CHAIRMAN JENSCH: May I interrupt a moment?

18 Perhaps you are familiar with the developments in  
19 the ECCS rule-making proceeding. I am not.

20 MR. TROSTEN: Yes.

21 CHAIRMAN JENSCH: I wonder, do you know if these  
22 experimenters will be witnesses in the ECCS proceeding?

23 MR. TROSTEN: I think that a great many of them  
24 will be, Mr. Chairman.

25 CHAIRMAN JENSCH: I mean something other than the

ln5

1 supervisor or the experimenter. Will the man who wrote the  
2 report, who conducted the experiment, will he be on the stand?

3 MR. TROSTEN: You are getting to our problem,  
4 Mr. Chairman.

5 Simply getting the man who signs his name to the  
6 report and saying to us, well, you can cross-examine him, that  
7 may not be enough for us. There needs to be a competent  
8 witness who can support these particular facts. Until we know  
9 what the facts are, it's very difficult for us to judge whether  
10 there is a competent witness available.

11 But this is one of our fundamental problems with  
12 this procedure. There has to be a witness available at all  
13 times to all parties -- I'm sorry, the witness who sponsors  
14 evidence must be competent to sponsor that evidence. Otherwise,  
15 our right to cross-examine is not effective.

16 CHAIRMAN JENSCH: In other words, you would feel then  
17 that it would not be enough to bring the supervisor  
18 or the experimenter to testify about the report, is that  
19 correct?

20 MR. TROSTEN: It might not be.

21 CHAIRMAN JENSCH: It almost follows that it would  
22 not be within the basis of your contention. You need the  
23 man who set up the experiment and he can be able to describe  
24 all the arrangements made.

25 MR. TROSTEN: Yes, this is quite true.

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1 Now, it certainly has been the case throughout this  
2 hearing that we have had witnesses testify who were supervisory  
3 witnesses, but we've always had available a person who could,  
4 if necessary, testify as to the details of a situation where  
5 required. And, in particular instances, where official notice  
6 is being asked to be taken here, I think it's going to be  
7 quite clear that the individuals who are responsible for those  
8 experiments, not just the man who signs the report and  
9 generally supervises the work of a division, must be available  
10 to testify to these things.

11 This is my general view, but, of course, I have to  
12 reserve, Mr. Chairman, until I can see what it is that the  
13 Board is actually being asked to take official notice of.

14 Frankly, at this point, I have not really got any  
15 idea what we're talking about because of the scope of the  
16 documents that have been offered. So that's one of my basic  
17 problems with this.

18 CHAIRMAN JENSCH: May I inquire, the Board has  
19 emphasized the Board has not made any decision, but supposing in  
20 these rule-making proceedings that they do not call the  
21 particular experimenters and that the supervisors alone are  
22 presented and they can probably discuss they knew the experi-  
23 ment was going on, they weren't present, but here's the report  
24 and you can ask him about the report and he will read you what  
25 is in the report, but that's about as far as he can go.

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1 Now, is it your thought that maybe if we do not  
2 take official notice and that these data from these reports seem  
3 sufficiently relevant that maybe we would have to get -- in  
4 order to get really valid evidence, to have the experimenters  
5 available for these facts that the Intervenor desires to have  
6 brought into the record. Is that your thought?

7 MR. TROSTEN: Well, Mr. Chairman, I don't mean to  
8 be evasive in responding to your question but I have difficulty  
9 frankly focusing on -- getting to the heart of this problem.  
10 Until I can see the particular --

11 CHAIRMAN JENSCH: I understand your problem is to  
12 what facts you want to be concerned with. I'm just talking  
13 about as a matter of foundation you need a witness who has  
14 done the work, really, to get valid evidence about the  
15 experiment, is that correct?

16 MR. TROSTEN: Generally speaking, that's correct,  
17 Mr. Chairman.

18 I think that there are instances where the nature of  
19 the facts that a supervisor could testify as to the facts. On  
20 the other hand, this might not be true in a particular case.

21 If we were talking about a very particular experi-  
22 ment and the Intervenor was relying on the results of a  
23 particular experiment, a very specific experiment, and there  
24 were serious questions, for example in the minds of  
25 Applicant's witnesses as to whether the experiment had been

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1 properly conducted or whether the instrument had been properly  
2 calibrated or all of the other things that might be involved  
3 in here, I really don't see how the Intervenor is relying on  
4 that particular experiment to support its case, how a  
5 supervisor would be appropriate in a situation like that.

6 CHAIRMAN JENSCH: Or vice versa.

7 If the Applicant is relying upon any details of an  
8 experiment -- well, I think you indicated you had the person  
9 present who had the details within his particular knowledge  
10 and could testify.

11 MR. TROSTEN: That has always been our position.

12 CHAIRMAN JENSCH: And you believe that's a better  
13 way to present the evidence?

14 MR. TROSTEN: Yes, sir, I do.

15 CHAIRMAN JENSCH: Very well.

16 Excuse me, proceed.

17 MR. TROSTEN: We've always taken the position that,  
18 we were presenting -- let me be clear about this, Mr. Chairman.  
19 We have taken the position that the nature -- that our wit-  
20 nesses have been the appropriate witnesses, that we have  
21 sponsored our testimony by people who were competent to testify  
22 with regard to this.

23 We have always had available to the Intervenors  
24 competent witnesses to be cross-examined with regard to the  
25 details of our testimony.

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1 CHAIRMAN JENSCH: You may proceed.

2 I don't want you to cover everything that I know  
3 you want to put in a brief, but if you can just summarize.

4 MR. TROSTEN: I will summarize our other points,  
5 Mr. Chairman.

6 I do not feel that the fact that the documents  
7 have been taken into account by the Commission in connection  
8 with the ECCS Interim Criteria and are being taken into  
9 account again in connection with the public ruling hearing  
10 gives these documents any different status in terms of official  
11 notice.

12 There is no dispute among the parties that many of  
13 the document, at least, were considered by the ECCS task force,  
14 were looked at by the ECCS task force.

15 CHAIRMAN JENSCH: Do you think this might be a  
16 subject that you could certify? Has it been passed upon by  
17 the Commission?

18 MR. TROSTEN: I don't think it needs to be certified,  
19 Mr. Chairman. The reason why I don't think so is that I feel  
20 that the law that we have presented to the Board in our briefs  
21 makes it quite clear that because an agency may know about --  
22 the agency, people in the agency, the commissioners, the  
23 Commission Staff are familiar with all of the basic texts on  
24 thermodynamics or what-have-you.

25 They have considered those in connection with the

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1 ECCS criteria. That doesn't mean that the Board can take  
2 official notice of everything that is in a textbook on thermo-  
3 dynamics.

4 CHAIRMAN JENSCH: Well, that's true.

5 But there isn't any doubt in your mind that the  
6 Commission knows about these experiments that are subject to  
7 the request for official notice, is there?

8 Yes or no, please.

9 MR. TROSTEN: I cannot say, yes, the Commission  
10 knows about every one of the documents that the Intervenor has  
11 cited. I do know because I received from the parties and the  
12 Board and have received from Mr. Karman a list of the documents  
13 that the ECCS task force considered that, yes, some of those  
14 documents were considered by the ECCS task force. That's  
15 really all I can say about it.

16 CHAIRMAN JENSCH: Well, the Commission has issued  
17 the emergency core cooling criteria and they mentioned the  
18 Idaho experiments. They must know about the Idaho experiments,  
19 do you not believe?

20 MR. TROSTEN: They must know about the existence  
21 of the Idaho experiments, yes.

22 CHAIRMAN JENSCH: And that's within their knowledge  
23 and they set down rule-making proceedings and they must know  
24 or else it must have come to their attention again about the  
25 Idaho experiments, do you not think?

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2 MR. TROSTEN: I certainly think so, Mr. Chairman,  
3 but that isn't the same thing. When I say that the Commission  
4 knows about that, that is not the same thing as saying the  
5 Commission know every single fact that was reported or knows --  
6 that the Commission agrees with or accepts every fact reported  
7 in those articles.

8 CHAIRMAN JENSCH: It isn't a question of agreeing.  
9 The rule doesn't say they have to agree with that, but it's  
10 in their knowledge. I think you're minimizing the capability  
11 of the Commission.

12 MR. TROSTEN: Well, Mr. Chairman, I don't think  
13 that the statement in the rule, or the fact within the  
14 knowledge of the Commission as a technical body, could possibly  
15 mean, sir, that if a report comes across the desk of an offi-  
16 cial in the agency that every fact that is reported down in  
17 that report is within the knowledge of that body.

18 It could not mean that.

19 CHAIRMAN JENSCH: Oh, no, I think we're beyond  
20 that because the Commission has acted specifically in reference  
21 for instance, to the Idaho reports in some capacity. Whether  
22 they agree or disagree, I do not know, but at least I know  
23 it is within their knowledge that the Idaho experiments have  
24 revealed certain things.

25 They have issued two important documents in reference  
to them. One, the Emergency Core Cooling Criteria and, second,

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1 the rule-making proceeding. Now, they may disagree entirely  
2 with those facts, but they know the facts exist.

3 MR. TROSTEN: But one could not argue, Mr. Chairman,  
4 that this rule could mean that an agency which knows of the  
5 facts and disagrees with the fact, has determined that the  
6 fact is not a fact, if you will, that somehow the Board can  
7 take official notice of that.

8 CHAIRMAN JENSCH: Well, I think the validity or  
9 nonvalidity of the relationship of the fact to a contention is  
10 yet to be established for determination in any proceeding, but  
11 this rule just requests or permits recognition of facts that  
12 have occurred.

13 Now, what you do with the facts, I think as  
14 Mr. Briggs points out, he wants the contentions of the Inter-  
15 venors and likewise we will request the expressions and  
16 response of the other parties as to what should be done with  
17 those facts.

18 I think that's the second step. The first is just  
19 to take official notice of facts.

20 Proceed, please, with your summary.

21 MR. TROSTEN: Another point that I want to mention  
22 concerns the matter of waiver; Mr. Chairman, we have briefed  
23 the matter of waiver in our latest brief to the Board. It is  
24 our view that the fact that cross-examination takes place with  
25 regard to a document in no way constitutes -- in no way

ln13 1 authorizes that document to be considered in evidence. We can  
2 find no authority, Mr. Chairman, where the proposition that  
3 the use of a document for cross-examination authorizes that  
4 document to be received in evidence or to be considered against  
5 any party.

6 CHAIRMAN JENSCH: I'll be glad to submit some  
7 references to you and have an opportunity to controvert the  
8 submittal.

9 MR. BRIGGS: Mr. Trosten, I think a part of the  
10 problem here is that many of these documents, much of the  
11 information that is provided in the documents originated  
12 after the calculations had been made for the Emergency Core  
13 Cooling System for the Indian Point 2 plant and there's no  
14 indication in any of the evidence that was provided in the  
15 record that these data were considered in designing the  
16 Emergency Core Cooling System.

17 They could not have been or in evaluating its  
18 performance and there is the problem then of deciding how  
19 new information gets into the Board's consideration when we  
20 have a decision like this to make.

21 MR. TROSTEN: Mr. Briggs, this gets to the basic  
22 question that we have briefed in our submission to the Atomic  
23 Safety and Licensing Appeal Board. We feel that -- of course,  
24 there is always new information occurring in a field such as  
25 this, and presumably the fact that this is a very significant

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1 matter and the Commission wants to assure that all information  
2 is properly taken into account is the reason for the Commission's  
3 schedule in the public rule-making hearing on ECCS criteria.

4 But it is our position that the Interim Criteria  
5 are legally binding, immediately effective regulations and we  
6 have briefed that to the Appeal Board and under the normal  
7 processes of administrative determination, this Board therefore  
8 must abide by the Commission's best judgment on this matter as  
9 defined by the Interim Criteria. And the Commission is going  
10 to review in a rule-making proceeding whether -- taking into  
11 accounts all considerations, any documents, any testimony,  
12 whether there is any reason to change the Interim Criteria.

13 Our position is that the Board, pending any change  
14 in the Interim Criteria, is bound by the Commission's regula-  
15 tions.

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1 CHAIRMAN JENSCH: Or until the matter is determined  
2 under certification, whether you can change rules in the  
3 course of a proceeding by starting another rule-making  
4 proceeding in reference to criteria -- that's why I think  
5 the certification procedure here is so necessary to what I  
6 understand to be the Commission's proposal that its determina-  
7 tion of the rule-making will apply to other proceedings.  
8 I think through the certification procedure that may well be  
9 accomplished in this proceeding. I'm not sure that without  
10 that a subsequent rule-making proceeding can be made retro-  
11 active to an existing proceeding. But I don't think we have  
12 that problem here.

13 MR. TROSTEN: There is at least one case involving  
14 the Commission where this was done and upheld by the Court  
15 of Appeals.

16 CHAIRMAN JENSCH: I don't know that that's quite  
17 the same situation.

18 MR. TROSTEN: Well, in any event that is my answer  
19 to your question, Mr. Briggs.

20 Now, as far as -- the only other thing I wanted  
21 to say, Mr. Chairman, and we will deal with these matters  
22 in our submission of findings and conclusions on brief --

23 CHAIRMAN JENSCH: Yes. In your additional brief  
24 anything supplemental to what you said today, rather than a  
25 repeat, would be helpful. Have you concluded?

1 MR. TROSTEN: Just one final point, Mr. Chairman,  
2 and that is that I think that what the Chairman has said makes  
3 it extremely important that we get on with the matter of  
4 filing and developing a schedule by the Board's order for  
5 submission of findings, conclusions and briefs; and I would  
6 like to discuss that with you and the parties later this  
7 morning.

8 CHAIRMAN JENSCH: Yes. What bothers me about  
9 your statement is that if what you say must be applied here  
10 then this whole proceeding will have to await the rule-making  
11 proceeding determination on emergency core cooling, and that's  
12 the problem. But I wonder if it's actually present and  
13 whether, for the purposes of this proceeding, official notice  
14 might be in a different category than I think you have  
15 indicated.

16 MR. TROSTEN: Well, again we have addressed this  
17 matter in our brief which was filed yesterday with the Appeal  
18 Board, Mr. Chairman.

19 We feel that the Commission has determined --

20 CHAIRMAN JENSCH: Will you give us a copy of that  
21 too?

22 MR. TROSTEN: Yes.

23 CHAIRMAN JENSCH: At your convenience -- and all  
24 other parties?

25 MR. TROSTEN: Yes; fine. I think we have copies.

1 CHAIRMAN JENSCH: If you will mail them to us that's  
2 enough.

3 MR. TROSTEN: I believe, Mr. Chairman, that the  
4 Commission has already determined in its supplemental notice  
5 of the rule-making that the existence of the rule-making  
6 proceeding is definitely not a basis for holding up pending  
7 proceedings and that boards are required to proceed on the  
8 basis of the existing criteria. That is covered in our brief  
9 and I won't expand on it here.

10 CHAIRMAN JENSCH: Thank you.

11 Do Intervenors desire to speak to this matter?

12 MR. ROISMAN: Yes, Mr. Chairman.

13 Let me begin by clearing up Mr. Briggs' problem,  
14 and this has been served on the Board yesterday. When we filed  
15 our brief before the Atomic Safety and Licensing Appeal Board  
16 we did specify the precise areas of the various documents  
17 that we did wish official notice to be taken of. We did it  
18 in the context of proposed findings of fact and conclusions  
19 of law on fuel rod swelling and bursting, since we felt that  
20 the Appeal Board would need to see those record references in  
21 order to understand why, with reference to the certified  
22 question number 2, that it should be concluded that the ECCS  
23 interim criteria do not preclude an examination into the  
24 question of rod swelling and bursting; that as a practical  
25 matter those references will be there. Mr. Trosten quit

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1 badgering me on the subject as I promised him I would do that  
2 by January 11th. Yesterday was January 11th.

3 In addition, in several discussions that I've had  
4 with our technical people they have concluded after reading  
5 a number of the documents and talking to a number of the  
6 authors of those documents on the question of metal-water  
7 reaction, in particular talking to Dr. Baker, that the Baker-  
8 Just equation is a valid representation of the metal-water  
9 reaction question.

10 Thus, as soon as I have an opportunity to get Mr.  
11 Ford to quit flying between his offices and Oak Ridge to  
12 prepare for the national ECCS hearing I will advise the Board  
13 of those documents that we no longer request official notice  
14 of, since we will not be making a contention of that aspect  
15 of metal-water reaction.

16 I think for the time being, with the exception of  
17 portions of ORNL-4635, and portions of BNWL -- I can't  
18 remember the number of it now -- that deals with the question  
19 of sprays and the spray removal, an issue which we have  
20 agreed will not be relevant on the 50 percent testing question,  
21 that the statement of documents that is listed in the proposed  
22 findings attached to the Atomic Safety and Licensing Appeal  
23 Board brief includes all of the specific references to  
24 documents.

25 The reason that we request official notice as to

1 all of the documents really goes back to how we got here in  
2 the first place, and why we are in this difficult position  
3 now. And I recognize that it is a difficult position. We  
4 felt that it would be improper to ask the Board to look only  
5 at line 3, page 4 of a 40-page document where there is a  
6 statement that supports our contention, and not at the same  
7 time look at the remainder of the document and consider the  
8 context in which that statement appeared. Obviously every  
9 single word in that doesn't necessarily support us. By the  
10 same token, we think it would be dishonest and it would be  
11 a discourtesy to the author of the report if we merely tried  
12 to excise out the most favorable portion. We would look more  
13 like a New York Times review of a movie, as shown on the  
14 marquee. And we felt that it would be more proper that the  
15 Board should see the entire document.

16 But how do we get to the point where we were put  
17 in the position of doing this? And I think that goes back to  
18 a point which we are briefing and will include in our proposed  
19 findings of fact and conclusions of law. And that goes to  
20 the question of what the Staff's responsibility was in this  
21 proceeding to begin with.

22 I think that my colleague, Mr. MacBeth, has briefed  
23 the question extremely well in his brief. The point that he  
24 makes there is that the Staff's fundamental responsibility is  
25 to bring to this Board all facts that bear on an issue. It

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1 is irrelevant whether the facts support the Staff's ultimate  
2 conclusion or oppose that ultimate conclusion. In fact,  
3 whether the Staff reaches an ultimate conclusion or not is  
4 really secondary.

5 What is primary is that they see to it that the  
6 Board and the parties are afforded an opportunity to see every  
7 fact.

8 What should happen and did not happen in this  
9 proceeding -- at least did not happen with regard to the  
10 radiological safety matters -- is that the Staff should have  
11 summarized every one of the documents that were relevant not  
12 only on the question of ECCS but on the other issues that were  
13 within the knowledge of the Commission; and we would have all,  
14 then had the pros and cons of this issue before us. Instead,  
15 the Staff's posture in the proceeding has been more the  
16 proponent of the issuance of the license, revealing the  
17 information that it felt supported its position and reluctantly  
18 discussing -- and never really coming forward with open arms  
19 and piles of documents voluntarily of information that it felt  
20 was contrary.

21 Perhaps the classic example is in this very area  
22 on ECCS. Mr. Karman, in response to a motion that we filed  
23 for production of documents if May, filed on August 25, 1971  
24 a letter. Attached to that letter was a list. The list is  
25 entitled, "Documents Consulted by Members of the ECCS Task

1 Force, March-June, 1971."

2 Now, the purpose of our request at the time was to  
3 find out all of the relevant documents that bore on interim  
4 criteria. I'm sure Mr. Karman, the Regulatory Staff, is fully  
5 aware of that.

6 On the 28th of December, 1971 the Regulatory Staff  
7 filed another document -- not in this proceeding, but in a  
8 national proceeding for the emergency core cooling system.  
9 That list is entitled, "List Based on the File Search of  
10 Documents Considered by ECCS Task Force Members other than  
11 Internal Memoranda." I won't go through the difference in  
12 the list, but I would simply say that in the list provided for  
13 the national hearing there are 249 references. There is  
14 considerably less than that in the list that was provided by  
15 the Staff in our proceeding.

16 Included in the list that was provided on December  
17 28, 1971 is virtually every document of which we requested  
18 official notice, including -- beginning on page 15 -- a listing  
19 of most of the journals to which we referred: the Crest  
20 Journal, the articles by Rittenhouse in Nuclear Technology,  
21 the Nuclear Safety article -- all of these articles were also  
22 mentioned in here. Also looked at by the ECCS Task Force --

23 CHAIRMAN JENSCH: Excuse me. You're in that  
24 national proceeding are you?

25 MR. ROISMAN: Yes, we are.

1                   CHAIRMAN JENSCH: Is Dr. Rittenhouse going to be  
2 a witness?

3                   MR. ROISMAN: He is. And Mr. Lawson and Mr.  
4 Cottrell and a number of the other people from Oak Ridge who  
5 have been concerned with these problems are either scheduled  
6 to be witnesses or have been indicated on a list provided by  
7 the Staff will be available to be called as witnesses if  
8 wished by the parties. In addition, assurances have been  
9 given privately by the General Counsel of the Atomic Energy  
10 Commission and the Director of Regulation that without  
11 requiring the use of subpoenas that it will be the position  
12 of the Staff that unless it is their feeling that the  
13 information being requested is clearly redundant that they  
14 will be making available all the witnesses that the parties  
15 feel are important to have, whether they be -- if Mr. Trosten  
16 had chosen, as Consolidated Edison did not, to participate  
17 as a party in that emergency core cooling system hearing they  
18 would have had an opportunity to say as to any one of these  
19 reports, "We do not want to hear from Rittenhouse; he is only  
20 the boss," assuming that that is applicable to the reports  
21 that Dr. Rittenhouse's name is on, and "...we want to see the  
22 person who actually performed the experiment." And it's  
23 my understanding from the General Counsel of the Atomic  
24 Energy Commission that that request would be honored as long  
25 as there was merit in it, and that the person who actually

1 stood in front of the test tube at the moment that the  
2 particular calculation or observation was made would be brought  
3 forward and there would be an opportunity to controvert him.

4 CHAIRMAN JENSCH: May I interrupt?

5 In a case that had pre-hearing conferences, a pre-  
6 hearing conference last week, the suggestion was made that Mr.  
7 Chief Justice Burger when he was Judge Burger in the Court of  
8 Appeals in the case of Office of Communication of the Church  
9 of Christ vs. the Federal Communications Commission decision ---  
10 I think there were two decisions rendered -- one something  
11 like 396 Fed. 2nd and the other, which is more direct in point  
12 here, I think was 425 or 412, Fed. 2nd --

13 MR. ROISMAN: 425 Fed. 2nd.

14 CHAIRMAN JENSCH: -- in which Judge Burger said  
15 an intervenor who is seeking some facts must be treated as  
16 an ally rather than as an opponent, and it was incumbent upon  
17 the Staff of the Regulatory Commission to seek out and develop  
18 facts that were relevant to the issues which were under  
19 consideration.

20 Now, it seems to me that what you are saying,  
21 Intervenors' Counsel, is that the General Counsel of the  
22 Atomic Energy Commission and the Director of Regulation have  
23 adopted that philosophy for the emergency core cooling  
24 proceeding; is that correct?

25 MR. ROISMAN: That certainly seems to be the case,

1 Mr. Chairman. Our dealings with him so far have indicated  
2 that all the facts will come out on the table, and that the  
3 Commission is prepared to have the chips fall wherever they  
4 ought to fall.

5 CHAIRMAN JENSCH: Well, now, I read some statement  
6 which was sent to us -- I guess by way of information -- from  
7 the Applicant in which there was some request, as I recall  
8 the statement, by Applicant's Counsel to the rule-making  
9 board to tell the Board in this hearing to not bother about  
10 official notice because this is all going to be taken up in  
11 the rule-making proceeding. And I wonder where we are in  
12 that regard?

13 My problem is this: there should not be duplication  
14 If these facts are going to be developed, and if they are  
15 relevant to emergency core cooling considerations, what can  
16 we do to get those facts in this record? Or if we don't do  
17 it through official notice what mechanism, what procedures  
18 are available? We cannot move the Commission that we  
19 consolidate this hearing with that one.

20 And yet if these facts are as important for  
21 emergency core cooling criteria determinations, while I  
22 appreciate the Commission has requested that these matters  
23 go forward, we do have a certification in this proceeding  
24 asking for guidance. And while I think that for the testing  
25 license as to which I take it the parties will consider later,

1 we're in a little different position -- I don't want to  
2 mis-speak for my colleagues at all in kind of a layman's  
3 language on this -- but I have the impression from the  
4 transcript and my understanding of the situation that maybe  
5 the emergency core cooling situation for a testing operation  
6 is kind of a different category. And as to that we are open--  
7 or I am open to be persuaded.

8 But I just wonder as to the balance of your  
9 request for the next power that you seek to have authorized,  
10 whether that doesn't necessarily mean that somehow we should  
11 get some of those facts that will be developed in the rule-  
12 making proceeding into this proceeding, either by a duplicative  
13 effort, a duplicative procedure, or moving to incorporate  
14 something. If you folks were a party to the rule-making  
15 proceeding, maybe you would feel you would have the opportunity  
16 to participate in all respects, so that you could accept the  
17 record more readily by way of incorporating what is developed  
18 without waiting, I may say, for a decision by perhaps the  
19 Commission, since we are to go ahead anyway, without waiting  
20 for the decision by the Commission on the rule-making  
21 proceeding.

22 But the important concern is whether we get these  
23 facts into this record.

24 I think what the Intervenors are seeking to do  
25 here is either to get them in by official notice or find some

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1 way to do it. And I think if this were ever to get to be  
2 reviewed by Mr. Chief Justice Burger I think his philosophy  
3 about the fact that -- I think he used the language that the  
4 Intervenors are not interlopers in administrative agency  
5 hearings. I think we have to recognize that they cannot be  
6 treated as interlopers, or intruders in this proceeding.

7 So I just suggest that I think maybe some thought  
8 should be given to that. Not now, but in the course of your  
9 considerations as to what can we do about these facts. If  
10 they are important enough for the rule-making proceeding, why  
11 are they not important enough for the same kind of determina-  
12 tion, whether we arrive at the same result for this proceeding  
13 which is supposed to go forward without waiting for the  
14 Commission decision on emergency core cooling.

15 MR. ROISMAN: Mr. Chairman, let me say in regard  
16 to that suggestion that as counsel for 53 organizations who  
17 have consolidated their presentation to the national hearing  
18 on ECCS that we will not oppose the request of the Applicant  
19 to participate in that proceeding, even though it is out  
20 of time by a couple of weeks, if they choose to utilize that  
21 procedure.

22 As I say, I think we are aware that we are in a  
23 situation which is somewhat unique, because frankly -- and  
24 this is not a personal criticism; I think it's a problem of  
25 policy in the Commission -- I think the Staff has not done

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what the statute and administrative law would require it to do, and therefore we are now working with a number of alternatives each one of which has certain disadvantages to it.

And I think the Applicant's main concern is, its main motive is that it does not want anything to slow up its license.

It's really that where the focus is, that it is concerned that the licensing decision is going to be held up.

end 4

5 ebl

1                   And given that we expect cross-examination of the  
2                   very people who prepared these reports is to begin on the  
3                   27th of January or shortly thereafter, it seems to me that  
4                   there is an excellent opportunity, and I have suggested in a  
5                   letter to the Board in which it asked for-- I replied to  
6                   some material in the brief that was submitted by the Applicant  
7                   during the Christmas recess that we were perfectly happy to  
8                   utilize that national hearing as a vehicle for doing that and  
9                   not worry about, "Well, it isn't technically before this  
10                  Board."

11                  The contentions about those facts would be, in our  
12                  opinion, fully developed there, and I agree with the Board.  
13                  I think that what the Commission has said is that this Board  
14                  must then, however, get what facts it should get; it must  
15                  proceed ahead irrespective of what the Commission may ulti-  
16                  mately conclude in that national hearing.

17                  But I think that the suggestion that the Commis-  
18                  sion somehow or other has given its stamp of approval to the  
19                  Interim Criteria any more than what they did when they issued  
20                  them initially is incorrect. The critical language appears  
21                  at the very end of a Supplemental Notice that was filed on  
22                  the 8th of January with regard to the ECCS proceeding and it  
23                  says that:

24                                 "Notice should also be taken that the  
25                                 conduct of a rule-making hearing on the subject

eb2

1 matter of this notice will not affect the orderly  
2 resolution under the Commission's existing regula-  
3 tions."

4 It does not say that those regulations don't in-  
5 clude the memorandum in the Calvert Cliffs case which permit  
6 a challenge to regulations within certain prescribed proce-  
7 dures which this Board has utilized in this proceeding. It  
8 does not say, "Fellows, quit talking about the Interim Cri-  
9 teria. You don't have anything to say about them."

10 It very carefully says "orderly resolution under  
11 the Commission's existing regulations."

12 And I guess we could push for the theory that the  
13 only place that we are able to have the cross-examination  
14 of Dr. Rittenhouse and so forth take place is on this witness  
15 stand. I don't think that that would be "in the public  
16 interest," and we are prepared to utilize the existence of  
17 the other procedure.

18 Unfortunately, the Applicant at this time is not  
19 prepared, it appears, --

20 MR. TROSTEN: I should make an observation at  
21 this point. The Applicant is determined to participate in  
22 the rule-making proceeding.

23 CHAIRMAN JENSCH: As a party?

24 MR. TROSTEN: As a party; that's correct.

25 Now I do want to make it clear, however, that

eb3

1 our decision, however, --

2 CHAIRMAN JENSCH: How are we going to get those  
3 facts into this record?

4 MR. TROSTEN: -- our decision to participate, how-  
5 ever, as a participant as opposed to the previous statement,  
6 by way of limited appearance, does not mean, however, that we  
7 necessarily accept the suggestion that was contained in the  
8 letter from the Citizens' Committee to the Board of December  
9 30th, that we simply sort of incorporate wholesale portions of  
10 the ECCS transcript.

11 I stated this, Mr. Chairman. I stated our non-  
12 agreement with this general approach, generalized approach  
13 to the problem, in my letter to the Chairman of January 7th.

14 It may be that, subject to a very precise deter-  
15 mination of exactly what it is that the Board is required and  
16 permitted to consider-- Now this, Mr. Chairman, of course  
17 is the subject of your certification and the subject of our  
18 brief to the Atomic Safety and Licensing Appeal Board. Once  
19 a clear determination is made, we think it is very important,  
20 as the Chairman does, that a clear determination be made as  
21 to what the Board is to consider, it may be that utilizing a  
22 device for incorporating testimony or other factual matters  
23 from the rule-making proceeding into our proceeding would  
24 work.

25 On the other hand, some sort of a generalized

eb4

1 approach of "Let's take whole segments of this proceeding  
2 into our proceeding" we think is not going to work at all.  
3 It is going to have the same defect as taking wholesale notice  
4 of documents.

5 CHAIRMAN JENSCH: Well, let's let that mechanism  
6 be developed in the course of time, but I'll appreciate it  
7 if you'll give some thought to it.

8 Let me just ask that we go specifically to the  
9 issue we have here. We are trying to focus solely on this  
10 motion for a testing license.

11 Now, Intervenor, let me ask you, is it your impres-  
12 sion that the emergency core cooling system-- I want to use  
13 the right words here -- has the same purpose or has the same --  
14 must necessarily have the same capability for a testing  
15 operation as to the higher-power operation, my thought being  
16 this:

17 Is there any objection to going ahead with this  
18 testing operation and then stop it until we have made some  
19 further determinations and heard some further evidence in  
20 the proceeding?

21 MR. ROISMAN: Yes, Mr. Chairman.

22 Let me say this: First of all, I believe that,  
23 whenever called upon, the emergency core cooling system  
24 serves the same function. If there should be a loss-of-  
25 coolant accident, it can occur when the plant is at 1 percent.

eb5

1 10, 20, 30, 40, 50, 100, steady-state operation or otherwise.

2 In the early days-- Particularly in the early days  
3 of testing, the fission product inventory in the reactor is  
4 small and the consequences of a loss-of-coolant accident would  
5 be less severe; not to say that they would not be severe but  
6 they would be less severe. If the emergency core cooling  
7 system, when that accident occurred on the third or fourth  
8 day of testing, if it should happen, were called upon to  
9 operate and failed, the consequences would be, as I understand  
10 them, -- would still involve the meltdown of the core.

11 The temperatures involved without any emergency  
12 core cooling system to operate would still involve nothing to  
13 keep those -- the residual heat of those fuel rods from  
14 causing a disintegration of the exterior jacket of the rod.

15 Now it is conceivable that at some place -- and  
16 I don't have the computations, and when we submit our proposed  
17 findings of fact and conclusions of law we will have a  
18 section that will relate to generalized proposed findings of  
19 fact and conclusions of law to the question of testing.

20 It may be that up to 20 percent of testing, we  
21 don't have enough residual heat such that if the ECCS failed,  
22 the fuel rods, just left to themselves, with no water there,  
23 could reach the melting point or reach the critical point.  
24 But it is my understanding that at some point along the line  
25 before you reach 50 percent, you do have a problem that if the

eb6

1 ECCS does not function, then you can have that problem -- then  
2 you have that difficulty.

3 CHAIRMAN JENSCH: Does this record show that?

4 MR. ROISMAN: That if the ECCS does not function?  
5 Yes, it is my understanding that if the ECCS does not function  
6 this record shows that the fuel rods could melt if you had a  
7 loss-of-coolant accident at the 50 percent level or even per-  
8 haps some level under that.

9 CHAIRMAN JENSCH: Will you give us the specific  
10 references?

11 MR. BRIGGS: There are several questions here. One  
12 is, if it does not function at all, if no water gets to the  
13 core from anywhere, then certainly at some level one would  
14 expect meltdown.

15 Now there's the question of how seriously can the  
16 performance of the emergency core cooling system be degraded  
17 and still provide protection against meltdown, and it seems  
18 to me that one has to differentiate between these two.

19 MR. ROISMAN: Yes.

20 I had meant to say, Mr. Chairman, -- and I wanted  
21 to explain it fully -- that we are dealing with a gradation  
22 here. The Applicant comes in with the burden of establishing  
23 reasonable safety of the plant. The Applicant is more able  
24 to meet the burden that the ECCS will function to some  
25 extent than it is able, in our opinion, to meet the burden

eb7 1 that it will function to the extent that they claim it will  
2 function and that from the standpoint of the Board, you will  
3 be dealing with a gradation, if you will, of probability be-  
4 tween total failure of the ECCS versus failure of the ECCS to  
5 operate in the manner in which the Applicant has predicted  
6 that it will operate.

7 So there is no doubt that on the 50 percent testing  
8 the Board could conceivably reach the conclusion that as to  
9 this aspect, if all the Applicant wanted to do was to test  
10 the reactor at 50 percent, maybe they provided enough proof  
11 there although you might subsequently conclude that at 100  
12 percent full power, the question marks that existed on the  
13 ECCS performance were sufficient to begin to raise problems.

14 Another aspect of this is that the Applicant has  
15 computed what fuel rod temperatures will be in a loss-of-  
16 coolant accident, based upon assumptions which we have been  
17 challenging in the proceeding not assumptions which is the  
18 case of the 50 percent testing would necessarily involve  
19 challenges to the ECCS regulations.

20 But the Applicant has testified in response to a  
21 question by Dr. Briggs, I believe, that the maximum high  
22 temperatures would be between eleven and twelve hundred  
23 degrees Fahrenheit. That's assuming the validity of the  
24 FLECHT heat transfer data. That's assuming that the per-  
25 formance of the emergency core cooling system would be as

eb8

1 they predicted with the same flowage through the core.

2 If that did not occur, if that flowage did not  
3 occur then, even though rods swelling and bursting would not  
4 initially initiate a distortion of the core, there would be  
5 some movement of the water from the hot spot through the cooler  
6 regions of the core. The hot spot would not stay at eleven  
7 to twelve hundred degrees as the Applicant has suggested but  
8 might go to sixteen or seventeen where the swelling and burst-  
9 ing would become a problem even with the internal pressures  
10 that the Applicant has predicted would be applicable to the  
11 50 percent testing period.

12 So that in addition to the question of the per-  
13 formance of the emergency cooling system in -- if you will,  
14 in a simplistic sense, -- that is, can the water get to the  
15 core -- the kinds of problems that came up in the semi-scale,  
16 we have the additional problem that the Applicant's analysis  
17 of what the temperatures are going to be in the core following  
18 the loss-of-coolant accident and how the ECCS will perform  
19 are, in our opinion, based upon invalid assumptions or inade-  
20 quate evidentiary data to support the codes.

21 Now that attack is really the same, whether whether  
22 we are talking about a 50 percent testing license or a 100  
23 percent full power license. The same assumptions are being  
24 used. The same weaknesses, if there are weaknesses, exist in  
25 those assumptions. The same problems with the predictability

eb9

1 what fuel rod temperatures will be.

2 It would be our view that if we cast doubt on the  
3 validity of the Applicant's contention that in a 50 percent  
4 testing, a loss-of-coolant accident maximum fuel rod tempera-  
5 tures would be no more than eleven to twelve hundred degrees  
6 by showing that their calculations were not accurate, that  
7 the Applicant could not get a 50 percent testing license  
8 unless it came back with new data to substantiate that a more  
9 conservative evaluation of the 50 percent testing showed that  
10 they were still within the -- quote -- "safe region." -- un-  
11 quote.

12 At this point they have taken the eleven to twelve  
13 hundred degrees. They have made no other prediction or  
14 attempted to do a calculation based upon what we would think  
15 would be the more conservative approach.

16 If we throw down the eleven to twelve hundred  
17 figure, then I think that the burden becomes on the Applicant  
18 to come forward to show that he can find a figure which is  
19 beyond doubt, or beyond the doubt that the Board requires and  
20 still within the safe region. Maybe he can; I cannot say that.

21 Again, obviously the Applicant's task is substan-  
22 tially easier when we're talking about an initial prediction  
23 program of temperatures that are still eleven to twelve hundred  
24 degrees below the maximum permitted under the Interim  
25 Acceptance Criteria for Criterion No. 1.

eb10

1           Finally, is the question of what the Board has  
2 certified and that is Criterion No. 3. Irrespective of  
3 temperature, Criterion No. 3 suggests that the core must re-  
4 main amenable to cooling following a loss-of-coolant accident.  
5 And as I interpret Criterion No. 3, that's a performance  
6 criterion.

7           It does not say that the 2300 degrees Fahrenheit  
8 figure automatically assures that Criterion No. 3 is met. If  
9 so, there would be no reason to have the separate criteria.  
10 It implies that perhaps at a lower temperature it is possible  
11 that you could have distortion of core geometry such that the  
12 core would no longer be amenable to cooling, and that requires  
13 a different set of analyses to be done, and a different set  
14 of proof.

15           As you know, much of our attack in this proceeding  
16 has been not so much on the validity of Criterion No. 3,  
17 assuming our interpretation is correct, but rather upon the  
18 conclusion which the Applicant attempts to reach, namely,  
19 that it meets Criterion No. 3.

20           We claim it does not, that the core will not  
21 remain amenable to cooling following the loss-of-coolant  
22 accident.

23           Again in the context of 50-percent testing, it is  
24 more likely to remain amenable to cooling than it will be in  
25 the case of 100 percent full power, and it still will be a

eb11

1 problem at that level.

2 There are obviously some areas where we do not run  
3 in, in our opinion, into question questions of full power.  
4 One will be the exceeding of the 2300 degree Fahrenheit figure.  
5 Assuming that the core remains amenable to cooling, at this  
6 time we would not believe that the record would support a con-  
7 clusion that 2300 degrees Fahrenheit would be exceeded by the  
8 operation of the emergency core cooling system.

9 With the core remaining amenable to cooling but  
10 the Applicant at 100 percent full power, of course it's right  
11 at the 2300 degree Fahrenheit figure. If even one of its  
12 assumptions is only a fraction under conservative, then that  
13 alone would cause a violation of that. You are not at that  
14 borderline when you deal with the 50 percent test, so that  
15 issue won't really be a contention on the test.

16 In addition, now, the spray. That's the reason  
17 we have indicated our feelings on this. The effectiveness of  
18 the spray is still an issue in general but the specific conten-  
19 tion that we have to make with regard to the computation of  
20 off-site doses, based upon conclusions which we get from  
21 Dr. Burley's letters and testimony in this proceeding, is  
22 based on the theory that if you already know that you can  
23 expect something like 270 rems at a 720-hour dose following  
24 a loss-of-coolant accident with the spray functioning the way  
25 the Staff and the Applicant say that it will, and the filters,

eb12 1 that by changing those assumptions only slightly more con-  
2 servative, which we think is warranted by the data, you would  
3 exceed the 300 rem and the 10 CFR Part 100 standards.

4 That is not going to be the case when you're deal-  
5 ing with the fission product inventory that we're talking about  
6 here, so that that issue, as such, will not be in the proceed-  
7 ing.

8 But independent of this ultimate conclusion on  
9 safety, it seems to me that the Applicant puts forward certain  
10 propositions which-- It says, "We propose these propositions  
11 as being important to our victory." And we think that a  
12 number of those propositions are incorrect, that unless the  
13 Applicant files some sort of a modified statement on 50 per-  
14 cent testing that indicates that they can withstand, if you  
15 will, more conservative margins on those various issues, that  
16 our casting doubt on the validity of those assumptions is  
17 sufficient to deny the 50 percent testing license, absent  
18 some new proof from the Applicant.

19 For instance, the Applicant says that the filters  
20 in the building will operate, I believe at 70 percent of  
21 efficiency in terms of the removal of iodine. Now we believe  
22 that that figure is not adequately conservative; in fact,  
23 so does the Staff since they say that the operation efficiency  
24 is 10 percent.

25 Let's say that the proper operation efficiency is

eb13

1 neither of those, at least that there is sufficient doubt  
2 so that the Board is not prepared to say, "Yes, we are ready  
3 to go to 10 percent." The Applicant then has no evidence in  
4 the record to substantiate the fact that the filters will  
5 operate at an appropriate efficiency.

6 The Applicant does not have that until it comes  
7 back and says, "Well, for 50 percent testing we can withstand  
8 a filter that will operate with an efficiency of only 2 per-  
9 cent," and that the Intervenors' data does not cast any doubt  
10 on the 2 percent figure, even though it may cast doubt on the  
11 10 percent or the 70 percent figure.

12 So that those doubts, if you will, will still re-  
13 main valid in the 50 percent testing license so long as the  
14 Applicant does not come forward, if you will, with a whole new  
15 proposed set of findings of fact and conclusions of law in  
16 which it says, "We'll be extra conservative in all of these  
17 things to cover all the possible doubts that the Board might  
18 have about the points that the Intervenors raised."

End 5

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1           So much of what we will be arguing about are  
2 proposed findings of fact and conclusions of law which will be  
3 equally applicable to the 50 percent testing and the full  
4 power. As I said, to the extent that they won't, of course,  
5 we will identify those for the Board and we will identify the  
6 sections of the transcript.

7           To go back to official notice for just a second, I  
8 think really that we are not arguing here, perhaps the  
9 Applicant is still making the statement, but I don't think that  
10 there is really a genuine dispute that the documents here  
11 deal with matters that are relevant in the proceeding. That  
12 the reports that have been done at Oak Ridge and Idaho and  
13 Argonne and don't have in them material which is extremely  
14 relevant.

15           If we doubt it, the very fact that the Commission  
16 used it in preparing the Interim Criteria and uses it as the  
17 basis for the considerations now at the national hearings  
18 would seem to resolve that. What we are doing is looking for  
19 a mechanism by which this Board can get that relevant  
20 information before it. And in the course of the cross-  
21 examination and in the course, I'm sure, of the Board's own  
22 development of general knowledge in the area, much of this  
23 information is already in the Board's mind, if you will.

24           They are already thinking about it. In a way,  
25 the Applicant, it seems to me, is far better protected by the

ln2 1 Board, say, yes, here's what we are looking at and here is  
2 what we are looking at and would you like an opportunity to  
3 come forward and say something contrary before we reach a  
4 conclusion that we are just not persuaded that this thing is  
5 safe enough.

6 Now, the Applicant says that the opportunity to  
7 controvert is not enough of a protection. And let me say  
8 that in the article in the Harvard Law Review which we cited  
9 in our second brief by Davis, he indicates that the opportunity  
10 to controvert official notice can in appropriate circumstances  
11 include the right to cross-examination, but they are not  
12 antagonistic to each other but that you use only as much  
13 controversion as seems appropriate for the particular fact  
14 that is being noticed.

15 The Applicant says, well, cross-examination is not  
16 enough because you need to have the people who actually did  
17 the experiments. Out of those 2,000 pages of documents, the  
18 Applicant has significantly refused to show any example of  
19 where it would have had a question in which the author of the  
20 report would not have been adequate or, for that matter, in  
21 which merely controverting it by its own expert would not have  
22 been adequate to challenge the document.

23 I can only assume that that's because the Applicant  
24 has not found an example to substantiate his general claim of  
25 it. It now has in its hands the specific portions of each of

ln3 1 those documents that we are concerned with and if it chooses  
2 I assume in the supplemental brief that the Applicant is going  
3 to file, it may be able to show the Board who it would have  
4 wanted to hear other than its own witness to controvert the  
5 allegation, or other than the person who signed on the report.

6 But I find it surprising to hear the Applicant  
7 discuss the burden of having to cross-examine this huge volume  
8 of information. There's substantially less information in  
9 those documents than there are in that Final Safety Analysis  
10 Report, which the Applicant filed, which was accepted in evidence  
11 and which was then subject to our cross-examination.

12 Our reading of the document, our finding all the  
13 weaknesses, and I very strongly take exception to the Appli-  
14 cant's allegation that it has produced in every instance the  
15 people who actually prepared the particular part of the report  
16 and remind the Board of that portion of our hearings in  
17 November when we asked again and again to have brought to this  
18 hearing room the man that prepared the regression analyses on  
19 the single and multi-rod burst tests and time and again,  
20 Mr. Moore, who is not a mathematician, who did not prepare  
21 those regression analyses went out to the telephone and called  
22 Pittsburgh and talked to somebody and came back and we kept  
23 getting told, this is the best you are getting. This is all  
24 you're going to get. Talk to Mr. Moore.

25 Now, the Applicant simply has not produced those

ln4

1 underlying people. What they have produced are the top men in  
2 their various departments who know the general field and who are  
3 prepared to testify about it and in many instances they have  
4 been more than adequate, but even yesterday Mr. Marubbio sat  
5 there and described to us the fact that he really didn't do  
6 any of the work that had to do with the cleaning up of the  
7 fire but people under his supervision did.

8 And when we asked him questions, he leaned over and  
9 talked to another unidentified gentleman who was there and then  
10 having picked up the hearsay from the gentleman, he testified to  
11 it as evidence in this proceeding.

12 When we had Dr. Franco here, during the in camera  
13 session, Dr. Franco told us that he does not conduct the medical  
14 examinations of the individual employees of the plant, but men  
15 under his supervision did. And then he proceeded to testify  
16 to the hearsay of what it was that they did in those particular  
17 instances.

18 I point this out not because we intend to raise an  
19 objection to it, but because this is an administrative proceed-  
20 ing and what we are trying to develop facts within a reasonable  
21 time frame, if we wanted to call and demand that every one of  
22 the people who wrote every single word of the document was  
23 here, the Applicant and you and I would be spending the next  
24 several years at the Springvale Inn, probably until the time  
25 that we became residents --

ln5

1 (Laughter.)

2 --at the Springvale Inn.

3 We are trying to have an orderly process  
4 here and the Applicant's general objections to this question of  
5 official notice, Mr. Chairman, I must say, seem to stem more  
6 from their deep, abiding fear and, I'm sure, their genuine  
7 conviction that if this happens, somehow or other, that this  
8 plant will not get on line in the summer of 1972, something to  
9 which they are very much committed.

10 I don't doubt their convictions about that. I would  
11 say that given the record of things completely outside of this  
12 proceeding that have interfered with meeting the summer of 1972  
13 deadline, that the Applicant probably is beating a dead horse  
14 on that issue.

15 But, be that as it may, obviously this Board is  
16 not going to limit its review because of the Applicant's  
17 desire to see that the plant goes on line in the summer of  
18 1972.

19 The Applicant's participation in the ECCS national  
20 hearings certainly will be welcomed and I will appreciate  
21 hearing the Applicant speak to the question of what it feels  
22 will not be able to be developed in the proceeding in the  
23 national ECCS that it would have wanted to develop if the  
24 same witnesses were brought to this proceeding.

25 Mr. Dan Ford will be conducting much of the

ln6 1 cross-examination on behalf of the Joint Intervenor group that  
2 I represented in that proceeding and issues that are summarized  
3 in this proceeding, or the issues which he intends to raise  
4 there, with even greater depth and with even more up-to-date  
5 documents that's obviously what is needed with an emerging  
6 field, I think that that proceeding offers the Board an  
7 opportunity, around, if you will, the difficult problem of  
8 official notice.

9           And let me merely conclude by saying that I think  
10 we are here at this time because of the problems that caused  
11 Chief Justice -- then Judge Burger to write two opinions in  
12 the Office of Communications of the United Church of Christ  
13 case.

14           The problem is that the data should have come in  
15 in the way of the agency bringing it in. If the mere reference  
16 or summarizing of the documents were not enough, then the  
17 bringing of those witnesses here, as part of the ECCS presenta-  
18 tion of the Staff, would, in my opinion, have been the proper  
19 way to handle that.

20           Now, we are dealing with it at a time when we  
21 will have to look to some other solution apparently, and I  
22 don't want the Board to think that I think official notice is  
23 the panacea. Maybe what it is, it's a foot in the door to get  
24 us to where we really ought to be. And I would like to have,  
25 as I said before, I would like to have those authors here.

ln7

1 I think if the Board hear them, it would be more  
2 persuaded than it would if they merely read what they said  
3 in these various matters, and it would conclude with us that  
4 there are just too many doubts about the performance of the  
5 Emergency Core Cooling System to warrant approval of a plant  
6 of this size in this particular locale.

7 CHAIRMAN JENSCH: At this time, let us recess, to  
8 reconvene in this room at 10:55, and I will give you 15 minutes  
9 of the 45 you are requesting.

10 (Recess.)

end 6

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1 CHAIRMAN JENSCH: Please come to order.

2 Before requesting a statement from the Staff we  
3 have a little matter to discuss with the other parties.

4 MR. BRIGGS: Mr. Roisman, in your statement you  
5 used ORNL, I believe 4635 as an example of a report where you  
6 thought it would not be well to take out particular sections  
7 and cite those; and I completely agree with that, that a  
8 report like ORNL 4635 should not have the treatment of  
9 taking out particular sections.

10 There is a possibility of a problem in there,  
11 however, that we would like for you to think about, and that  
12 is the following:

13 4635 contains data, descriptions of apparatus and  
14 the like. It contains the results of certain examinations,  
15 and then the authors reach some conclusions.

16 I'm not certain that this is the particular report,  
17 but some of the conclusions are clearly based on the data  
18 and some of the conclusions may well be speculations that  
19 are not at all supported by the data that are in that report.

20 Again, I'm not certain that this is true of  
21 ORNL-4635, but I believe there is at least one report where  
22 it is not at all clear that some of the conclusions put at  
23 the end are supported by the data in the report. I don't  
24 know whether you people have looked at this, but how  
25 thoroughly one adopts the conclusions in a report should be

1 considered in the information that you provide us, I think.

2 MR. ROISMAN: Mr. Briggs, I meant to mention that  
3 in our opening brief on this question of the notice which was  
4 filed on the 24th of November we did have in it, beginning  
5 on page 5, a discussion of how we wanted the Board to  
6 consider that portion of the document which represented  
7 opinions, as contrasted to a statement that a fuel rod was at  
8 a certain temperature. And we realized there were difficulties  
9 with official notice of that, regardless of whether the data  
10 to support the opinion might be in the document.

11 And what we sought, and I quote, is:

12 "Official notice of this data is sought, not to  
13 establish the truth of those opinions but to establish  
14 the existence of such opinions by men and women of  
15 undoubted expertise. The purpose is to demonstrate  
16 that substantial data exists regarding the matters of  
17 nuclear safety."

18 So that we are not attempting to say that the  
19 Board should adopt as a fact Dr. Rittenhouse's conclusions,  
20 whether they are based upon what is in that ORNL-4635  
21 document or upon his more general experience, but that in  
22 determining whether we have resolved the question in this case  
23 of fuel rod performance in a loss-of-coolant accident, the  
24 existence of a man of Dr. Rittenhouse's undoubted expertise,  
25 and an opinion that says he has doubts we think is relevant.

1           It's important to keep in mind that the burden  
2 of proof here is on the Applicant, and that we feel that if  
3 we open up a question mark then it is the Applicant's  
4 responsibility to overcome the doubt and indicate that matters  
5 have been resolved.

6           MR. MACBETH: Mr. Chairman, I would like to say a  
7 few words. Would you prefer me to go after the Staff?

8           CHAIRMAN JENSCH: You can do it now. We would kind  
9 of like to have the Staff give us a conclusion. I did not  
10 know that you were going to talk separately, but please do  
11 now.

12          MR. MACBETH: I just wanted to state our position  
13 briefly.

14          It seems to me that the Board is faced with the  
15 dilemma here that the Intervenors raised questions on the  
16 ECCS about which there really isn't much question there is a  
17 serious dispute among experts. That's certainly reflected  
18 in both the interim criteria and the convening of the  
19 national hearing.

20          And it seems to me that in that situation if the  
21 Board takes official notice, it has to be careful to protect  
22 the Applicant's right of cross-examination. I think that can  
23 be taken as part of the right to controvert the facts  
24 presented. I think it will in the end mean, either here or  
25 by adopting the transcript from another proceeding like the

1 national proceeding, the right to put questions to the authors  
2 or the sponsors or the people who conducted the tests.

3 The other side of it is, though, that if the Board  
4 decides not to take official notice I think they face another  
5 dilemma. It simply would be illogical and against common  
6 sense to ignore the issues that have been raised here, and  
7 being raised in the national hearings. And I think it would  
8 also be an abdication of the Board's responsibilities under  
9 the law in cases like Scenic Hudson and Greater Boston.

10 And I think it's a paramount matter that the Board simply  
11 cannot block that information out of its mind, nor should it.

12 So I think if the Board takes that route it also  
13 has to -- here or in the national proceeding or elsewhere --  
14 get to the witnesses, get to the underlying evidence that's  
15 at the bottom of this dispute. And I think what is really  
16 happening here essentially is searching for a mechanism to  
17 do that, either through official notice and then giving the  
18 Applicant the right to cross-examine, or the Board on its  
19 own motion calling witnesses or adopting the transcript of  
20 the national proceeding.

21 I really don't want to suggest one route rather  
22 than another. I'm obviously to the side of this particular  
23 dispute, and I think the Applicant and the Citizens' Committee  
24 and the Board are much better prepared to talk about the  
25 practical problems of which notice is to be taken.

1 But I really don't think after the notice has been  
2 developed it's clear that the dispute is before the Board and  
3 the Board has the responsibility of taking it into account.

4 If we could afford some way of getting at the other  
5 side of the question, getting the evidence in that would be  
6 competent, that would be reliable on the issues that the  
7 Citizens' Committee has raised. . .

8 CHAIRMAN JENSCH: I think this is a mechanism  
9 problem, and I think how far waiver can be utilized is another  
10 thing. Maybe it's a kind of a conglomerate consideration we  
11 will have to work out of all the factors involved.

12 I think certainly in judicial proceedings if a  
13 document is used as a basis for examination it becomes subject  
14 to some admission in one form or another. And I think those  
15 are matters that we can consider later, and I will perhaps  
16 suggest cases for review by the parties when I locate those  
17 where waiver has been a problem.

18 Mr. Martin, did you desire to make a statement?

19 MR. MARTIN: No, Mr. Chairman.

20 CHAIRMAN JENSCH: Very well; the Staff?

21 MR. KARMAN: Mr. Chairman, I just have a few  
22 words.

23 It is obvious that the matter of ECCS is quite  
24 important for the Board's determination, and I just want to  
25 make it clear that the Staff is certainly willing to

1 cooperate to any extent possible in exploring any mechanism  
2 by which the ECCS information which we feel the Board would  
3 require can be gotten into this record.

4           However, we have taken the position in our briefs  
5 which have been filed that the official notice route is really  
6 not the proper vehicle for such method of bringing into this  
7 record the matters requested by the Intervenor.

8           I don't believe I want to go into it any further.  
9 What we will do, of course, is to study the transcript of  
10 today's hearing and pick up any of the concerns cited by the  
11 Board this morning and file a supplemental brief.

12           CHAIRMAN JENSCH: We would be very happy to have  
13 it. I think a brief, especially with reference to decisions,  
14 is very helpful.

15           MR. KARMAN: I just have one or two other matters.

16           I want the record to be clear that as far as I am  
17 concerned I feel that the Regulatory Staff has cooperated  
18 rather extensively with all the parties to this proceeding,  
19 and that I feel that we are free from any stigma such as  
20 Chief Justice Burger would say of treating anybody in this  
21 hearing as an interloper.

22           Mr. Roisman's suggestion as to how the Regulatory  
23 Staff might bring certain information into the hearing is  
24 quite interesting, but it seems that there might be some  
25 question as to whether or not this is the way that Congress,

1 in giving the Regulatory Staff its legislative mandate to  
2 use its expertise in determining whether or not to recommend  
3 a license, as opposed to the town meeting type of approach  
4 which it would appear Mr. Roisman has been suggesting -- and  
5 of course the rule-making hearing which is going to be held  
6 in the near future on ECCS is somewhat different than the  
7 APA type hearing that we are holding for this particular plant.

8 CHAIRMAN JENSCH: Yes. I urge all the parties to  
9 confer among themselves as to -- let me state it this way:  
10 what can be done with the data that will be developed, and  
11 we will await your suggestions in that regard.

12 MR. TROSTEN: May I make one observation with  
13 regard to what Mr. Roisman has said?

14 CHAIRMAN JENSCH: Yes.

15 MR. TROSTEN: Mr. Chairman, one of Mr. Roisman's  
16 remarks I feel I must take exception to, and that is his  
17 discussion of the Applicant's witnesses and who the proper  
18 person for cross-examination should be.

19 I want to make it entirely clear that our position  
20 is that the proper person to present the results of a complex  
21 effort such as an ECCS experiment or some other effort, may  
22 or may not be the supervisor of the experiment. It depends  
23 on the particular facts involved.

24 The supervisor of a program in some instances might  
25 have the broad technical expertise and familiarity with the

1 program to make him the proper person, or in the particular  
2 case you might need to have someone who is more intimately  
3 familiar with it.

4 Now, I think Mr. Roisman is completely off base  
5 in calling attention to these examples. He cited, for  
6 instance, the testimony offered by Applicant through  
7 Westinghouse with regard to ECCS, which involved the matter  
8 of statistical presentation. The Applicant in that situation  
9 was not relying on the particular statistical presentation  
10 with regard to which Mr. Roisman wanted to cross-examine.

11 And Mr. Roisman's effort to cross-examine behind the Applicant's  
12 witness was inappropriate because of the nature of the  
13 testimony that was offered.

14 Applicant has in all instances offered Mr. Roisman  
15 an opportunity to cross-examine those persons who were  
16 appropriate to the testimony involved.

17 CHAIRMAN JENSCH: Well, let's go on.

18 Have we completed, now, just about all our  
19 discussion at least for the moment, and are we prepared for  
20 evidentiary presentations -- and before which we will take  
21 our noon recess for lunch and for the interim that Applicant's  
22 counsel requested? Would this be convenient for that?

23 MR. ROISMAN: Mr. Chairman, could we go on to  
24 some of the matters that would be involved in the further  
25 conference aspects of the proceeding? For instance, the

1 scheduling on submission of proposed findings of fact and  
2 conclusions of law, and further hearings in the proceeding,  
3 and so forth, so that when we return from the lunch break what  
4 we will have left is merely the two evidentiary presentations,  
5 the one on the power question and the one in response to  
6 Mr. Briggs' question with regard to the question of reactor  
7 pressure vessel integrity?

8 CHAIRMAN JENSCH: It's just a question of schedule,  
9 whatever is convenient to the parties. I thought we would  
10 take up the briefings and proposed findings at a later time.  
11 It could be done now.

12 The Board endeavored to indicate last evening that  
13 for the moment at least the Board feels that we don't want  
14 to be receiving evidence on another kind of license request  
15 until we have disposed of this one. This one is enough for  
16 us for the time-being, and we want to have the time available  
17 to make a thorough analysis of the transcript relating to  
18 this particular motion. And I think it is going to require  
19 some separation, perhaps, of the data that have been  
20 presented to see how far it is solely applicable to this  
21 one motion.

22 And for this reason we are suggesting that we  
23 dispose of this one problem, and then we will immediately --  
24 as conveniently as possible set further hearings for the  
25 next request.

1 MR. TROSTEN: We understand and accept that, Mr.  
2 Chairman, and I agree with Mr. Roisman that in order to  
3 facilitate the Board's consideration of the 50 percent  
4 testing license that it really would be desirable now --  
5 because there seems to be some disagreement among us as to  
6 how to proceed from here on, in order for us to discuss the  
7 matter of closing the record and findings and conclusions and  
8 so forth, so I do think we should discuss this now.

9 CHAIRMAN JENSCH: Proceed. What do you suggest?  
10 That you have your briefs and proposed findings by when?

11 MR. TROSTEN: As the Board knows, we have filed  
12 our proposed findings and conclusions on December 23, and it  
13 is our position, Mr. Chairman, that we ought today to set  
14 the schedule for filing the supplemental findings and  
15 conclusions on radiological safety matters, and this would  
16 include not only our supplemental findings and conclusions  
17 on radiological safety matters but also Mr. Roisman's findings  
18 and conclusions, of course, and the conclusions of other  
19 parties.

20 CHAIRMAN JENSCH: What date do you suggest?

21 MR. TROSTEN: Applicant suggests -- and we will  
22 within 15 days, Mr. Chairman, file our supplemental findings  
23 and conclusions dealing with the hearing record of December  
24 and January on radiological safety matters.

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1 Now before I go beyond that, Mr. Chairman, I have  
2 to discuss the question of Mr. Roisman's findings and con-  
3 clusions.

4 Some time ago we agreed that Mr. Roisman would have  
5 his findings and conclusions on radiological and safety matters  
6 filed by January 11th, it being understood of course that  
7 these would be dealing with findings and conclusions on  
8 matters that had been covered up until that time.

9 I had agreed with Mr. Roisman that it is not neces-  
10 sary that he make that date of January 11th, that if he wishes  
11 to file those by January 18th, this is satisfactory and  
12 acceptable to the Applicant.

13 However, we seem to be -- and I think Mr. Roisman  
14 should address this matter himself. But we seem to be in some  
15 dispute as to just what procedure Mr. Roisman follows in filing  
16 his findings and conclusions. And so before we go on beyond  
17 our offer of the supplemental findings and conclusions, I  
18 will suggest that Mr. Roisman speak.

19 CHAIRMAN JENSCH: Before you do that, I would sug-  
20 gest that any further presentation of proposed findings be  
21 in a coordinated composite rather than having what you have  
22 here, and the supplemental, and you mix them together. If  
23 you will give us one document that now incorporates that  
24 which you have previously filed plus your supplemental, and  
25 perhaps identify in some way if you desire what is

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1 supplemental -- We don't want to be putting the parts of the  
2 checkerboard together.

3 And we would like to have one document that sum-  
4 marizes fully and finally what your position is.

5 MR. TROSTEN: We will, Mr. Chairman.

6 CHAIRMAN JENSCH: Well, all right. Let's fix a date  
7 right now for you. You said 15 days?

8 MR. TROSTEN: Within 15 days.

9 CHAIRMAN JENSCH: We'll make it 16. How about  
10 January 28th; would that be all right?

11 MR. TROSTEN: That's 16 days.

12 CHAIRMAN JENSCH: January 28th; we will hold you to  
13 that schedule.

14 MR. ROISMAN: Mr. Chairman, insofar as our proposed  
15 findings and conclusions are concerned-- We will take what-  
16 ever date the Staff takes.

17 CHAIRMAN JENSCH: That's fair enough.

18 MR. TROSTEN: No, this is what we can seem to agree  
19 on.

20 MR. KARMAN: Mr. Chairman, I want the record to  
21 indicate that the Staff was not party to any stipulation.

22 CHAIRMAN JENSCH: Well, the Board was not party  
23 either, so we all start even.

24 (Laughter.)

25 Pick a date. That's all we're concerned with.

eb3

1 MR. TROSTEN: Mr. Chairman, there is something of a  
2 problem here. First of all --

3 CHAIRMAN JENSCH: You can have the opportunity for  
4 comment on what has been submitted. I think that's the next  
5 step.

6 MR. TROSTEN: It isn't quite as simple as that,  
7 Mr. Chairman. I have to review the history of this briefly.

8 CHAIRMAN JENSCH: We don't care. Let's start today  
9 and go on.

10 MR. TROSTEN: We have previously agreed that the  
11 Citizens' Committee and the Staff would file their findings  
12 and conclusions by January 11th.

13 MR. KARMAN: I beg your pardon. The Staff agreed  
14 to no such thing.

15 CHAIRMAN JENSCH: Never mind the history; we're  
16 looking for a date right now.

17 What's convenient to the Staff and Intervenor says  
18 he will pick the same date.

19 MR. TROSTEN: Well, the problem, Mr. Chairman, is  
20 that Mr. Roisman has his findings and conclusions either ready  
21 or approximately ready. But the fact is for some reason he  
22 doesn't want to release them to us or to the Board or to the  
23 Regulatory Staff.

24 CHAIRMAN JENSCH: You can either wash his mouth  
25 out with soap or give him a spanking, but not here.

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1 Pick a date. Staff, what is your date?

2 MR. TROSTEN: Mr. Chairman, I think that a procedure  
3 whereby Mr. Roisman is simply withholding from us the findings  
4 and conclusions that he has prepared is objectionable because  
5 we want all the time we can get. Mr. Roisman has had months.

6 CHAIRMAN JENSCH: We'll give you all the time --

7 MR. TROSTEN: It's not quite as simple as that,  
8 Mr. Chairman. Mr. Roisman has had months, with the aid of  
9 outside organizations to prepare his findings and conclusions.  
10 He has been working on these literally for months.

11 CHAIRMAN JENSCH: You ought to complement him.

12 MR. TROSTEN: He has had the benefit of ours since  
13 December 23rd. I don't want to be held to a 15-day period to  
14 respond to a document that Mr. Roisman has been working on and  
15 which represents not only the effort of his --

16 CHAIRMAN JENSCH: How many days do you want?

17 MR. TROSTEN: I would like to have them by January  
18 18th, Mr. Chairman.

19 CHAIRMAN JENSCH: All right.

20 Let's get your views now, Mr. Karman.

21 MR. KARMAN: The Staff feels that it could have its  
22 findings by February 8th.

23 CHAIRMAN JENSCH: February 8th.

24 February 8th is the date fixed on or before which  
25 both the Staff and the Intervenors will file their proposed

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1 findings.

2 How many days do you want for reply?

3 MR. TROSTEN: I object to that.

4 CHAIRMAN JENSCH: Very well.

5 How many days do you want for comment on the Staff's  
6 and Intervenors' findings?

7 MR. TROSTEN: Are you rejecting, Mr. Chairman, the  
8 concept that Mr. Roisman will be held to deliver to us his  
9 findings and conclusions by January 18th?

10 CHAIRMAN JENSCH: We have not made any arrangement  
11 on January 18th.

12 MR. TROSTEN: Mr. Roisman had previously stipulated  
13 that he will do this.

14 MR. ROISMAN: I stipulated I would file with the  
15 Staff on the 11th. You stipulated you would file yours on the  
16 8th of December. I have already filed on the 11th most of  
17 the proposed findings on the ECCS which are in the brief  
18 which is an in camera brief so I can't give you what is in  
19 it but you can look at it when you see it in your office.

20 That's the biggest thing that we had any help on,  
21 and the rest of it is going to be prepared.

22 MR. KARMAN: I don't quite understand how you  
23 could have stipulated to produce on the same day the Staff  
24 did when the Staff never made any such stipulation.

25 CHAIRMAN JENSCH: Would you gentlemen consider

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1 all these matters outside.

2 How many days do you want for a comment on the  
3 Staff's and the Intervenors' brief?

4 MR. TROSTEN: What is the date that is --

5 CHAIRMAN JENSCH: February 8th is the date for the  
6 Staff's and the Intervenors' briefs.

7 MR. TROSTEN: All right, Mr. Chairman. We wish to  
8 have 30 days.

9 CHAIRMAN JENSCH: March 8th is fixed as the date on  
10 or before which all parties may comment on the findings sub-  
11 mitted by the others.

12 MR. TORSTEN: No, Mr. Chairman. Under the regula-  
13 tions, the Applicant is permitted to reply.

14 CHAIRMAN JENSCH: Under the arrangements by the  
15 Board, which are within the arrangements that the Board are  
16 authorized to make, the other parties may comment if they  
17 desire on the other parties' findings.

18 Do we have anything other to consider by way of  
19 procedures before we take a recess for lunch?

20 MR. TROSTEN: I'm afraid, because of what the  
21 Chairman has just said -- and perhaps we can consider this  
22 again after lunch. I would be willing to do that.

23 CHAIRMAN JENSCH: Very well.

24 Mr. Briggs has some matters he would like to  
25 discuss.

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1 MR. BRIGGS: The first matter has to do with the  
2 schedule for the testing of power levels up to 50 percent. I  
3 believe there is such a schedule in the Applicant's testimony  
4 of October 19th. Is this the latest schedule?

5 MR. TROSTEN: Excuse me. I was distracted by some-  
6 body handing me a note and I didn't hear what you said.

7 MR. BRIGGS: Figure 1, does it show the latest  
8 proposed schedule for testing up to 50 percent? It goes  
9 beyond that, but at least it does go up to 50 percent.

10 MR. TROSTEN: Mr. Cahill will answer your question.

11 MR. CAHILL: Dr. Briggs, this schedule is valid as  
12 an outline of the testing program because it essentially indi-  
13 cates the elapsed time estimated with accomplishment of the  
14 tests.

15 Now the zero on the horizontal axis you will notice  
16 is the beginning of subcritical testing and fuel loading, so  
17 we are now in the initial stages of this test program with the  
18 fuel loading accomplished and the subcritical tests underway.

19 But the time elapsed for the tests is overlaid by  
20 the time required to repair the fire damage.

21 MR. BRIGGS: I was not really concerned very much  
22 about the time. My concern was more with power level and the  
23 question that I wanted to ask was the following:

24 In Section C, do you show operation at power levels  
25 of 30 and 35 percent for substantial periods of time, and the

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1 then much-lower power operation, and then finally for the last  
2 few days you get up to 50 percent power? The question was  
3 what is it that you do at 30 and 35 percent of power that  
4 could not almost as well be accomplished at 50 percent of  
5 power, full power-- I'm sorry, at 20 percent of full power?

6 MR. CAHILL: Would you repeat that again,  
7 Dr. Briggs?

8 MR. BRIGGS: In the period shown here from 35  
9 days to 51 days, you show operation at power levels up to 35  
10 percent of full power. What is it in that period that you  
11 could not do almost as well at power levels to 20 percent of  
12 full power rather than 30 and 35 percent of full power?

13 MR. CAHILL: I will have to refer to the details  
14 for a detailed answer but the general answer is that we are  
15 interested in the plant characteristics at each of these power  
16 levels because there is substantial information, both nuclear  
17 and fluid mechanics and power plant equipment design informa-  
18 tion that is picked up at each of these levels.

19 It is part of the ordering shake-down period. At  
20 each power level there are different pressures and tempera-  
21 tures and forces on equipment which should be searched out  
22 and we're going to do all this at 20 percent, but much of the  
23 same type of information will be observed and evaluated at  
24 30 percent and at the 50 percent levels.

25 MR. BRIGGS: Well, as I understand it, in some of

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1 of the past discussions it has been pointed out that if the  
2 Board were to authorize testing at power levels up to 20  
3 percent, the period of time involved there is only a few  
4 days. It is shown here from 28 days to 35 days, and then it  
5 would be necessary to go on up to 50 percent.

6 And of course the time at which you reach 50 per-  
7 cent is at about 68 days.

8 Now it occurs to me that if you are able to accom-  
9 plish most of the objectives by operating at 20 percent instead  
10 of 35 percent, then there would be rather little delay in  
11 getting the plant from that point on up to 50 percent.

12 As you pointed out, maybe you can look at the details  
13 of why this testing period from 35 days to 50 days has to be  
14 done at 35 percent rather than 20 percent, and maybe you  
15 could provide us with that information.

16 MR. CAHILL: I believe much of it is in the FSAR  
17 and other documents, but we can check this.

18 I can say this: the 20 percent level is not too  
19 significant a level to check out the secondary plan. For  
20 example, when you are at 20 percent reactor power--- Well,  
21 let's go back.

22 As you go into the low powers, 10 percent or so,  
23 you are generating or beginning to generate some steam but  
24 the turbine, just to get up to the full synchronous speed  
25 level at which it would generate power, is using up something

eb10 1 like 8, 10, 12 percent of the reactor power.

2 And this means that the steam plant or the electric  
3 plant is really not being tested at all. And general ex-  
4 perience in the start-up of nuclear plants has been that it is  
5 in this area where there are delays incurred because there  
6 cannot be any testing of this kind of equipment until you get  
7 the power.

8 The nuclear plants, the reactor and other parts  
9 of the plant -- that is, the nuclear parts of the plant tend  
10 to be subject to non-power tests which clean up a lot but the  
11 turbine and the steam plant does actually need the pressures  
12 and temperatures from flows at the various power levels to  
13 feel out the trouble spots.

14 At any rate, this is reflected in the long --  
15 relatively long run at the 35 percent level, and a longer run  
16 at 50 percent, and checks at each of the milestones on the way  
17 up.

18 MR. BRIGGS: Well, so what you are saying then is  
19 that you could not run acceptable tests on the turbine genera-  
20 tor plant at 20 percent, that you need 35 percent for that;  
21 is that right?

22 MR. CAHILL: We can and will run tests at 20 per-  
23 cent and at 35 percent; to accomplish the full shake-down  
24 of the plant we have to go on through to 50 percent and on  
25 up to the 100 percent.

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1 MR. BRIGGS: I understand that, but at the present  
2 time the motion is for testing at up to 50 percent, so that's  
3 the part of the schedule that we are concerned with, or the  
4 part of the plan that we are concerned with.

5 If one only needed -- really needed to operate up  
6 to 20 percent for a good share of this time rather than 35  
7 percent, that could make some difference in the problems that  
8 one is confronted with.

9 MR. CANILL: I would have to check on that,  
10 Mr. Briggs. There may be some things, but I have a feeling  
11 that it is not enough to make a difference.

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1 MR. BRIGGS: There was one other question. You  
2 submitted to the Regulatory people, Dr. Morris, a letter in  
3 which you informed him of 12 changes in the design of the  
4 Indian Point Unit No. 2 and asked for a concurrence that these  
5 design changes are acceptable.

6 Have you received a letter indicating that they are  
7 acceptable and have I missed seeing that, or have you not  
8 yet received such a letter?

9 WITNESS CAHILL: I don't believe we have received it,  
10 but let me check on that.

11 MR. TROSTEN: No, Mr. Briggs, I don't believe there  
12 has been any formal letter from the Commission with respect  
13 to this. There were discussions with the Commission Staff  
14 concerning these design changes and this letter was essentially  
15 prepared and was put into evidence in this proceeding for the  
16 purpose of making certain that the record in the proceeding was  
17 complete with regard to the present design of the plant.

18 The Staff has approved the design changes, has  
19 concurred that they are acceptable, but there has been no  
20 formal letter from the Staff that so states, but as I said, this  
21 letter was prepared following discussions with the Staff.

22 MR. BRIGGS: Mr. Karman, is there going to be  
23 information in the record to show that the Staff has accepted  
24 these design changes?

25 MR. KARMAN: I would certainly imagine that the

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1 response to the Applicant with respect to this request would be  
2 part of this record.

3 MR. BRIGGS: But we have not yet seen the response.

4 MR. KARMAN: I haven't either. I don't believe it  
5 has been forthcoming yet.

6 MR. BRIGGS: Would it be possible to find out  
7 when it might be forthcoming?

8 MR. KARMAN: I will certainly try to ascertain  
9 that.

10 MR. BRIGGS: Thank you.

11 CHAIRMAN JENSCH: Is there any other matter we can  
12 take up before we recess for lunch.

13 (No response.)

14 What time would be convenient -- how long do you  
15 envision that your presentation will take after we come back  
16 from lunch?

17 MR. TROSTEN: Mr. Chairman, I don't anticipate that  
18 our presentation would run over an hour.

19 I imagine it will be under an hour for the entire  
20 presentation.

21 I might add, Mr. Chairman, that our representatives  
22 of Westinghouse who will be prepared to testify in response  
23 to Mr. Briggs' question will not be able to be here before  
24 3:00 or 3:30 p.m., but we understand that they will be here  
25 about that time.

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1 We can confirm this with the Board when we resume.

2 CHAIRMAN JENSCH: Well, as we indicated, if they are  
3 not here, or, as Mr. Briggs has indicated, a written reply  
4 will be fully satisfactory.

5 MR. TROSTEN: All right, Mr. Chairman.

6 CHAIRMAN JENSCH: If we can accommodate them, we  
7 will do so, of course.

8 Would an hour be sufficient for lunch and your  
9 visit with your witnesses?

10 MR. TROSTEN: If we could have an hour and 15 minutes,  
11 Mr. Chairman, that would be fine.

12 CHAIRMAN JENSCH: Very well, at this time let's  
13 recess, to reconvene in this room this afternoon at 12:45.

14 (Whereupon, at 12:30 p.m., the hearing was recessed  
15 for lunch, to reconvene at 12:45 p.m., this same day.)

end 9

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A F T E R N O O N S E S S I O N

(12:45 p.m.)

CHAIRMAN JENSCH: Please come to order.

Is the Applicant ready to proceed?

MR. TROSTEN: Yes, Applicant is ready to proceed,  
Mr. Chairman.

Before I make the offer of evidence, however, I would like to return to the matter of findings and conclusions, as I indicated I would before lunch.

Applicant is concerned with regard to the possibility that the schedule for findings and conclusions could delay the Board's consideration of the 50 percent testing license, and Applicant wants to take every step possible to avoid delaying the Board in this matter.

As reported to the Board in my letter of November 29, 1971 we originally established on the basis of discussions with the Environmental Defense Fund, the Hudson River Fishermen's Association, the AEC Regulatory Staff, and the New York State Atomic Energy Council, that findings and conclusions would be submitted by the Citizens' Committee for the Protection of the Environment on January 11; by the AEC Regulatory Staff and by the New York State Atomic Energy Council on that date.

I am advised by counsel for the New York State Atomic Energy Council that he does not intend to file findings

1 and conclusions.

2           However, this left us with the problems we adverted  
3 to this morning of the AEC Regulatory Staff's filing findings  
4 and conclusions.

5           Mr. Karman noted this morning that he would file  
6 findings and conclusions by February 8, 1972. Recognizing the  
7 very heavy burdens that the Regulatory Staff is laboring  
8 under in this connection -- and I fully recognize that they  
9 are heavy, Mr. Chairman -- the Applicant is nevertheless very  
10 seriously concerned about the delay in having this matter  
11 delivered to the Board which is associated with the Staff's  
12 delivering its findings and conclusions by February 8,  
13 because this necessarily delays all of the parties.

14           Now, I have discussed this further with Mr. Roisman,  
15 and I might add that since the Board has ruled that all other  
16 parties may reply even though the regulations very clearly  
17 state that it's only the Applicant who may reply to findings  
18 and conclusions --

19           CHAIRMAN JENSCH: The regulations also say that  
20 the Board may make such provisions as will aid in expediting  
21 consideration of the case, and this is one of the items that  
22 will expedite consideration of the case, to have the comments  
23 from the parties.

24           MR. TROSTEN: Taking these factors into account,  
25 the Applicant wishes to say that we will have our reply to

1 all parties in by February 28, which is 20 days after  
2 February 8, and we request that all parties be similarly  
3 bound, Mr. Chairman.

4 CHAIRMAN JENSCH: I think this is to be kept in  
5 mind, Applicant's counsel.

6 First of all, a Board won't enforce a stipulation  
7 that the parties work out among themselves. They would like  
8 to see it complied with if the parties think that will  
9 expedite consideration of the case. But each time an arrange-  
10 ment is made respecting findings and conclusions and submittal  
11 of papers, it depends upon the circumstances at that time.  
12 Since whenever your discussions were, whenever they were,  
13 there have been changes in regulatory work. One, of course,  
14 is the ECCS rule-making proceeding which I daresay does  
15 affect the schedules of many people.

16 Now the Commission has set that up as they feel  
17 will accommodate the interests of both parties. We have to  
18 adjust to the requirements of what is surrounding the parties  
19 at the time that the specific arrangement is made.

20 At this time the Boards generally ask the parties  
21 what is convenient to them, and if the time seems reasonable.  
22 And if you recognize that the Staff can't do their chore until  
23 February 8 then it seems to me that other parties can use  
24 that as a kind of benchmark in their schedules. We don't  
25 really think it is going to delay the consideration of this

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1 matter. You may be assured that the Board will give prompt  
2 consideration to all of the submittals. If the parties can  
3 get their comments back to the findings and conclusions by  
4 February 28, they are urged to do so. They have indicated  
5 that they wanted more time. If there is a question of a week  
6 involved between February 8 and your March 8, I don't think  
7 it is going to make or break the case.

8 We do note your concern and we share your desire  
9 to have this thing move along rapidly. And we will endeavor  
10 to do that. But the parties' convenience has to be determined  
11 at the time the specific arrangement is made.

12 MR. TROSTEN: I understand that, Mr. Chairman.  
13 But the problem here is that we're dealing with a situation  
14 where all parties to this proceeding have been trying, I  
15 believe -- I know the Applicant has, and I think other parties  
16 have been attempting, the Board has been attempting -- to  
17 assure that procedural problems or workload problems do not  
18 interfere with the Board's consideration of this matter.

19 Now, I'm not as sanguine as the Chairman is that  
20 this period of time is not going to cause delay in the Board's  
21 consideration. I certainly hope not. I want very much that  
22 it not cause that, because this is a matter of the utmost  
23 concern to the Applicant and to the people of the Applicant's  
24 area in that sense. But be that as it may, Mr. Chairman, I  
25 hope that the Chairman will -- since the Applicant has chosen

1 the time of February 28 I will ask the Board to determine that  
2 that is the time when we will all have our findings and  
3 conclusions in.

4 MR. ROISMAN: Mr. Chairman, we will be pleased to  
5 meet the 28th and expedite the Board's denial of the license  
6 for testing.

7 CHAIRMAN JENSCH: Staff, do you feel you could  
8 submit comments by February 28?

9 MR. KARMAN: I believe we can, Mr. Chairman.

10 CHAIRMAN JENSCH: Very well. We will consider that  
11 that's a suitable date, but it may be extended for good cause  
12 shown.

13 Let us proceed. Will you call your first witness?

14 MR. TROSTEN: Yes.

15 Mr. Chairman, on the basis of our review of the  
16 transcript last night -- which we did not receive, incidentally,  
17 until 12:30, Mr. Chairman, which is the reason why I wanted  
18 some additional time with our witnesses -- we would like to  
19 offer certain additional testimony by Dr. Lawler, Dr. Lauer,  
20 and Mr. Woodbury relative to matters that were discussed  
21 yesterday and which came up in the context of the Staff's  
22 environmental statement. We would like to offer this in  
23 advance of the testimony by Mr. Schwartz and Mr. Cahill.

24 CHAIRMAN JENSCH: Very well. All the persons have  
25 been sworn and need not be sworn again. Will you proceed?

1 Whereupon,

2 JOHN LAWLER

3 GERALD LAUER and

4 HARRY G. WOODBURY

5 were called as witnesses on behalf of the Applicant, and having  
6 been previously duly sworn were examined and testified further  
7 as follows:

8 FURTHER DIRECT EXAMINATION

9 BY MR. TROSTEN:

10 Q Dr. Lawler, with respect to the thermal plume what  
11 temperature elevation would you expect at the bottom of the  
12 river where the benthic organisms would be?

13 CHAIRMAN JENSCH: And under what conditions are  
14 these, please? Full power, half power? What is the  
15 temperature at the exit?

16 WITNESS LAWLER: The temperature at the discharge  
17 would normally be 15° with full flow at full power.

18 CHAIRMAN JENSCH: 15° above ambient?

19 WITNESS LAWLER: Above ambient, correct.

20 I would say that my comments would apply to virtually every  
21 situation that would occur in the river.

22 CHAIRMAN JENSCH: Very well. Proceed, please.

23 WITNESS LAWLER: We find that the temperature rises  
24 on the bottom are (1) extremely small if they exist at all,  
25 and (2) when they do exist they exist over very small extents

1 of the bottom surface area.

2 The very reason for this is essentially that the  
3 heated water has a lower density than the cold ambient water  
4 and will rise.

5 This is supported by field observations of sub-  
6 merged discharges. It is supported by model testing, and it  
7 is also -- we find with the mathematical models of submerged  
8 discharges that have been constructed in designing the  
9 submerged discharges themselves an attempt has been made  
10 specifically to avoid the bottom -- when you take the mathemat-  
11 ically developed submerged discharges your jet expands as you  
12 move out, and you can orient your jet and locate it so that  
13 it won't touch the bottom.

14 But we found that, through the model studies, these  
15 mathematical estimates of the way in which the jet behaves  
16 are somewhat conservative.

17 So in conclusion I would say that we just simply  
18 don't expect to see any significant temperature rises on the  
19 bottom.

20 (Pause.)

21 CHAIRMAN JENSCH: While there is a pause, you said  
22 field discharges. Are these analyses of Indian Point #1  
23 releases?

24 WITNESS LAWLER: We could use Indian Point #1, but  
25 Indian Point #1 release is a slightly different design.

1 Originally that is what I would call a top-to-bottom discharge.  
2 It was an open channel through which the heated water emerged  
3 to the river from the river surface on down to the bottom.  
4 But even there the temperature on the bottom was very negligible.  
5 That heated water, again, rose to the surface quickly as is  
6 shown fairly clearly in the appendices that I alluded to  
7 yesterday.

8           There are actual submerged discharges, submerged  
9 pipes and other power plants on the river, and again you see  
10 very little temperature at the bottom in the vicinity of  
11 these plants.

12           CHAIRMAN JENSCH: You have checked those, have  
13 you?

14           WITNESS LAWLER: Yes.

15           And our final point would be that the centerline  
16 of the submerged discharge at Indian Point is 12 feet below  
17 the river surface. The bottom right immediately in front of  
18 the discharge structure is roughly 20 feet below the river  
19 surface, and then drops off rather rapidly after that.

20           CHAIRMAN JENSCH: By that you mean it gets deeper?

21           WITNESS LAWLER: That's correct.

22           BY MR. TROSTEN:

23           Q     Dr. Lauer, I asked that question of Dr. Lawler  
24 with regard to the last paragraph of the Staff Discussions  
25 and Conclusions at page 29, which was received into evidence

1 yesterday.

2 Now, with reference to that same paragraph what is  
3 your experience and judgment as to the effect of any elevated  
4 temperatures on benthic organisms?

5 A (Dr. Lauer) The results of the studies which we  
6 have been doing at NYU to date -- this would be with reference  
7 to unit #1 discharge -- indicate no significant differences  
8 in either the numbers or diversity of benthic organisms on  
9 that portion of the bottom that is traversed by the thermal  
10 plume over it in the surface waters, compared to adjacent  
11 bottom areas.

12 Moreover, I think the literature with which I feel  
13 thoroughly familiar indicates that some amount of temperature  
14 elevation over the ambients that we would expect in the  
15 Hudson River -- I would guess probably of the order of 5 to  
16 8 or 9 degrees above ambient -- would not be expected to be  
17 detrimental even if it did exist there.

18 But we have not found the temperature to be  
19 elevated at the bottom sites where we have been taking  
20 samples due to the operation of Unit #1, and we have seen no  
21 effects.

22 CHAIRMAN JENSCH: Have you checked the same types  
23 of power plant discharges that Dr. Lawler just referred to--  
24 other power plants on the Hudson River?

25 WITNESS LAUER: No, we have not been sampling  
benthic organisms around those power plants.

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1 BY MR. TROSTEN:

2 Q Dr. Lauer, with reference to page 30, paragraph 3  
3 of the Staff document, what has been your experience as to the  
4 extent to which the Indian Point area of the Hudson River does  
5 serve as the center for reproduction of Neomysis?

6 A (Dr. Lauer.) Okay. These remarks that I'm going  
7 to make are with reference to the information that we have  
8 gained for the most part in 1971. What we have found is that  
9 the presence and location of Neomysis in the Hudson River is  
10 very much keyed to the location of salt water. This means  
11 that during a good part of the year when the salt water intru-  
12 sion does not extend as far as Indian Point, we don't find  
13 Neomysis in the vicinity of Indian Point.

14 At times when the salt water intrusion does come up  
15 to Indian Point, we do then get Neomysis. In that case,  
16 Indian Point would be more on the northern fringe of the total  
17 range for Neomysis in the river. Neomysis exists all the way  
18 down the river, based on my personal experience; at least down  
19 to the harbor area of the river.

20 So it would seem that for this species Indian Point  
21 is either outside of the range during parts of the year or at  
22 the northernmost limits of the range during other parts of the  
23 year. And based on that, it would not be expected that the  
24 Indian Point location is the center for reproduction of the  
25 species in the river.

ln2 1 Now, over and above that, we have been doing some  
2 temperature tolerances study of the Neomysis again similar to  
3 the line I discussed yesterday. We have been studying them at  
4 the intake of the discharge canals when they exist in the river;  
5 and, by the way, when they do exist up in that area of the  
6 river, they show a very definite diurnal migration.

7 During the day most of them appear to be near the  
8 bottom. During the night, they are much more prominent up in  
9 the water column. So in order to get workable numbers of  
10 organisms to study, this means being out there at night. So  
11 we worked throughout the night to try to see what the effects  
12 of the plant operation are for neomysis.

13 Our experience has been during the opportunity that  
14 we've had to study them when they've been in the vicinity of  
15 the plant that they do pass through the plant and the studies  
16 indicate that they are not killed during the passage through  
17 the plant.

18 There's one qualification that has to be put in here.  
19 Their distribution, as I indicated, is due, or are keyed to  
20 the presence of salt water in the vicinity. Last summer, just  
21 at about the time when we would expect the maximum ambient  
22 summer temperature conditions in the river, we also got very  
23 heavy rains associated with the hurricanes coming up the Coast.

24 The effect of these rains and the runoff from them  
25 were to push the salt flow downriver from Indian Point, such that

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1 at the time when we would most like to have studied the  
2 maximum ambient temperature tolerances of these organisms,  
3 they weren't there.

4 Because of that and the interest in Neomysis, we  
5 have had the chance to collect Neomysis from far down the  
6 river, and this was not exactly at the maximum summer ambient  
7 temperature conditions, but we did go down river and collect  
8 Neomysis from waters of much lower quality than exist  
9 at Indian Point, and we studied them, exposing them to delta-T  
10 temperatures up to 16 degrees Fahrenheit and above.

11 And, in those instances, the laboratory exposures  
12 did not appear to cause the increased mortality of the test  
13 organisms in the bioassay.

14 A reference in the same paragraph was made to  
15 Gammarus. Gammarus does not seem to be as much keyed to the  
16 presence of salt water as Neomysis. We have very good data  
17 on Gammarus in the river as far as temperature tolerance is  
18 concerned throughout the year, and this that under the maximum  
19 summer ambient temperature conditions of about 78 to 79 degrees,  
20 Gammarus tolerates an increase in delta-T of approximately 19  
21 degrees Fahrenheit without showing increased mortality as  
22 compared to the controls.

23 Q Mr. Woodbury, with respect to the testimony of the  
24 Regulatory Staff at transcript pages 4521 and 4522, will the  
25 fixed fine screens at Indian Point 2 reduce fish kills below

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1 that which would occur without those screens?

2 A (Mr. Woodbury.) Mr. Chairman, the mechanism by  
3 which the small two-inch perch are impinged on the screen is  
4 that the fish take up a position in front of the screens  
5 facing away from the screens and from 6 to 18 inches in front  
6 and appear to occupy that position swimming against the current  
7 until they tire and then come back on the screen.

8 When their tail hits the screen, they then attempt  
9 to escape from the screen and swim away from it. Our experience  
10 has been that with the traveling screens as they were at  
11 Indian Point 1 recessed some 12 feet back in an intake bay  
12 when the fish attempted to escape the screen they had about  
13 12 feet of a steady current against which to flow, a current  
14 of foot per second or thereabouts.

15 And, as a matter of fact, they did not make the  
16 effort for the period of time necessary to get out of that  
17 bay so once in the bay there's no opportunity for them to  
18 escape laterally and they gradually drifted back on the screen  
19 until they could make no further effort to escape.

20 When we recognized this, we installed the fixed  
21 screens out at the entrance to the bay at the base of the  
22 river, so that when the fish first touched the screens and  
23 made an effort to get away, they did not have 12 feet of one  
24 foot per second current to fight against. Rather, the velocity  
25 decays very rapidly because they are right out in the river

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1 and the velocity gradient decreases very rapidly as you get away  
2 from the fixed screens that are in the river. And so we very  
3 substantially reduced the amount of fish that are impinged on  
4 the screens by doing this, and this factor is reflected in the  
5 fact that our traveling screens on Indian Point 3 are located  
6 at the entrance to the bay at the base of the river rather  
7 than back in the bay.

8 This came through very clearly in the winter of  
9 '69-70, when, because of ice conditions on the river, the  
10 screens which are out front were raised and for a few days in  
11 DEcember and a few days later in January, and again in March,  
12 when we had trouble with those outer screens, we had a very  
13 high percentage of fish impingement, a condition which has  
14 not returned to the plant except when we have had damage to  
15 the screens and a hole is developed either through the screen  
16 or under the screen.

17 We are able to keep track of the fish that are  
18 impinged, even on the outer screen, pretty well, because these  
19 outer screens are raised once a day and washed. They're  
20 washed by a water jet that plays across them as they are  
21 raised up and whatever fish are impinged on the screens fall  
22 back into the water and, in turn, for the most part, are taken  
23 by the current in the intake bay and are then picked up on the  
24 traveling screens.

25 There are a few fish that are impinged, that fall

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1 back on structural members, that don't go into the intake.  
2 There are a few that may fall on top of a log or some other  
3 floating debris that for some reason or other does not enter  
4 the intake bay and floats away, but the mechanism of flow in  
5 the river is such that those dead fish which fall down in  
6 front of the screen, in front of the fixed screen, are, in  
7 fact, taken into the bay and subsequently picked up by the  
8 traveling screens and counted.

9 Q Mr. Woodbury, the Staff discussions and conclusions  
10 at the top of page 27, estimates are given for the amount of  
11 fish collected at Indian Point 2 during the winter season.

12 What are the estimated collections for the spring  
13 and summer seasons, please?

14 A This information was presented in our October 19th  
15 report, in which we showed that we could expect an impingement  
16 on the order of 3 to 30 pounds per day operating all six streams  
17 on Indian Point 2 in the late spring.

18 This estimate was based on the record of fish that  
19 we have maintained that Indian Point 1 and on Indian Point 2  
20 and 3 at such times as they were operating for test purposes.

21 We have been able to do some things to the screens  
22 since that time, which should further reduce these numbers. We  
23 found by running sonic surveys in the river in front of the  
24 screens last summer, for example, that we had some holes in  
25 the bottom of the river just in front of the screens that had

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1 been generated there by the construction forces when they had  
2 their cofferdam in and had left there at the conclusion of the  
3 construction.

4           These holes seemed to attract fish and the fish  
5 population at these holes immediately in front of the screens  
6 was much higher than it was a little further out or where these  
7 holes did not exist. We have since filled up these holes and  
8 the most recent surveys show that this large collection of  
9 fish which had existed in the vicinity of these holes is no  
10 longer there.

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2 We also have undertaken at Indian Point 2 to de-  
3 vise a means for throttling or reducing the intake velocities  
4 and intake volume in order to reduce the flow and the rate of  
5 flow through the screens. We are doing this with a by-pass  
6 system on the pumps which permits us to return to the intake  
7 bay the water that would otherwise flow through the conden-  
8 sers and thereby reduce the intake flow -- reduce the flow  
9 through the intake screens.

10 By this device we will be able to throttle the  
11 flow at Indian Point 2 as we have in Indian Point 1 when we  
12 have a fish problem down to an order of something less than  
13 one-half of one per second.

14 Q Dr. Lauer, I now refer to the portion of the  
15 Staff Discussions and Conclusions in the last paragraph on  
16 page 30 through page 32, and remarks in the conclusion on  
17 page 49, in your judgment as a representative of the Indian  
18 Point Fish Advisory Board, what will be the effect of opera-  
19 tion of Indian Point 2 on the Hudson River fishery?

20 A (Dr. Lauer) Well, as a member of the Indian Point  
21 Fish Advisory Board --

22 CHAIRMAN JENSCH: Excuse me, sir. Is this in  
23 reference to economics or the amount of fish picked up, or  
24 the amount of fish sold, or what is the basis?

25 MR. TROSTEN: I'll let Dr. Lauer expand on this  
but it is in reference to the ecological effects on the

1 population. It is not in relation to the economic effects.

2 CHAIRMAN JENSCH: Is this a commercial fishery  
3 or an individual fishing person or-- Who is going to get less  
4 fish?

5 MR. TROSTEN: I think I had better let Dr. Lauer  
6 answer.

7 CHAIRMAN JENSCH: That's your question, who is  
8 going to get less fish?

9 MR. TROSTEN: No, my question is what is going to  
10 be the effect on the fish population, is the nature of the  
11 question, Mr. Chairman.

12 CHAIRMAN JENSCH: All right, proceed.

13 WITNESS LAUER: I, as a member of the Fish Advisory  
14 Board, and the other members of the Board have been wrestling  
15 with this question of fish impingement on the screen and the  
16 effect of the plant operation for, I guess, approximately 18  
17 months now. And I personally and the members individually  
18 and collectively, based on their professional experience,  
19 feel that the operation of Units 1, 2, and even 3 at Indian  
20 Point would have no significant effect on the fisheries --  
21 on the fish populations in the Hudson River.

22 Mr. Woodbury described the composition of this  
23 Board yesterday. Within the membership of the Board there  
24 is approximately represented about 30 man years of experience  
25 and knowledge of the Hudson River fisheries specifically,

eb3

1 and approximately 60 years of experience on fish biology and  
2 fish population biology in general.

3 This has been the opinion of these individuals and  
4 of the Board collectively.

5 Now even so, in recognition of the fact that  
6 professional opinions based on experience are really no longer  
7 adequate to allay the concerns about this kind of a problem,  
8 the Advisory Board has recommended to Con Ed that they under-  
9 take the fish population studies which Mr. Woodbury described  
10 yesterday, to establish a more concrete foundation for this  
11 kind of a figure.

12 MR. TROSTEN: Mr. Chairman, I would now like to  
13 turn to the matter of the additional evidence which Applicant  
14 intends to offer.

15 CHAIRMAN JENSCH: Excuse me. Before we do that I  
16 wonder if it would be well to see if the parties desire to  
17 interrogate these three witnesses in reference to these  
18 matters.

19 State of New York?

20 MR. MARTIN: No.

21 CHAIRMAN JENSCH: Staff?

22 MR. KARMAN: No questions.

23 CHAIRMAN JENSCH: Hudson River Fishermen's Asso-  
24 ciation?

25 MR. MAC BETH: Not in terms of this limited license.

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1 CHAIRMAN JENSCH: You want them to be available for --

2 MR. MAC BETH: I would like them to be available  
3 when we return.

4 MR. ROISMAN: Environmental Defense Fund will second  
5 that, Mr. Chairman.

6 CHAIRMAN JENSCH: Very well.

7 I guess then that these gentlemen, Messrs. Woodbury,  
8 Lauer and Lawler, are excused.

9 (Witnesses excused.)

10 MR. TROSTEN: At yesterday's session, Mr. Chairman,  
11 the Board expressed an interest in additional testimony with  
12 regard to the effect of delay, the "out facility" operation,  
13 on the public interest.

14 I am referring here to Subparagraph C in Section  
15 D(2) of 10 CFR 50, Appendix D. The Board expressed particular  
16 interest in evidence pertaining to this factor which the  
17 Board is required to balance insofar as this factor applies  
18 to Applicant's motion for a 50 percent testing license.

19 At this time I would like to recall Mr. Cahill as  
20 my first witness.

21 CHAIRMAN JENSCH: Mr. Cahill having been previously  
22 sworn, need not be sworn again.

23 Whereupon,

24 WILLIAM J. CAHILL, JR.

25 resumed the stand on behalf of the Applicant and, having been

eb5

1 previously duly sworn, was examined and testified further as  
2 follows:

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## 3 FURTHER DIRECT EXAMINATION

4 BY MR. TROSTEN:

5 Q Mr. Cahill, when will Indian Point 2 be ready to be  
6 made critical?

7 A We expect that on or about the first of April it  
8 will be ready to go critical.

9 Q Mr. Cahill, why is the license for testing Indian  
10 Point 2 needed before a license to operate the plant for  
11 producing power?

12 A Indian Point 2, as all other power plants, needs to  
13 undergo a several-months testing and shake-down program before  
14 it operates as a power producer. The testing is needed for  
15 safety and reliability reasons and also to ferret out any  
16 startup problems which have to be resolved.

17 Testing authorization is needed before we can  
18 start this program and such authorization is therefore a neces-  
19 sary first step in putting Indian Point 2 into an operable  
20 condition to make it available for as use thereafter as a  
21 power producer when an appropriate license is issued by the  
22 AEC.

23 Unless we get the authority to test Indian Point  
24 2, the operation will necessarily be delayed for a period  
25 equivalent to the delay in issuance of such testing

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1 authorization, regardless of whether a license to operate for  
2 producing power is eventually issued.

3 In other words, testing authorization is valuable  
4 because it provides an option to utilize the plant at the end  
5 of the testing period.

6 Q You have testified a moment ago that the plant will  
7 be ready to go critical on April 1st, 1972.

8 CHAIRMAN JENSCH: On or about.

9 MR. TROSTEN: Thank you, Mr. Chairman.

10 BY MR. TROSTEN:

11 Q If authority to test were received on that date --  
12 or I should say on or about that date, when could the plant be  
13 ready to operate reliably as a power producer at 50 percent  
14 of full power?

15 A I refer to the diagram, the schedule diagram that  
16 has been issued in evidence which contains an estimate of the  
17 test program duration. That estimate is that the program of  
18 testing up to 50 percent power takes about 49 days from the  
19 point of initial criticality.

20 Now as I indicated before in testimony, this is an  
21 ideal estimate which is realistically attainable but I would  
22 not expect to accomplish this program much sooner than --  
23 in much less time than that 49 days, and it is realistically  
24 possible that it would take maybe twice as much as that.

25 Taking the "twice as much" as an outside realistic

eb7

1 schedule for accomplishing the program would give us 98 days  
2 or, say, three months, and taking the 98 days from April  
3 1st would bring us to early July, July 7th or so, to the end  
4 of the first week in July, which I think is realistically  
5 attainable and possibly with good fortune, we could achieve  
6 this point of being ready for firm operation at 50 percent  
7 sooner than that.

8 Q Mr. Cahill, is the estimate that you have given,  
9 that is, the estimate of 98 days, is that consistent with the  
10 experience of other nuclear power plants?

11 A Yes. I have been following the design, operation,  
12 licensing, and continued operation and start-up of nuclear  
13 plants for a long time. I first started in the nuclear power  
14 phase of power plant engineering in 1954 and from time to  
15 time, I have considered just how long the start-up periods  
16 last.

17 Generally, before this recent period of protracted  
18 licensing procedures, the normal start-up was dated from the  
19 point of fuel loading authorization which amounted to  
20 authorization to go to full power. These periods from fuel  
21 loading authorization to completion of the full power testing  
22 ranged from four months at the best to nine months for some  
23 of the plants that had more difficulty, and as I mentioned  
24 before, those difficulties were largely within the secondary  
25 plant, the steam power plant equipment and systems as opposed

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1 to the nuclear.

2 Six months for that period from fuel loading  
3 authorization to completion of full power seemed to be a good  
4 average and these estimates for the accomplishment of a much  
5 more limited program since we have fuel loading and we are  
6 only going to the completion of the 50 percent test are en-  
7 tirely realistic and reasonable, in my judgment.

8 MR. TROSTEN: I would now like to call Mr. Burton  
9 Schwartz.

10 CHAIRMAN JENSCH: I wonder if, before we do that,  
11 if I can ask Mr. Cahill a question.

12 You have indicated on or about April 1st or April  
13 9th --

14 THE WITNESS: I said on or about April 1st, sir.

15 CHAIRMAN JENSCH: April 1st.

16 How much prior to April 1st will you know whether  
17 you're going to make it or not?

18 THE WITNESS: Well, these things change. Right  
19 today it looks like we're right on schedule on the repair.  
20 The things we have to accomplish are to repair the damage of  
21 the fire, then complete the subcritical testing program that  
22 was to some extent interrupted by the fire.

23 I can't think of any particular milestone that  
24 would change that. Of course the closer you get to a schedule  
25 date and the more you have accomplished in between, the

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1 greater the confidence in that date. At the present time we  
2 are accomplishing the things that we planned to accomplish  
3 on time, and have had this program proceeded entirely to our  
4 satisfaction.

5 CHAIRMAN JENSCH: Let me ask you:

6 You have a certain amount of rewiring to do,  
7 splicing and this sort of thing.

8 THE WITNESS: Yes.

9 CHAIRMAN JENSCH: How much time are you allowing  
10 for testing all this situation out again after you have com-  
11 pleted your wiring, splicing, and whatever you do?

12 THE WITNESS: If I recall that correctly, it was  
13 three or four weeks; that is, after the completion of the  
14 physical repair, --

15 CHAIRMAN JENSCH: Yes.

16 THE WITNESS: -- we have a three- or four-week  
17 period for testing the plant functionally which, in effect,  
18 will complete tests that have to be redone because of the  
19 fire damage and tests that weren't done because they were  
20 interrupted by the fire damage.

21 CHAIRMAN JENSCH: Well, then, as of March 1, if  
22 you have not completed your repair by that time you will know  
23 by that time you are not going to make it?

24 THE WITNESS: Yes, we will know more.

25 CHAIRMAN JENSCH: Well, now, I wonder-- I suppose

eb10 1 this is part of the arrangement we have requested, and the  
2 Applicant has undertaken since that time to keep us informed  
3 as to how you're getting on with this repair situation.

4 MR. TROSTEN: We are continuing to do that.

5 CHAIRMAN JENSCH: Are there any questions of  
6 Mr. Cahill?

7 MR. BRIGGS: Just one.

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1 I believe this morning we concluded that it was  
2 the turbo-generated equipment that made it necessary to go  
3 above 20 percent to get much in the way of testing. Was there  
4 any reason to change that conclusion during luncheon?

5 THE WITNESS: I don't think so.

6 Let me refer to some notes which I have had  
7 generated here.

8 (Pause.)

9 No, sir. The information I have had gathered  
10 confirms my judgment that certainly at the 20 percent level  
11 there isn't much more we can do other than what we have  
12 scheduled, which is a short period. The testing of the power  
13 plant -- the steam power plant -- has to take place at higher  
14 power levels. That's when the flows and pressure drops and  
15 temperatures in that part of the plant become significant.

16 MR. BRIGGS: Has the Applicant communicated infor-  
17 mation like this to the AEC in terms of comments on the  
18 Regulation -- that it really is not very helpful to just be  
19 able to test at 20 percent power? That some number like 30  
20 percent or 35 percent would be better?

21 MR. TROSTEN: Mr. Briggs, it's true that the  
22 Commission's regulations say that testing at more than 20  
23 percent of power must receive the Commission's specific  
24 approval, but the Commission's regulations do authorize  
25 testing at more than 20 percent power.

1           Before we responded to your particular question, I  
2 just wanted to make sure we were clear about that.

3           MR. BRIGGS: Yes. This is referred to the  
4 Commission for their decision.

5           MR. TROSTEN: Will you wait just a minute, please?

6           (Pause.)

7           I just refreshed my recollection on the nature of  
8 the comments that were filed, and although we commented that  
9 the interim licensing procedure was inadequate in a number of  
10 respects we did not specifically address ourselves to the  
11 question of whether the breaking point for reference to the  
12 Commission should be higher than 20 percent.

13           We feel there are more serious problems associated  
14 with it than that.

15           MR. BRIGGS: I don't know what the reason for the  
16 20 percent breaking point was. It may be explained better  
17 somewhere, but it might just as well have been 33 percent, I  
18 suppose, if there were reason for making it that to facilitate  
19 the testing.

20           But as you say, you commented that there are other  
21 deficiencies that you considered more serious.

22           MR. TROSTEN: Yes.

23           MR. BRIGGS: Thank you.

24           CHAIRMAN JENSCH: Did Citizens' Committee have  
25 some interrogation?

1 MR. ROISMAN: Just one question of Mr. Cahill.

2 CROSS-EXAMINATION

3 BY MR. ROISMAN:

4 Q Mr. Cahill, I believe you testified that on or about  
5 the first week of July would be the time at which you would  
6 believe the plant would be prepared to begin steady-state  
7 operation; is that correct?

8 A At 50 percent.

9 Q I'm sorry; at 50 percent.

10 Assuming for a moment hypothetically that you  
11 agreed with our position that there were risks associated  
12 with steady-state operation, would the risks that are  
13 associated with steady-state operation also begin the first  
14 week of July?

15 A The way you phrase the question there is only one  
16 answer. If you assume that there are risks associated with  
17 steady-state operation, then the risks commence with steady-  
18 state operation.

19 MR. ROISMAN: Okay; thank you.

20 MR. BRIGGS: Just a question here. Are the risks  
21 associated with steady-state operation beginning on the first  
22 of July likely to be the same for 50 percent power as  
23 the risks of steady-state operation a year from the first of  
24 July, for instance?

25 WITNESS CAHILL: No. The concern in nuclear power

1 plants involves the release of radioactivity to the environ-  
2 ment or within the plant to the employees in an uncontrolled  
3 and excessive way. And as a plant operates--the radioactivity  
4 is produced as a result of plant operation--the fission  
5 products are the ashes of fuel consumption of nuclear fuel, and  
6 the corrosion products are generated by continued exposure of  
7 the coolant to the operating core. The amount of radioactivity  
8 increases with operation.

9 But it's a complex affair, because there are many  
10 different radioactive isotopes and they decay as they are  
11 generated and reach equilibriums at various periods of  
12 operation.

13 Certainly, though, as the time goes on from  
14 operation you come closer to the equilibrium level of radio-  
15 activity inventory in the plant.

16 So in that sense the risk increases as steady-state  
17 operation increases.

18 MR. BRIGGS: The radioactive isotope that is of  
19 most concern is which one, do you recall? Or which group?

20 WITNESS CAHILL: Well, the isotope of most concern  
21 from the point of view of exposure outside the plant is the  
22 iodine group.

23 MR. BRIGGS: And the iodine has about an 8-day  
24 halflife I guess; is that right?

25 WITNESS CAHILL: Yes.

1 MR. BRIGGS: Insofar as iodine is concerned, then,  
2 I suppose the risks saturate at a couple of months?

3 WITNESS CAHILL: That's the feel I have, but  
4 maybe somebody here can --

5 MR. BRIGGS: Actually, a month probably is closer.

6 WITNESS CAHILL: A couple of months is right.

7 MR. BRIGGS: So the main difference that occurs is  
8 during the first two months of operation after a couple of  
9 months the other isotopes continue to grow in, but the iodine  
10 has reached about where it's going to reach?

11 WITNESS CAHILL: Yes, sir.

12 CHAIRMAN JENSCH: Any further questions?

13 MR. ROISMAN: I just wanted to clarify --

14 BY MR. ROISMAN:

15 Q Mr. Cahill, is the testimony that the risk of the  
16 iodine is about one month -- that it reaches the level --

17 A We are talking one to two months.

18 MR. ROISMAN: I will call Mr. Grob, then.

19 WITNESS GROB: It has generally taken about a  
20 little over a month to reach saturation inventories on your  
21 iodine.

22 MR. ROISMAN: Could you give me days? 40 days?

23 WITNESS GROB: Give me the power history. Tell  
24 me how I shut down and when I shut down and --

25 MR. ROISMAN: On our hypothetical 50 percent

1 steady-state.

2 WITNESS GROB: About one month.

3 MR. ROISMAN: Thank you.

4 CHAIRMAN JENSCH: Any further questions of Mr.  
5 Cahill?

6 If not, thank you, Mr. Cahill. You are excused.

7 WITNESS CAHILL: Mr. Briggs had asked about what  
8 the testing program consists of in more detail, and I can  
9 refer to transcript 4013 and the FSAR, Section 1.3.3 for a  
10 more extensive listing of what the tests consist of.

11 MR. BRIGGS: Yes, I think my main concern is:  
12 was there one factor that made it necessary to go above  
13 20 percent to do meaningful testing, and I think you really  
14 hit at what that is.

15 Thank you.

16 CHAIRMAN JENSCH: Thank you, Mr. Cahill. You may  
17 be excused.

18 (Witness excused.)

19 Will you call your next witness, please?

20 MR. TROSTEN: Yes. Mr. Schwartz.

21 CHAIRMAN JENSCH: Has Mr. Schwartz been sworn?

22 MR. TROSTEN: Yes, he has been sworn previously.

23 CHAIRMAN JENSCH: Very well; proceed.  
24  
25

1 Whereupon,

2 BERTRAM SCHWARTZ

3 was called as a witness on behalf of the Applicant, and having  
4 been previously duly sworn was examined and testified further  
5 as follows:

6 FURTHER DIRECT EXAMINATION

7 BY MR. TROSTEN:

8 Q What do you mean by the term "peak demand," as  
9 used in Con Edison's October 19, 1971 testimony in support  
10 of the testing license?

11 A That is the period during which we are exposed to  
12 be required to deliver the maximum amount of power we expect  
13 we will be required to deliver during the year.

14 For example, our peak period occurs in the summer  
15 and by correlating commercial activity in the city and likely  
16 temperatures we anticipate that we will be called upon or  
17 could be called upon on any given day to deliver our peak  
18 load that year in the period June 15 to approximately  
19 September 15 of any given year.

20 Q Mr. Schwartz, has Con Edison ever been forced to  
21 institute load reduction measures after the period of summer  
22 peak demand and before the period of winter peak demand?

23 A Yes, sir.

24 Q Would you please explain those circumstances?

25 A On a number of occasions in 1970 the Company was

1 forced to institute load reduction. In one instance, on  
2 September 22, 1970, the Company was forced to go beyond  
3 reduction in curtailing the load. It was forced to actually  
4 cut off the service of approximately one percent of its  
5 customers for a period varying from one to approximately three  
6 hours.

7 Q Do you anticipate there is a significant likelihood  
8 that such measures might have to be instituted in the fall  
9 of 1972?

10 A I think the key to the answer of that question is,  
11 the availability of Indian Point 2.

12 CHAIRMAN JENSCH: Assuming not?

13 WITNESS SCHWARTZ: Yes, Mr. Chairman. In my  
14 opinion we would be subject to voltage reductions and perhaps  
15 more drastic load curtailment measures beyond the 1972 peak  
end 13<sub>16</sub> were Indian Point 2 not available to us.

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1 BY MR. TROSTEN:

2 Q What will Con Edison's reserve margin be in the  
3 fall of 1972?

4 A Zero. And I think it's important to understand  
5 that that zero reserve that we would anticipate our having  
6 after the 1972 peak is brought about by our need during the  
7 non-peak periods to perform the necessary maintenance on our  
8 equipment that had been operating all summer before and will  
9 be called upon the next summer to operate at peak loads.

10 What we do in devising the maintenance program that  
11 we can undertake is to predict our loads throughout the non-peak  
12 period, that is, from September 15th, well, really, it's about  
13 October 1st that we start our maintenance program, from  
14 October 1st to June 1st, we undertake each week in that year  
15 to estimate what our maximum load could be.

16 Were we to achieve design weather conditions, we  
17 then look at our available capacity during these periods and  
18 declare there the differences available for maintenance and,  
19 in fact, this winter have taken our equipment out for main-  
20 tenance up to that limit. And so because of our maintenance  
21 program and the great need to have a maintenance program, our  
22 reserves during the fall and winter periods are zero very  
23 frequently. Our reserves on our own system, zero very fre-  
24 quently, and there is a great potential of it being negative.

25 Q If Indian Point 2 is not available before the fall

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1 of 1972, will the company's maintenance program be jeopardized?

2 A Excuse me, Mr. Trosten, you said if it is not  
3 available before the fall; that is, am I to assume it will be  
4 available in the fall in answering your question?

5 Q You assume that it is not available in the fall.

6 A Thank you.

7 If it is not available in the fall, then we would be  
8 limited by an equivalent amount of capacity to the amount of  
9 capacity that would be available to be taken out for maintenance.  
10 I would estimate that over the eight-month maintenance period  
11 beginning October 1, '72 and ending May 31, '73, that were we  
12 not to have Indian Point 2, we would have to reduce our main-  
13 tenance program by at least 50 percent.

14 Q What would be the effect of such a reduction in the  
15 maintenance program.

16 A It would severely reduce the reliability of our  
17 system to serve our customers' needs in the subsequent winter  
18 of '72 if we did not have it in the fall of '72 and the subse-  
19 quent summer of '73.

20 Q If Indian Point 2 were unavailable in the fall of  
21 1972, how would Con Edison satisfy the demands for power on  
22 its system?

23 A First, as I mentioned, we would reduce our  
24 maintenance program, but we would attempt to replace the  
25 energy that Indian Point 2 would generate. increased generation

ln3

1 on our own system and by increased purchases.  
2 We have found that when we lose a unit  
3 most of the power, replacement power, must come from our  
4 existing stations. Our existing stations, other than Indian  
5 Point, are in the City of New York.

6 These are fossil-fuel units and we would increase  
7 the consumption of fossil fuel to replace the power that Indian  
8 Point 2 would otherwise create. This, of course, would sig-  
9 nificantly increase the pollution levels in New York City. And  
10 I think it might be important to note that incrementally we  
11 would operate our next most efficient station first.

12 So we have been operating with our most efficient  
13 stations, and now when we're called upon to produce even more  
14 power in the City, it is our lesser and lesser efficient  
15 stations that become called upon.

16 So, per kilowatt hour, the pollution generated is  
17 much greater as you call more and more upon the fossil plants  
18 to generate power.

19 Q If Indian Point is not available before the winter  
20 of 1972-1973, what would be the effects on the power supply  
21 situation for New York City?

22 A During the winter of 1972-73?

23 Q Yes.

24 A I believe that during that winter, the New York  
25 City power supply would be in jeopardy without Indian Point 2.

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1 MR. TROSTEN: Mr. Chairman, I now want to address  
2 certain questions to Mr. Schwartz that were prompted by the  
3 Board's interrogation of the Staff witnesses yesterday.

4 CHAIRMAN JENSCH: Proceed.

5 BY MR. TROSTEN:

6 Q First, Mr. Schwartz, what was Con Edison's 1971  
7 peak load. I refer particularly to the Staff's testimony,  
8 page 44?

9 A Con Edison's peak load in 1971 was 7719 megawatts.  
10 This occurred on July 1st.

11 MR. TROSTEN: Excuse me a moment.

12 (Pause.)

13 WITNESS SCHWARTZ: For the information of the Board,  
14 on July 1st, during the hour when we sustained our 7719 megawatt  
15 peak, we were in partial voltage reduction. Our estimates as  
16 to the load effect of the voltage reduction when integrated over  
17 the entire hour of the peak is approximately 24 megawatts.

18 So, were it not for being the voltage reduction, our  
19 load would have been 24 megawatts higher than the 7719.

20 BY MR. TROSTEN:

21 Q What was the New York power pool's peak load in  
22 1971 and I refer here to the Staff's testimony on page 45?

23 A 18,146 megawatts. Also, on July 1st, 1971.

24 end 14

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1 Q During yesterday's session, Chairman Jensch raised  
2 questions concerning the feasibility of the purchase of  
3 Canadian power. I refer here to page 47 of the Staff testi-  
4 mony. Would you please comment on that, Mr. Schwartz?

5 A Yes. We believe it entirely feasible for Con  
6 Edison to purchase large blocks of power from Canada. We are  
7 in intensive negotiations with various Canadian power agencies  
8 to accomplish a significant purchase which we hope can begin  
9 in 1977. We are now speaking of 500 megawatts.

10 A number of things have to occur that are quite  
11 critical before this power actually begins to flow into  
12 New York from Canada. We need to be able to construct the  
13 necessary transmission lines from the Canadian border down to  
14 our service area and the Canadians in turn will have to con-  
15 struct some transmission lines to the international borders.

16 Other important prerequisites to such a trans-  
17 action are an export license from Canada which, under present  
18 Canadian law, can only be granted after a declaration that the  
19 power to be exported is surplus to the Canadian needs.

20 And then we reach the question of, well, until we  
21 can reach an agreement that will assure us a firm supply  
22 that won't be pulled back in the event of an unforeseen growth  
23 in Canada, can we justify the construction of the necessary  
24 transmission lines?

25 But without troubling the Board much longer with

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1 more details on this, I would like to state that Con Edison's  
2 recent long-range plan which was just completed and recently  
3 submitted to this City's Public Service Commission's, Public  
4 Power Commission does have in its capacity resources,  
5 beginning in 1977, 500 megawatts from Canada.

6 Q Did you take into account in your determination of  
7 the need for Indian Point 2 for the summer of 1972 the avail-  
8 ability of Bowline Point No. 1 and an added 70 megawatts  
9 electric? I refer here to the Staff testimony at page 47.

10 A Yes, sir, we did. In analyzing the capacity re-  
11 sources available to us for the summer of 1972 we have been  
12 assuming the availability of Bowline Point 1 on July 1st,  
13 1971; that is its current schedule -- 1972, excuse me.

14 We have a 400 megawatt share in this unit and  
15 arrangements to purchase an additional 125 megawatts of our  
16 partnership during this first year, 1972.

17 We also took into consideration an additional 70  
18 megawatt purchase, and perhaps I can explain where that comes  
19 from.

20 We have under contract now 200 megawatts from the  
21 Ginna nuclear unit of Rochester Gas and Electric. We have  
22 reached agreement with-- And by the way, last summer we had  
23 270 megawatts under contract from that unit.

24 We have reached oral agreement with Rochester to  
25 continue our purchase in '72 at the 270 megawatt level. That

eb3

1 perhaps attests to the difference between the 200 and the 270,  
2 or the 70 megawatts that seems to appear sometimes and not  
3 others.

4 But yes, we believe that we will have it. We have  
5 an oral contract for that amount which we are now reducing to  
6 writing.

7 Q In response to a question asked by Mr. Briggs yes-  
8 terday, I ask you, Mr. Schwartz, whether in determining the  
9 cost of delay, a point referred to on page 47 of the Staff's  
10 statement, did you take into account the cost savings that  
11 would result from not operating Indian Point 2?

12 A Yes, sir. The way in which we computed the cost  
13 of delay was to determine the entire system cost with Indian  
14 Point 2 and then to determine the entire system cost without  
15 Indian Point 2, and to take the difference. That's the only  
16 way we were able to do it because with Indian Point 2 or with-  
17 out, we have a fundamental change in circumstance on our  
18 system which would cause different dispatches of our various  
19 other units during different kinds of days.

20 So we have a computer program which is able to  
21 model our system with units in and with units out and this  
22 actually operates for every two hours in the year, so it is  
23 more than 4,000 different determinations, and we then deter-  
24 mined what our cost would be with Indian Point 2 and without  
25 Indian Point 2. The difference is the amount of cost to

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1 replace the power.

2 We must add to this though the interest that we  
3 would continue to pay had we not had Indian Point 2, of about  
4 a million dollars.

5 I am advised that the question also revolved about  
6 fuel costs. Yes, this is the majority of the increase in  
7 cost: fuel costs, purchased power costs, increased main-  
8 tenance and operating costs of other units. But basically we  
9 did credit that number with the savings that would be achieved  
10 by our not having to operate Indian Point 2 or not having to,  
11 pay for its operation.

12 MR. TROSTEN: Mr. Chairman, we have no further  
13 evidence to offer.

14 Mr. Chairman, I would like to advise you that the  
15 FSAR section which Mr. Cahill read should be corrected to read  
16 13.3.

17 CHAIRMAN JENSCH: We will so note that.

18 Let me ask Mr. Schwartz:

19 What will be your capacity from the gas turbine you  
20 are adding to the system?

21 THE WITNESS: Our current gas turbine capacity is  
22 1984 megawatts. We are now adding 348 megawatts of additional  
23 capacity.

24 These figures are quoted as the capacity of the unit  
25 at the time of the summer peak. These units have different

eb5 1 capacities at different ambient temperature. Assuming it is  
2 hot, we would have then 1948 plus 348-- Excuse me, 1984  
3 plus 348, something in excess of 2300 megawatts, by the com-  
4 pletion of the 348 megawatt increment which is scheduled for  
5 July 15th, 1972.

6 CHAIRMAN JENSCH: Did you include those figures in  
7 the calculations you gave us of the peak loads you expect for  
8 '72, in your consideration of the peak loads for '72?

9 THE WITNESS: Yes, in consideration of the peak  
10 loads and consideration of the resources we have available  
11 to us, yes, we have considered the availability of these  
12 units.

13 CHAIRMAN JENSCH: Are the other members of the  
14 New York Power Pool adding to their capacity at the present  
15 time, do you know?

16 THE WITNESS: Yes, sir, they are.

17 CHAIRMAN JENSCH: And what will be that increase  
18 in capacity in that Pool and what will be available to you  
19 from that Pool in 1972 as an increase over '71, for instance?

20 THE WITNESS: The amount of power that will be  
21 available to us to purchase in 1972 will be significantly  
22 less than the amount that was available to us in 1971. In  
23 1971 we had under contract 920 megawatts of firm power. We  
24 now have under contract for 1972, 395 megawatts of firm  
25 power.

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1 CHAIRMAN JENSCH: Are you indicating there has  
2 been a refusal of the Pool to supply you more?

3 THE WITNESS: No, sir. We have held discussions  
4 in an attempt to increase our firm purchases for 1972 with  
5 not only each member of the New York Power Pool but we have  
6 held discussions with the PJM companies, the Pennsylvania-  
7 Jersey-Maryland Pool companies and the New England companies  
8 and Canadians.

9 We testified earlier that through all of these  
10 discussions we have not been able to identify an available,  
11 firm capacity beyond some 200 megawatts not contingent upon  
12 the completion of other units whose schedules were perhaps  
13 as much or more in jeopardy as Indian Point 2.

14 Now with respect to that 200 megawatts, we have  
15 recently been advised that approximately half of it will not  
16 be available, so really we are talking about perhaps 100 or  
17 150 megawatts of additional capacity available for us to  
18 purchase in 1972 that is not contingent upon the completion  
19 of other generating plants.

20 CHAIRMAN JENSCH: Well, what is the schedule for  
21 completion of the other generating plants by those members of  
22 the Pool?

23 THE WITNESS: As an example, the Northport 3 Unit  
24 of Long Island Lighting Company, a 386-megawatt coal-fired  
25 unit, is scheduled for completion in June of 1972, and any

eb7

1 offer of power from those loads is contingent upon completion  
2 and successful operation.

3 Another operation, outside of the Pool, is the  
4 Northfield Mountain Pump Storage Project of Northeast  
5 Utilities. This is in Massachusetts. Now at the time we  
6 started discussions with Northeast Utilities associated with  
7 the purchase of Northfield Mountain capacity and perhaps other  
8 Northeast utility system capacity, it all was contingent upon  
9 the completion of that entire 1,000 megawatt pump storage  
10 plant next spring.

11 As the discussions proceeded last fall, the schedule  
12 of Northfield Mountain began to slip faster than the negotia-  
13 tions could proceed and now it itself is only scheduled for  
14 half of it to be available next spring, and the offer to us  
15 has been correspondingly reduced and is still contingent upon  
16 the completion of their remaining half of that plant.

17 CHAIRMAN JENSCH: I don't want to develop any  
18 frothing of the mouth around but how is Storm King Mountain  
19 going these days?

End 15

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(Laughter)

WITNESS SCHWARTZ: Storm King Mountain is doing well, sir.

CHAIRMAN JENSCH: Has the time for the latest appeal expired?

MR. ROISMAN: He's talking about the mountain, Mr. Chairman.

(Laughter)

WITNESS SCHWARTZ: You are aware that the Circuit Court ruled in our favor?

CHAIRMAN JENSCH: So I understand.

I understood there was going to be an appeal taken, and I was wondering whether the appeal was taken or not taken.

MR. TROSTEN: Mr. Sack will answer that.

MR. SACK: The petition for rehearing for the Second Circuit was denied. Time is now running on the opportunity for the proponents of that project to file a petition for certiorari to the Supreme Court. If they follow their past procedure, they will await until the last possible day.

CHAIRMAN JENSCH: Which is....?

MR. SACK: Which I believe runs out in February.

WITNESS SCHWARTZ: End of February.

CHAIRMAN JENSCH: Thank you.

1 Well, assuming it is contingent upon the essen-  
2 tial completion of all of these matters, how long will it  
3 take you to get Storm King Mountain going?

4 WITNESS SCHWARTZ: We believe that it will take  
5 us seven years from the point where we begin detailed  
6 design to the completion of the first half of the plant,  
7 which is the first four units. We are scheduling seven  
8 years for 1000 Megawatts and an additional year for the  
9 second 1000 megawatts. This is based upon the schedule of  
10 breaking ground one year after completion of -- or initiation  
11 of design. Or an actual six-year construction and start-up  
12 program.

13 CHAIRMAN JENSCH: Perhaps this is a legal ques-  
14 tion. Is there any jurisdiction in the New York Public  
15 Service Commission to allocate power supply from the New York  
16 Power Pool? What I have in mind is, I understand that --  
17 from the papers, at least -- there is a decline in the use of  
18 power up in the northern regions of the State of New York,  
19 and whether that will affect the power supplies available.  
20 For instance, plants are being closed in Buffalo, and that  
21 sort of thing. And I wonder if that will lessen the power  
22 take; and, in which event, if the Public Service Commission  
23 has some jurisdiction over the pool and might allocate some  
24 supplies?

25 WITNESS SCHWARTZ: Well, without addressing the

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1 question of jurisdiction, I think I can answer your question;  
2 that is, we are members of the New York Power Pool, and we  
3 do have operating agreements such that the availability of  
4 power in any part of the state surplus to the needs of that  
5 area will be made available to the other areas of the State.

6 We on almost a daily basis interchange power  
7 with other members of the pool. And were there to be a  
8 reduction of load requirements in the Buffalo area, that  
9 would help us, without question, and without regard to juris-  
10 diction.

11 CHAIRMAN JENSCH: Well it seemed to be indicated  
12 by the Ginna plant-- I don't think the projections were  
13 originally submitted that the Ginna plant would supply  
14 New York City. So I inferred that the Northwest section  
15 of the State of New York might be developing a power surplus  
16 and be available to New York City.

17 WITNESS SCHWARTZ: Sir, I don't think that's  
18 quite correct.

19 Mr. Drake, of Rochester, the Chairman of Rochester,  
20 sent our Chairman a telegram a while back which indicated  
21 that our purchase, a purchase of the Ginna capacity during  
22 its early years, was what permitted Rochester to build so  
23 large a plant. So this was planned on by Rochester. They  
24 were able to build a 500 Mwt plant because we purchased a  
25 large share of it at the beginning, and a diminishing share a

1 few years later. They were able to grow into the plant  
2 and achieve the economies of it.

3 CHAIRMAN JENSCH: Well, as I say, of course--  
4 Did you want to add something?

5 WITNESS SCHWARTZ: No.

6 CHAIRMAN JENSCH: I appreciate that. But if  
7 there is a decline in the take and they are not growing into  
8 it any more, my thought was that a surplus might be available.

9 WITNESS SCHWARTZ: Perhaps I should address my-  
10 self to the load forecasts and the actual loads that have  
11 been achieved.

12 CHAIRMAN JENSCH: I think you've covered it.  
13 You indicated that at the present moment you cannot count  
14 on a greater supply from Ginna that you have now contracted  
15 for.

16 WITNESS SCHWARTZ: Yes, sir, that's correct.

17 CHAIRMAN JENSCH: Now another probably unpleasant  
18 subject to discuss: But assuming the inter-tie across the  
19 border at that northwest section of New York is operating,  
20 are you bound in taking supplies from Canada to be still  
21 subject to the declaration that the power must be declared  
22 surplus to the Canadians under the present arrangements that  
23 you have with the pool; or is that declaration of surplus  
24 to Canadian needs only applicable to newer connections such as  
25 you indicated, I presume, may be something from Quebec?

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WITNESS SCHWARTZ: Sir, we need to differentiate between the existence of the connection and the flow of power back and forth to maintain the stability of both systems and long term purchases of power. It is for these purchases of power that we require -- that the Canadian law requires the declaration of excess.

Now we have in the past -- and our neighbors in Michigan and Chicago have purchased power from the Canadians on a short-term basis. We had two contracts last summer. It was the existence of those very ties that permitted the import of power. This is quite limited, though. Basically it's limited by those ties themselves, and also the transfer west-to-east across the middle of New York State. Niagara-Mohawk, being essentially in two regions, has a higher demand in the East than they generate. And the transmission available for us to get power from Canada is quite frequently bottlenecked by that west-east leg. That's why I referred to the need for even more investment in large transmission facilities, for us to have a very significant import capability from Canada, like 500 Mwt.

CHAIRMAN JENSCH: Are you suggesting if you had better transmission, or larger transmission facilities from west-to-east you could get more Canadian power through the inter-tie at Buffalo?

WITNESS SCHWARTZ: No. That would begin to be

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1 limited by the availability of power.

2 Let's talk of new summer, the availability  
3 of power from the Ontario Hydro System. The availability of  
4 power from there is dependent upon the completion of two  
5 units, one of which is complete -- it's the nuclear unit,  
6 the Pickering unit -- and a fossil fuel plant, Nanticote,  
7 I think it is No. 2, which is not scheduled for operation  
8 until next spring.

9 If Nanticote is completed and Pickering is in  
10 service and reliable, I believe we will be able to purchase,  
11 an additional 200 Mwt, about 200 Mwt of power from Canada.  
12 But were either of those 500 Mwt not available, it is not  
13 likely that there would be any power available for sale  
14 from Ontario Hydro next summer.

15 CHAIRMAN JENSCH: Well I appreciate these are  
16 contingent upon people going ahead with the work that they  
17 are planning to do. I think that's the way you have to  
18 project your own service: you expect things to be done that  
19 are proposed to be done. And if these plants are completed  
20 up in Canada you expect that there might be power available  
21 from that source. In any event, the transmission capability  
22 is there to bring the power from west to east; is that  
23 correct?

24 WITNESS SCHWARTZ: There would be next summer  
25 a capability to bring that power -- to bring a few hundred

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1 megawatts of power to us from Ontario Hydro next summer  
2 were such power available in Canada.

3 CHAIRMAN JENSCH: Everything is contingent if it  
4 is available. The existing plants may break down, just as  
5 contingent as to whether they are going to complete the  
6 plants they are now constructing. So we kind of assume that  
7 they're going to keep operating and that they will finish  
8 their construction that they are now building. But assuming  
9 those factors, you could get, you say, a few hundred megawatts,  
10 and could you put a figure on that? --west to east?

11 WITNESS SCHWARTZ: Yes, sir. Assuming the com-  
12 pletion on schedule of everybody else's construction program  
13 but Con Edison's, there would be additional power available  
14 for us to purchase.

15 CHAIRMAN JENSCH: Adequate power?

16 WITNESS SCHWARTZ: I don't think that's likely,  
17 sir. Adequate to replace 873 Mwt of Indian Point? I  
18 do not believe that much power would be available.

19 CHAIRMAN JENSCH: Well whether it's 973, there  
20 would be enough to meet your peak demands, would there not?

21 (Witness Schwartz conferring with Mr. Woodbury.)

22 WITNESS SCHWARTZ: It would be enough to -- what,  
23 sir?

24 CHAIRMAN JENSCH: I will finish my question if  
25 you will finish talking to Mr. Woodbury. If you desire to

1 talk to him, I will stop.

2 WITNESS SCHWARTZ: I'm sorry.

3 CHAIRMAN JENSCH: You may not get 973, maybe,  
4 from these other sources, but these other sources will supply  
5 enough power to meet your demands as you project them for  
6 the peak of '72, will they not?

7 WITNESS SCHWARTZ: No, sir. I do not believe we  
8 can prudently plan that that amount of power, or an amount  
9 of power approaching that, will be available for us to import  
10 on a firm basis to replace Indian Point 2 next summer.

11 CHAIRMAN JENSCH: That isn't quite the question.

12 WITNESS SCHWARTZ: I do not believe that will  
13 occur.

14 CHAIRMAN JENSCH: It's not a question of replac-  
15 ing; but it will be enough to meet your peak demands without  
16 Indian Point-2?

17 WITNESS SCHWARTZ: The meeting of peak demands  
18 is related to the coincidence of a probability of peak  
19 demand with the probability of a given level of forced  
20 outages. With Indian Point-2 we may not be able to meet  
21 our peak demand. We may face a period of high incidence  
22 of forced outages during the period when our neighbors are  
23 unable to supply additional power.

24 CHAIRMAN JENSCH: Well, there's lots of possibilities.

25 WITNESS SCHWARTZ: All of these things can happen.

1 What you can do is to attempt to reasonably plan our  
2 capacity resources to meet what we reasonably anticipate to  
3 be our load.

4 CHAIRMAN JENSCH: Ordinarily the supply problems  
5 are contingent upon many things, and you kind of hope to  
6 get a combination of favorable circumstances.

7 WITNESS SCHWARTZ: I cannot leave the record with  
8 my having acquiesced in the validity of that statement, sir.

9 CHAIRMAN JENSCH: Very well. Maybe this will be  
10 the way to do. Could you at a later time-- And this should  
11 be directed to your counsel. --list all of the possible  
12 sources of additional supply that might be available through  
13 pools or other connections that you may have. The gentleman  
14 just mentioned Pickering and this other plant that they have  
15 in Ontario. What additional supply might there be from  
16 other sources in the Ontario group? And, likewise, what  
17 additional power might be available from Niagara Mohawk and  
18 Ginna, and enumerate with some specificity, to see whether  
19 the inference might be drawn that there might be power  
20 available to you.

21 WITNESS SCHWARTZ: Yes, sir.

22 CHAIRMAN JENSCH: Of course I realize that things  
23 may happen, that they won't complete these things. But  
24 assuming that the schedule-- Everybody is assuming: Mr. Cahill  
25 is assuming that they will be ready on April 1st. We assume

1 these things and hope that they will work out that way.

2 So I ask you to assume the same kind of an assumption that  
3 Mr. Cahill has on your expectation of what sources could  
4 be available to you.

5 Now you back off from any one of them, because  
6 I realize that some contingency may arise to prevent it.  
7 But it seems to me that there's a great deal of additional  
8 generating capacity being built all the way from New England  
9 west to Ohio, and it is not all nuclear; there's a lot of  
10 fossil fuel plants.

11 MR. TROSTEN: Did you say the summer of '72?

12 CHAIRMAN JENSCH: Yes.

13 WITNESS SCHWARTZ: We will provide that informa-  
14 tion.

15 CHAIRMAN JENSCH: Very well.

16 Now this increased pollution situation. As you  
17 mentioned, that depends upon the fact of whether you get  
18 low sulfur coal or low sulfur oil, does it not?

19 WITNESS SCHWARTZ: No, sir. The New York City  
20 Air Pollution Code requires us during the one-year period  
21 commencing October 1st, 1971, to use residual oil with an  
22 average sulfur content of .55 percent. After October 1st,  
23 1972, we are obliged to use residual oil with a sulfur content  
24 not exceeding .3 percent.  
25

1 WITNESS SCHWARTZ: By next summer will burn oil with an  
2 average sulfur content of considerably less than .55, I believe.  
3 We will not be burning coal next summer. We have only one  
4 plant in our system now which is burning coal and that plant  
5 is Arthur Kill 3, which is scheduled for shutdown on September  
6 27th, at which time it will be converted for oil firing when  
7 it starts up.

8 We then will have no coal burning and all oil burning.  
9 What I referred to, sir, was simply an increase in the amount  
10 of barrels of oil that will have to be burned to make the  
11 kilowatt hours to replace that which Indian Point otherwise  
12 would generate.

13 CHAIRMAN JENSCH: Well, you used the term "pollution"  
14 and --

15 WITNESS SCHWARTZ: "Emission" levels is the Board's  
16 correct statement. Really a more correct term.

17 CHAIRMAN JENSCH: I see.

18 You have the low sulfur oil contracted to take care  
19 of these requirements, have you?

20 WITNESS SCHWARTZ: We have long-term contracts for  
21 low sulfur oil sufficient to meet our requirements, assuming  
22 the availability of Indian Point 2. Now, we do have flexibility  
23 though, in these contracts to increase our imports in the event  
24 of a contingency such as not having Indian Point 2.

25 I do not think that the availability of fuel would

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1 be the limiting factor in our generation.

2 CHAIRMAN JENSCH: I thought you were concerned about  
3 high pollution levels and I wondered --

4 WITNESS SCHWARTZ: Simply as a result of more  
5 generation of the city.

6 CHAIRMAN JENSCH: I understand.

7 How long does it take you to add additional gas  
8 turbines to your system, order them and deliver them and put  
9 them on.

10 WITNESS SCHWARTZ: Well, sir, it takes us a year to  
11 add the next ones that we have not yet added, but when we look  
12 back on how long it has taken us to add the ones that actually  
13 have come in, it takes considerably more than a year.

14 CHAIRMAN JENSCH: And there's no licensing involved  
15 there, is there?

16 WITNESS SCHWARTZ: There are numerous licensing  
17 procedures that we have to go through, permits and --

18 CHAIRMAN JENSCH: Usually, there are no hearings,  
19 are there?

20 WITNESS SCHWARTZ: We have not been delayed in  
21 the construction thus far, in the construction of gas turbines  
22 as a result of licensing matters. There have been construction  
23 problems and strikes in supply plants, et cetera.

24 CHAIRMAN JENSCH: In your consideration of additional  
25 supplies, will you include your PGM possible sources as well?

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1 WITNESS SCHWARTZ: Certainly. We will include  
2 anything connected to us and connected to that.

3 CHAIRMAN JENSCH: Is there any governmental body  
4 that has any jurisdiction over allocation of supplies from your  
5 pools, Counsel?

6 MR. TROSTEN: Mr. Chairman, would it be satisfactory  
7 to you if I sent you a letter on this matter?

8 CHAIRMAN JENSCH: Yes.

9 My reason for asking is this: As I understand,  
10 there's been quite a shift in electrical demands, say, in the  
11 last year from what it was previously, same area, same amounts  
12 and so forth. I just wonder whether there isn't a developing  
13 pattern that permits a greater flexibility by Con Edison as to  
14 supplies and whether there is any arrangement possible for  
15 Con Edison to utilize to secure the supplies.

16 I take it there is not a party in this proceeding  
17 who has not expressed the concern that the power demands be  
18 met by all the users. I think the difference is only how the  
19 supplies shall be provided for the needs, but I think pretty  
20 exhaustive efforts -- I mean, I said sometimes perhaps you can  
21 negotiate a contract for a variety of reasons for supplies and  
22 it may be that there are other methods available for Con Edison  
23 to get its -- I think the expression from the Intervenors here,  
24 the Citizens' Committee and the Hudson River Fishermen's  
25 Association and the others, that they are equally concerned with

ln4 1 power needs. It's just a question of how they can be supplied.

2 If anything, if you could assist in telling us  
3 what supplies are available, again, perhaps you and Mr. Cahill  
4 could work on that hopeful anticipation that everything will  
5 proceed on schedule, we will get a good supply picture presented  
6 for Con Edison.

7 MR. ROISMAN: Excuse me, Mr. Chairman, just a  
8 point of clarification.

9 Were you asking for the Applicant's supply statement  
10 for this area to be not what is available by contract, but what  
11 is available as reserves on other systems?

12 CHAIRMAN JENSCH: Oh, yes.

13 I appreciate there may be many factors why contracts  
14 aren't executed for supplies.

15 WITNESS SCHWARTZ: May I suggest, sir, that perhaps  
16 it would be more informative to the Board and to the other  
17 parties if I responded by saying what other companies have  
18 been willing to offer to us contingent upon other things  
19 occurring because it may or may not be directly related to  
20 their reserves.

21 They may have a reserve picture beyond that, but  
22 have a maintenance schedule that I don't know about which  
23 inhibits their offering to us.

24 CHAIRMAN JENSCH: If I may request, I would not  
25 suggest they be limited to what they said they would have

ln5 1 available to you from some source, for instance, like  
2 Electrical World magazine, or something like that.

3           The capacities that these companies have either  
4 present or expected within the near future, I think that would  
5 be very helpful in consideration of -- not to exclude  
6 what you have indicated, however, that they're only going to  
7 offer you a certain amount out of what they have.

8           I think that if the take is not in their area at  
9 the moment, they may be more willing to sell more as time goes  
10 on than they are now presently proposing to do.

11           WITNESS SCHWARTZ: Certainly, sir, that would be  
12 conjecture for us to provide you any information other than  
13 that which the individual companies have stated to us.

14           They are quite inclined to sell as much power as  
15 they can, quite economically.

16           CHAIRMAN JENSCH: From what you have projected for  
17 cost and savings, I would think it was economically advantageous  
18 for some of these sellers to sell, but sometimes, despite that,  
19 there are other factors that play a part in pool considerations.  
20 And I think Electrical World, as I recall it, puts out a  
21 publication on what the capacity of a company has and what  
22 they're coming around with.

23           Now, they may change that availability depending  
24 on maintenance and shutdown and obsolescence and so forth, but  
25 let us disregard those for the moment. It may be that they

ln6 1 have a capacity of 10, that they have indicated to you that  
2 they will sell you 1, and it may be that as time goes on they  
3 will push that figure 1 up a bit. It may be because it's  
4 advantageous economically to them or other factors may play a  
5 part in what they are willing to negotiate about.

6 WITNESS SCHWARTZ: We will endeavor to provide the  
7 Board with whatever reliable information is available.

8 CHAIRMAN JENSCH: If it is as reliable as  
9 Electrical World, I'm sure it will be very helpful.

10 WITNESS SCHWARTZ: May I correct the statement  
11 apparently I made when I referred to the shutdown of Arthur  
12 Kill 3 for conversion to oil? I intended to say February 27th.  
13 I am advised that I said September.

14 CHAIRMAN JENSCH: I see. Quite a bit going on these  
15 days. Are you buying any gas or oil from Algeria or foreign  
16 frozen gas? El Paso Gas Company or --

17 WITNESS SCHWARTZ: We have undertaken negotiations  
18 with El Paso, yes, sir. We have gone beyond that and we have  
19 indicated our intent to a company called Distrigas to purchase  
20 it in the purchase and importation of Algerian LNG beginning  
21 in 1973. It will probably be small in '73 and '74 but go to  
22 10 billion cubic feet a year, our take in 1975 and for a number  
23 of years thereafter.

24 That's our first LNG import or import contract. We  
25 hope to make more.

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1 DR. GEYER: That will not be for power production,  
2 though?

3 WITNESS SCHWARTZ: Yes, sir.

4 DR. GEYER: It will?

5 WITNESS SCHWARTZ: The Distrigas purchase is  
6 actually summer gas. We are participating with the Brooklyn  
7 Union Gas Company and Public Service Electric and Gas of  
8 New Jersey in this venture with Distrigas. We will get, in  
9 the initial stage, we will get summer gas and Brooklyn Union  
10 will get winter gas.

11 We will use this summer gas essentially for  
12 electric production. We have a surplus of gas in the summer.  
13 This will add to it, and it is being done in compliance with  
14 undertakings with the City of New York, wherein we will  
15 attempt to increase our gas purchases for electric production  
16 to further reduce our emissions.

end 17

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1 CHAIRMAN JENSCH: Does anybody have any questions of  
2 Mr. Schwartz?

3 I hear no such request.

4 Thank you, Mr. Schwartz. You are excused.

5 (Witness excused.)

6 Does that complete your presentation?

7 MR. TROSTEN: Yes, it completes our evidentiary  
8 presentation. I would like to note, Mr. Briggs, that we will  
9 take advantage of your offer and we will file a written offer  
10 to your question on the pressure vessel.

11 MR. BRIGGS: Thank you.

12 MR. TROSTEN: Mr. Chairman, may I bring up a few  
13 procedural matters, please?

14 CHAIRMAN JENSCH: Yes.

15 MR. TROSTEN: First, I want to make one point clear  
16 concerning the findings and conclusions. The entire discussion  
17 this morning as far as Applicant was concerned was related  
18 to the radiological safety findings and conclusions. Now,  
19 so far as Applicant is aware Applicant is the only one that  
20 is going to file findings and conclusions on the environmental  
21 matters related to the Board's balancing under Section D.2,  
22 unless the Staff chooses to do so.

23 CHAIRMAN JENSCH: Well, I hope it chooses to do  
24 so. We would be glad to have the statements from the Staff.  
25 We would be glad to have statements of other parties, too,

1 because I don't know what your stipulations are. But I don't  
2 think the Board is inclined to believe stipulations are any  
3 limitation on participation and if the other parties can  
4 contribute to our consideration of the matter we would be  
5 obliged to have those.

6 MR. TROSTEN: As a matter of fact, the stipulation  
7 does provide so far as the Applicant and Environmental Defense  
8 Fund and Hudson River Fishermen's Association are concerned  
9 that only the Applicant will file these. The Citizens'  
10 Committee is going to file, according to the stipulation, the  
11 Citizens' Committee will file only on radiological safety  
12 matters.

13 Applicant will file -- the point I wanted to make,  
14 Mr. Chairman, was that Applicant will file its findings and  
15 conclusions by February 8 with regard to the Section D.2  
16 balancing factors.

17 Another point I wish to make, Mr. Chairman, is  
18 that as I advised the Board when we submitted our preliminary  
19 findings and conclusions we intend shortly to file a request  
20 with the Board to certify the record to the Commission for  
21 its determination insofar as testing at the 50 percent level,  
22 as opposed to testing at the 20 percent level, in accordance  
23 with the supplemental notice of the hearing in this proceeding  
24 that was published on November 30.

25 CHAIRMAN JENSCH: Whether you file it or not, we

1 would be obliged to send it to the Commission anyway.

2 We'll be glad to have more paper in that regard.

3 MR. TROSTEN: Mr. Chairman, there are certain  
4 wrap-up procedural matters which I suggest the parties simply  
5 work together on. I refer to such matters as transcript  
6 corrections, stipulation on certain statistical terms which  
7 the Board asked us to develop. I suggest that the parties  
8 simply work together on this. We will ask the Board for  
9 appropriate orders if for some reason we are unable to work  
10 this out.

11 CHAIRMAN JENSCH: All right. We could fix a time  
12 if you wanted to fix an outside date now on or before which  
13 transcript corrections should be submitted. We really would  
14 like to have them within some definite scope now, if we  
15 could.

16 MR. TROSTEN: Would you excuse me just a moment?

17 CHAIRMAN JENSCH: Surely.

18 (Pause.)

19 MR. TROSTEN: Mr. Chairman, we suggest that the  
20 Applicant and all parties file proposed transcript corrections  
21 on February 21, with all parties having the right to reply by  
22 February 28.

23 CHAIRMAN JENSCH: Is there any objection?

24 MR. MACBETH: No objection.

25 MR. ROISMAN: No objection.

1 CHAIRMAN JENSCH: Hearing no objection, that may  
2 be done. And if those dates don't work out we could, for  
3 good cause shown, change them.

4 But let's proceed on that definite basis. I think  
5 it's good to have a schedule in that regard.

6 Is there any other matter that we can consider  
7 before we recess?

8 We will indicate that we do not now plan to  
9 designate a date for further evidentiary hearings. This will  
10 be subject to completion of these pending matters, and some  
11 formal submittal as to readiness to proceed on the next stage  
12 of licensing which will be requested by the Applicant.

13 MR. TROSTEN: We will return to the Board with  
14 such a request.

15 MR. MARTIN: Mr. Chairman, did I understand that  
16 the Board does not plan to hold further sessions until March  
17 at least?

18 CHAIRMAN JENSCH: Until a date later to be selected.

19 MR. MARTIN: Is there any idea of --

20 CHAIRMAN JENSCH: My offhand guess is we probably  
21 will not be meeting until March. We will be guided by the  
22 latest projection of time, I think, to some extent from Mr.  
23 Cahill, while we are burning the midnight oil on these  
24 transcripts and documents and findings and corrections to the  
25 transcript, and other submittals.

1 MR. ROISMAN: Mr. Chairman, I just want to get  
2 one matter clear because it goes back to what we talked about  
3 a little bit yesterday.

4 The Citizens' Committee will submit its proposed  
5 findings of fact and conclusions of law, obviously proposal,  
6 as to how the final balance should come out with regard to  
7 whether a license should be issued. That will not include  
8 any findings or proposals on the portion of the Staff's  
9 statement that deals with the environmental considerations,  
10 nor on the portion of it that deals with the power needs,  
11 except to allege to the extent we intend to that portions  
12 thereof are irrelevant to consideration of 50 percent testing.

13 There is, of course, in this document several  
14 pages devoted to the radiological safety matters and risks  
15 associated therewith. Obviously our proposed findings will  
16 relate to those, and to the final balance that we think the  
17 Board should reach in deciding whether to issue a license.

18 CHAIRMAN JENSCH: Very well.

19 Let me inquire: Mr. Schwartz, -- when can Mr.  
20 Schwartz' statement be submitted? Will you pick a date,  
21 counsel?

22 MR. TROSTEN: Will you give us a moment, Mr.  
23 Chairman? Can we be in informal recess?

24 (Pause.)

25 MR. SCHWARTZ: Monday of next week I can submit

1 my comments.

2 CHAIRMAN JENSCH: A week, then, would be fine.

3 MR. TROSTEN: We will endeavor to have it within  
4 a week.

5 CHAIRMAN JENSCH: Very well. Is there any other  
6 matter we can consider before we recess?

7 (No response.)

8 CHAIRMAN JENSCH: I hear no such suggestion.

9 At this time this evidentiary hearing is now  
10 concluded.

11 (Whereupon, at 2:40 p.m., the hearing was  
12 concluded.)

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Regulatory Docket File

RETURN TO REGULATORY CENTRAL FILES  
ROOM 016

Regulatory Docket File

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