

UNITED STATES ATOMIC ENERGY COMMISSION

REGULATORY DOCKET FILE COPY

IN THE MATTER OF: *GENERAL ATOMIC COMPANY OF  
ANN ARBOR, MICH.*

*London Refuse Station, Unit No. 2)*

Place - *Springville Inn, 550 Albany East Road, Chicago, Ill.*  
Date - *Chicago, May 18, 1971.* Pages: *721-A to 630*

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UNITED STATES OF AMERICA  
ATOMIC ENERGY COMMISSION

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In the matter of:	:
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CONSOLIDATED EDISON COMPANY OF	:
NEW YORK, INC.	:
	:
(Indian Point Station, Unit No. 2	:
	:
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Docket No. 50-247

Springvale Inn  
500 Albany Post Road  
Crugers, New York  
Thursday, 13 May 1971

The above entitled matter came on for hearing,  
pursuant to notice, at 9:30 a.m.

BEFORE:

- SAMUEL W. JENSCH, Esq., Chairman,  
Atomic Safety and Licensing Board.
- DR. JOHN C. GEYER, Member.
- MR. R. B. BRIGGS, Member.

APPEARANCES:

(As heretofore noted.)

A BS B1

1 CHAIRMAN JENSCH: Please come to order.

2 This proceeding is a conference-type of hearing which  
3 may include some presentation of evidence. The proceeding  
4 is convened in accordance with an order to convene the  
5 conference, an evidentiary type of hearing, issued on  
6 April 22, 1971, setting this time and place for the  
7 convening of such a conference and hearing.

8 Public notice was given of this order convening  
9 the conference, an evidentiary type of hearing, by  
10 deposit with the Public Document Room, Atomic Energy  
11 Commission, and publication of it in the Federal Register  
12 as reflected in Volume 36 of the Federal Register at  
13 Page 7761 on April 24, 1971. In addition, it was our  
14 understanding that the Public Distribution of Public  
15 Information Section, Atomic Energy Commission, that it  
16 has distributed this order to several communication  
17 media, including newspapers, radio stations, in this  
18 area, and in addition, I believe the public proceeding  
19 branch of the Secretary's Office of the Atomic Energy  
20 Commission has sent a copy of this order to all persons  
21 who request that they be notified by receipt of a order  
22 for the hearing.

23 Before we proceed, we will request that there  
24 be no smoking in this room. The Reporters are not adapted  
25 for that performance.

1           The parties appear to be represented. The  
2 applicants are represented by Messrs. Trosten and  
3 Maher, the staff by Messrs. Karman & Knotts, and the  
4 intervenors by Messrs. Roisman, McBeth & Scinto.

5           I take it there are others who have been  
6 notified who do not desire to participate. The Applicant  
7 has requested that at this conference-type of hearing  
8 that it was prepared to submit some further evidence,  
9 and if there is nothing in that regard, let us proceed  
10 to that presentation of evidence.

11           Does any party desire to speak to any  
12 preliminary matter before we reach the presentation of  
13 evidence to which the Applicant referred? I don't hear  
14 a request from any of the parties.

15           It may be noted on the record that we did  
16 have a request from Congressman John Dow, by his letter  
17 or inquiry to Chairman Seaboard be placed in the record.  
18 His letter has been placed in the public correspondence  
19 record pertaining to this proceeding, and the parties  
20 are thoroughly informed and I have directed his inquiry  
21 to that source.

22           The Commission responded to his inquiry,  
23 and that response is likewise in the public record, public  
24 correspondence record of this proceeding, and persons  
25 interested in that response are directed to that source.

A BS B3  
1 In addition, we have had a communication  
2 from Congressman Henry Helstoski, who has expressed a  
3 view with respect to this application that is pending  
4 in this proceeding, and his letter has been placed in  
5 the public correspondence pertaining to this proceeding.

6 The staff responded to his letter by  
7 transmitting that to the Board.

8 We did have a request from some gentleman  
9 asking that he be permitted to give a statement by way  
10 of limited appearance in this proceeding, and he is a  
11 member of an organization which is a party to this  
12 proceeding. Distribution was made of his request.  
13 I think the gentleman's name was Henry Hefner. Is he  
14 here?

15 Is that your name, sir?

16 MR. KRUGER: I wrote to the --

17 CHAIRMAN JENSCH: What is your name, please?

18 MR. KRUGER: My name is Richard Kruger.

19 CHAIRMAN JENSCH: You also are coming here and  
20 you desire to make a statement by way of limited appearance,  
21 do you?

22 MR. KRUGER: Yes, Mr. Chairman.

23 CHAIRMAN JENSCH: Is it very long? Do you  
24 have it written?

25 MR. KRUGER: It's about two and a half pages.

A BS B4  
1 CHAIRMAN JENSCH: Do you have any copies of  
2 it?

3 MR. KRUGER: Yes, sir.

4 CHAIRMAN JENSCH: I wonder rather than at this  
5 moment giving attention to that matter would you give  
6 copies of your statement to all of the parties and then  
7 we will give consideration to in fact whether it would be  
8 sufficient for your views to have your statement included  
9 within the transcript as if read. I'd like to have all  
10 the parties informed about what your statement is before  
11 we give consideration to that. Would you do that, please.

12 MR. KRUGER: Yes, Mr. Chairman.

13 CHAIRMAN JENSCH: There was another gentleman,  
14 I believe his name was Henry Hefner. Is he here? He  
15 desired to present a statement. We will give consideration  
16 to his request if he appears either now or at a later time.

17 If there is nothing further.

18 MR. KARMAN: Pardon me, Mr. Chairman. As a  
19 preliminary matter I'd like the record to indicate that  
20 at the commencement of this session the Atomic Energy  
21 Commission's regulatory staff distributed to the Board  
22 and all the parties our answers to the series of questions  
23 indicated, H and I, which have been submitted by  
24 Intervenor Citizen's Committee for the Protection of the  
25 Environment.

End A

Pj MR MI

1 CHAIRMAN JENSCH: Very well that will be  
2 noted. If there are no preliminary matters is the applicant  
3 ready to proceed?

4 MR. TROSTEN: Yes I am.

5 CHAIRMAN JENSCH: Please proceed

6 MR. TROSTEN: Mr. Chairman I would like to  
7 proceed to offer into evidence the answers to certain of  
8 the Board's questions which were raised at the March 24th  
9 hearing. As a preliminary matter I would like to ask that  
10 Mr Wilson D. Fletcher of Westinghouse Electric Corporation,  
11 be sworn Applicant's witness.

12 CHAIRMAN JENSCH: Will the gentleman please  
13 stand.

14 (Thereupon Wilson D. Fletcher sworn by  
15 Chairman Jensch.)

16 MR. TROSTEN: Mr. Fletcher, I show a two-page  
17 document entitled: Qualifications of Wilson D. Fletcher.  
18 Copies of which have been distributed this morning to the  
19 Board and the other parties. I ask if you are familiar  
20 with the contents of this document?

21 MR. FLETCHER: Yes, I am.

22 MR. TROSTEN: Is this a true and correct  
23 statement of your professional qualifications?

24 MR. FLETCHER: Yes, it is.

25 MR. TROSTEN: And do you desire that this

B1 MR M2 1 statement of your qualifications be received in evidence  
2 in this proceeding and incorporated into the transcript  
3 as if read?

4 MR. FLETCHER: Yes, I do.

5 MR. TROSTEN: I now ask that the document that  
6 I have described entitled: Qualifications of Wilson D.  
7 Fletcher be received in evidence and incorporated into the  
8 transcript as if read.

9 CHAIRMAN JENSCH: Is there any objection?

10 MR. KARMAN: No objection.

11 CHAIRMAN JENSCH: Intervenors?

12 MR. ROISMAN: No objection.

13 MR. MC BETH: No objection.

14 MR. SCINTO: No objection.

15 CHAIRMAN JENSCH: The request is granted and  
16 the Reporter is directed to physically incorporate or  
17 copy into the transcript at this place the statement of  
18 qualifications of the witness, Wilson D. Fletcher.

19 (Qualifications of Wilson D. Fletcher.)

20 CHAIRMAN JENSCH: Will you proceed, please.

21 MR. TROSTEN: Yes. Addressing myself now to  
22 Messers. Nelson, Grob and Wiesemann, each of whom has  
23 previously been sworn in this proceeding, I show you all  
24 a document which is entitled: Answers of Applicant to  
25 Questions Raised by Atomic Safety and Licensing Board on

BEFORE THE UNITED STATES  
ATOMIC ENERGY COMMISSION

In the matter of

Consolidated Edison Company  
of New York, Inc.  
(Indian Point Unit No. 2)

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Docket No. 50-247

QUALIFICATIONS OF WILSON D. FLETCHER



1 chemical kinetics of organo-phosphite compound reactions,  
2 electrokinetics of oxide deposition processes, and kinetics  
3 of borane compound formation. In 1953 and from 1955 to  
4 1957, I served as an officer in the United States Air  
5 Force. My duties consisted mostly of administrative func-  
6 tions at the Group level following specialized training at  
7 munitions school.

8 I joined Westinghouse in 1957 and held various  
9 chemical engineering development and design assignments  
10 related to coolant chemistry, radionuclide transport and  
11 removal behavior, corrosion of materials, radiation effects,  
12 and performance evaluations of plant safety features for  
13 control of fission products.

14 From 1967 to 1969, I was Manager of PWR-Chemistry,  
15 a group engaged in the aforementioned development work,  
16 as well as the chemical surveillance of operating nuclear  
17 facilities, which included Yankee-Rowe, Saxton, Connecticut-  
18 Yankee, San Onofre, Trino (Italy), and SENA (Franco-Belge).

19 Since 1969, I have been responsible for the design  
20 and development activities of three engineering groups, viz.,  
21 Containment Systems, Radiation Analysis, and Chemistry.  
22 Within these groups, the design requirements and performance  
23 evaluation of safety systems related to fission product re-  
24 moval are accomplished.

1 I am a member of the American Nuclear Society, a  
2 member of the American Chemical Society, a member of the  
3 National Association of Corrosion Engineers, and am pre-  
4 sently serving on the Nuclear Sub-Committee of the ASME  
5 Research Committee on Boiler Feedwater Studies.

B1 MR M2

1 March 24, 1971. Part One. It consists of a total of  
2 twenty-two pages. Copies of this document have previously  
3 been distributed to the Board and the parties. I ask you  
4 was this document prepared by you or under your supervision  
5 and direction?

6 MR. NELSON: Yes.

7 MR. GROB: Yes.

8 MR. WIESEMANN: Yes.

9 MR. TROSTEN: Are the statements contained  
10 therein true and correct?

11 MR. NELSON: Yes.

12 MR. GROB: Yes.

13 MR. WIESEMANN: Yes.

14 MR. TROSTEN: Do you desire to have this  
15 document received in evidence in this proceeding as your  
16 testimony?

17 MR. NELSON: Yes.

18 MR. GROB: Yes.

19 MR. WIESEMAN. Yes

20 MR. TROSTEN: Mr. Chairman, I ask that the  
21 document which I have just described be received in  
22 evidence in this proceeding and incorporated physically  
23 in the transcript as if read.

24 CHAIRMAN: Any objection, staff?

25 MR. KARMAN: No objection, Mr. Chairman.

B1 MR M3

1 CHAIRMAN JENSCH: Intervenors? When I say  
2 Intervenors I'm going to use the term collectively. I'll  
3 ask each of you to respond but if any one of you desires to  
4 have a separate identification of your position, will you  
5 so indicate it.

6 MR. McBeth, Mr. Roisman and Mr. Scinto, any  
7 objections?

8 MR. ROISMAN: No objection.

9 MR. MC BETH: No objection.

10 MR. SCINTO: No objection. But I have a  
11 question, though, Mr. Chairman, clarification for the  
12 record. I would like to identify that this document,  
13 twenty-two pages, consists of two pages, one a cover page,  
14 one a key to identification, and then two separate packages  
15 numbered from one to ten each. Is that true?

16 MR. TROSTEN: Yes, this is correct.

17 MR. SCINTO: No objection.

18 CHAIRMAN JENSCH: Request is granted. Do you  
19 have sufficient copies for the Reporter?

20 MR. TROSTEN: Yes, we do.

21 CHAIRMAN JENSCH: The Reporter is requested to  
22 physically incorporate it in the transcript at this place,  
23 the answers identified by Applicant's counsel.

24 (Answers of Applicant Questions Raised by  
25 Atomic Safety and Licensing Board on March 24, 1971.)

BEFORE THE UNITED STATES

ATOMIC ENERGY COMMISSION

In the Matter of )  
Consolidated Edison Company ) Docket No. 50-247  
of New York, Inc. )  
(Indian Point Station, Unit No. 2) )

Answers of Applicant to Questions Raised  
by Atomic Safety and Licensing Board  
on March 24, 1971

Part I

May 8, 1971

KEY TO IDENTIFICATION OF QUESTIONS

(B) Question by Mr. Briggs

(G) Question by Dr. Geyer

(J) Question by Mr. Jensch

(Tr. 680) - Transcript Page 680

Question No. 1 (B) (Tr. 680)

"With reference to Question 1 in the answers by the Applicant, the question had to do with the effect of operation of Indian Point Unit No. 1 on the radiation in the environment around the plant.

The answer provided is helpful; however, I am not sure it quite answered the question. For instance, the Applicant had a program of environmental monitoring in effect before Indian Point 1 went into action. Presumably some information was gained from that and some background level was established on the basis of that monitoring.

The reply to the question didn't indicate what the background level was prior to the operation of Indian Point Unit No. 1. They didn't indicate what the constituents were in the background.

In other words, what radioactive isotope made up the background and I sort of expected the answer to contain some information on that. Then it discussed the effect of the operation with the plant in 1969.

Again not indicating what radioactive isotopes made up the background, the calculation seemed to indicate that one couldn't measure the difference but there was some question about what the monitoring is for.

Presumably the monitoring is done to show either there is no difference between the measurements prior to the operation of the plant and the measurements during the operation of the plant or to show there is some difference or to show that the numbers are so vast that you can't distinguish a difference.

So, as I say, it might be worthwhile to provide some additional information on what these measurements have been and what they establish. That information is available in the periodic reports that have been published and is available in reports that have been published by the State of New York and others and the hope here was that a summary would be prepared that would give a good summary of the results to the Board and the general public, something they could understand.

I think this is not treated at all in the FSAR. There are one or two pages where there are some general statements made about the effects of operation on the background but no qualitative information that I could find."

Answer:

ENVIRONMENTAL MONITORING PROGRAM

A. Introduction

The object of the Con Edison environmental monitoring program has been to:

- a) Measure levels of radiation and radioactive material in the environment, and changes in these levels.
- b) Determine whether changes in these levels are from fallout, plant operations or other sources.
- c) Evaluate the dose to the local population from this source, if nuclear plant operations are found to contribute to these levels.

Those responsible for measuring doses from nuclear plant operation do so within an environment of naturally occurring and manmade radiation. Radiation dose received by persons in an area comes from four different sources:

- (1) cosmic radiation,
- (2) terrestrial radioactivity,
- (3) airborne radioactivity, and
- (4) internal radioactivity.

1. Cosmic radiation. For a given location, cosmic radiation is relatively constant in time except for minor short term variations because of solar activity and fluctuations in atmospheric pressure. It increases rapidly with elevation above sea level. The cosmic radiation dose rate in the vicinity of Indian Point is about 30 mrem/year and is constant at different points around the plant.

2. Terrestrial radioactivity. Radiation emitted from naturally occurring radioactive isotopes which are contained in earth, rock, brick, wood, etc., consists primarily of naturally occurring radioisotopes potassium-40 and the uranium-238 - thorium-232 series and to a very small extent from natural and manmade isotopes which fall out of the atmosphere onto the ground.

3. Airborne radioactivity. Consists primarily of naturally radioactive noble gases emitted from the ground, principally radon and its daughters, naturally airborne radioisotopes produced by incoming cosmic radiation, and manmade radioactivity from weapons testing and to a slight extent from reactor operation.

4. Internal radioactivity. Radiation emitted from radioisotopes deposited in the human body consists mostly of naturally occurring potassium-40. There is also a small amount of manmade radioactivity from weapons testing. Such radioactivity reaches the body as a result of the intake of food, water and air containing radioisotopes of natural and manmade origin. The average human body receives about 20 mrem/year from this source.

Radiation levels in environmental samples are not static but constantly changing. Changes in the levels of radiation that have occurred since the plant has been in operation and that might be attributed solely to the plant are so small as to be nearly undetectable. Radioactivity in environmental samples analyzed during the period 1958 to August, 1962 (before the plant first became critical) were substantially greater than currently measured levels, because major quantities of nuclear bomb debris from weapon testing fell to earth during the 1958-1962 period. Data previously provided (Applicant's Exhibit 2, Answer to Question No. 28) on the gross beta-gamma particulates in air shows that high fallout periods occurred also from 1959 through 1960 and from mid-1960 through 1964. This heavy fallout, ever

changing, is reflected in all environmental samples collected in these periods. Some of the major radioisotopes associated with fallout are the same fission products produced by plant operation. Nevertheless, health physicists have devised several techniques to distinguish between the contributions from fallout and those of plant operation.

1) Noting that the distribution of radioactive materials from fallout are widespread, whereas those from nuclear plant operation are local, the two can be distinguished by comparing environmental levels at the site with those remote from the site.

2) Some isotopes might be expected to appear in both nuclear plant releases and weapons fallout; other isotopes are present primarily in plant releases, but not in fallout. The cesium isotopes are typical examples. Cesium-137 is found in both fallout and plant releases. Cesium-134, on the other hand, is present in plant releases but not in fallout. The radioactivities of the two isotopes found in fish are measured and compared to distinguish the effects of fallout from those of nuclear plant operation.

3) Age measurements based on the ratio of isotopes can be used to trace and pinpoint the origin of the isotopes to a bomb test.

All of the above techniques can be used to evaluate environmental radiation levels.

B. Background Radiation Measurements at Indian Point

When one measures the dose rate from "background" radiation, one normally measures the radiation received by a radiation detector at a given spot. Thus the measurement includes "external" terrestrial, airborne and cosmic sources but not the internal sources. Manmade radioactivity contributes to this "external" radiation in two ways: (1) manmade gaseous and particulate radioisotopes contribute to the airborne radioactivity; and (2) manmade particulate radioisotopes "fall out" from the atmosphere and become part of the terrestrial radioactivity.

In 1961 the measured doses to detectors in the open air from all external sources of radiation varied from 61 mrem/year to 131 mrem/year depending on detector location. The average reading was 105 mrem/year. In 1969 the doses ranged from a minimum of 70 mrem/year to a maximum of 155 mrem/year with an average of 94 mrem/year. Analyses of the energy spectrum of this external background radiation show only radiation from naturally occurring radioisotopes potassium-40 and members of the uranium-238 - thorium-232 series. This doesn't mean that other radioisotopes, both natural

and manmade, are not present but only that their contribution to the external background is so small compared to the above-mentioned sources as to be indistinguishable.

The fact that manmade radioactivity cannot be seen when the overall external background is measured is to be expected since the calculated dose at the site boundary resulting from Indian Point Unit No. 1 airborne releases during 1969 was 0.013 mrem while the dose from cosmic, airborne and terrestrial radiation during the same year was on the average 94 mrem, or over 7000 times as great. Of course, the dose from Indian Point, Unit No. 1 airborne releases decreases with distance from the site making its detection even more difficult.

C. Monitoring Paths of Radioactivity to Man

While the environmental monitoring program is designed to detect significant change in the overall external background radiation, the program is devoted primarily to monitoring possible paths for radioactivity to enter the human body and then contribute to the internal dose.

Much of the data which has been collected is summarized in the graphs presented in responses of Applicant to questions raised by the Atomic Safety and Licensing Board (Applicant's Exhibit 2,

Answer to Question No. 28). The significant path by which radioactivity from Indian Point, Unit No. 1 might enter the body is through radioisotopes released to the river and taken up directly or indirectly by fish destined for human consumption.

Air particulate and fallout measurements vary greatly due to weapons testing. The isotopes generally found in air particulates and fallout are: I-131, Ce-144, Ba-140 - La-140, Ru 103-106, Cs-137, and Zr-95 - Nb-95.

Gaseous releases are only a small percentage of the allowable releases and the resultant dose is small. Over 99% of the releases are inert noble gases. Although the amounts of the noble gases released from the plant are so small as not to be detectable by the air monitoring station, they are measureable at the stack. External doses may then be calculated from measurements of stack releases using known meteorological dispersors. The remaining small percentage (less than 1%) are particulates. Therefore, radioactive airborne particulate and fallout around Indian Point, Unit No. 1 is essentially from weapons testing and not from the plant. Samples of drinking water have shown the same isotopes as fallout, as expected. Indian Point, Unit No. 1 operation has not contributed any detectable activity in drinking water.

The exposure to man from radioactivity in the Hudson River is partly from natural and partly from artificially produced radioactivity. The most important pathway for radionuclides to be recycled to man by the aquatic food chain appears to be the consumption of indigenous and migratory fish caught for recreation and commerce. Assuming a fish eater would eat 50% more than the national average, or would have an average daily intake of 30 grams of fish taken solely from the vicinity of Indian Point, during 1969 Cs-137 in fish from fallout would have given him a whole body dose of 0.01 mrem/year. Releases of radioactivity at Indian Point would have resulted in radionuclide levels in fish that gave about 0.03 mrem/year to the whole body.

D. CONCLUSION

In conclusion, the environmental monitoring program has shown:

1. Indian Point, Unit No. 1 has made no measureable contribution to the overall external dose rate in the vicinity. The calculated addition to the external dose rate was 0.01 mrem in the worst year.
2. No radioisotopes attributable to Indian Point, Unit No. 1 have been found in the atmosphere or fallout.

3. Radioisotopes from plant operation have been found in sediment, algae, and fish in the Hudson River, but contribute a very small percentage of the permissible dose to man.

Question No. 2 (B) (Tr. 682)

"I continue to have some problems with the inspection proposed for the reactor, after it has begun to operate as I understand this is the first of the higher powered series of the Westinghouse reactors.

I suppose the pressure vessel for the reactor is one of the largest that has been made. When I say largest, I take into account diameter of wall thickness, one of the first large vessels that have been made. To some extent I would think that the fabrication of this vessel must have had some problems and there must have been some development that was required and the fabrication of the vessel itself must have been in a sense a development operation.

Since I have wondered from time to time whether this could have constituted a part of the research and development that has been done with the plant, that is, its operation and the safe operation of the vessel and the experience with the vessel which would contribute to the technology of pressurized water reactors and larger sizes.

In the development program, one would ordinarily think that more than ordinary precautions would be taken in the operation of the plant and with the inspection of the components of the plant and that maybe very special methods would be used in the inspections to provide assurance that this plant is a safe one and that plants following it could be expected to be safe, even more safe. However, the inspection program that was proposed for the reactor vessel in particular apparently was based on Section 11 of the ASME boiler codes which says it is possible to inspect the reactor vessel at the end of ten years of operation.

It appears to me this decision to inspect at the end of ten years of operation by the Boiler Code Committee wasn't based upon necessarily the safety requirements. It seemed to be based at least as much on convenience for the operator. It is indicated that methods aren't developed for doing these operations as yet and we make the inspection at the end of ten years and if methods haven't been developed, maybe the rules can be changed in that period of time.

I believe in the reply the Applicant said methods have been developed for doing some inspections. I think it is important that more information be provided on what will be done to assure there will be inspections at the end of a reasonable period on this reactor and to examine whether ten years is a reasonable period for the first inspection on the reactor vessel itself."

Answer:

The Indian Point Unit No. 2 reactor vessel was the first 173-inch diameter 4-loop reactor vessel constructed for Westinghouse. The following tabulation of several large size reactor vessels, both for PWR and BWR plants already in operation indicates that the Indian Point Unit No. 2 reactor vessel diameter is smaller than that of BWR vessels already in operation and its wall thickness is less than that of the San Onofre, Connecticut Yankee and H. G. Robinson vessels.

<u>Vessel</u>	<u>No. of R. C. Loops</u>	<u>Design Code</u>	<u>Inside Diameter</u>	<u>Belt-line Thickness</u>
San Onofre	3	VIII	142"	9-3/4"
Connecticut Yankee	4	VIII	154	10-5/8"
H. B. Robinson	3	III*	155 1/2	9-5/16"
R. E. Ginna	2	III	132	6 1/2"
+Dresden II	N.A.	III	251	6-1/8"
+Oyster Creek I	N.A.	I & VIII	218	7-1/8"
Indian Point 2	4	III	173	8-5/8"

Thus, the vessel diameter and wall thickness for the Indian Point Unit No. 2 vessel were well within the existing

\* Plates sized for Section VIII

+ BWR

manufacturing technology. This is further evidenced by the fact that no unusual fabrication problems were encountered during the course of manufacture. Fabrication of the vessel did not constitute part of the research and development identified at the construction permit stage for Indian Point Unit No. 2. No need for new research and development programs with respect to fabrication developed for the Indian Point Unit No. 2 reactor vessel during construction and existing standard core design formulation was applicable.

Finally, no unusual limitations on operation of the Indian Point Unit No. 2 vessel have been found to be necessary.

The inspection program for the Indian Point Unit No. 2 reactor vessel imposed by Westinghouse on the vessel manufacturer during its fabrication is indicated in the following table:

<u>Reactor Vessel</u>	<u>RT</u>	<u>UT</u>	<u>PT</u>	<u>MT</u>
Forgings				
Flanges		yes		yes
Studs		yes		yes
Head Adaptors		yes		yes
Plates		yes		yes
Weldments				
Main Seam	yes			yes
CRD Head Adapter Connection			yes	
Instrumentation Tube			yes	
Main Nozzles	yes			yes
Cladding		yes	yes	yes

Special requirements are imposed by Westinghouse on the quality control procedures for both the basic materials of construction and on the various subassemblies and final assembly for the primary loop components. These requirements supplement the rules for quality assurance spelled out in the applicable design codes. Examples of the Special Quality Assurance requirements beyond code requirements are: (based on 1965 edition)

A. Ultrasonic Examinations

1. 100% volumetric shear wave UT of plate material.
2. UT of Clad bond to a 1/4" x 3/4" unbonded area repair standard.
3. All Stud material is 100% volumetric examined with longitudinal wave.
4. Weld buildup areas to which the core-support pads are attached are examined 100%.
5. Selected areas of the completed vessel are ultrasonically mapped after hydrotest to provide a base for future in-service inspection.

B. Dye Penetrant Testing

1. Dye Penetrant test all clad surfaces and other vessel and head internal surfaces after hydrotest.

B. Dye Penetrant Testing (cont'd)

2. Dye penetrant examine the weld between the bottom head and instrumentation tubes after each 1/4" of weld is deposited.
3. Dye penetrant examine weld between Control Rod Drive Mechanism housing and closure head after first layer and each 1/4" of weld is deposited.
4. Dye penetrant examine weld between the lower core support pad and the vessel shell after the first layer and each 1/2" of weld metal is deposited.

C. Magnetic Particle Testing

1. Magnetic particle examination of all exterior vessel and head surfaces after hydrotest.

The contract for the Indian Point Unit No. 2 reactor vessel was made by Westinghouse and Combustion Engineering in January 1966, and had already been completed prior to publication by the ASME of Section XI of its Boiler and Pressure Vessel Code. This section was developed by an Ad Hoc Task Group under the sponsorship of the ASME as a co-operative effort by the USA

Standards Committee N-45 and the U. S. Atomic Energy Commission. This Committee was formed in January 1968 and worked closely with the AEC which had representation on the Task Group. Section XI was adopted formally by the ASME in January 1970. However, before the advent of the N-45 Ad Hoc Committee, Westinghouse had determined the importance of an inspection program during fabrication, as evidenced above, and of an ultrasonic pre-service map of the reactor vessel in selected areas as a base for future inspections. Technical requirements on pre-service mapping of high radiation and high stress regions were instituted in December 1966. Westinghouse also required the reactor vessel and internals be designed to facilitate in-service inspections from the vessel interior. Incorporated in this design are an uncluttered inside diameter in the core region and completely removable internals.

#### Inspection Program

The in-service inspection program of the reactor vessel is described in the Technical Specifications. While it is true that the inspection interval is ten years, there are inspections that will be accomplished before the end of ten-year period. These inspections are:

<u>Item</u>	<u>Description of Inspection</u>
1.2	A volumetric inspection of a portion of the welds between the head flange weld and the control rod drive shroud.
1.3	A volumetric inspection of the head flange weld.
1.8, 1.9 1.10	Various inspections of the closure studs, nuts, washers, bushings and stud hole ligaments.
1.13	A visual and liquid penetrant inspection of the closure head cladding.
1.14	A visual inspection of the vessel cladding that is accessible through ports in the core barrel support flange.
1.15	A visual inspection of internal surfaces and supports, as permitted during normal refueling.

Also, directly related to the evaluation of the vessel for service are the reactor vessel irradiated specimens. These specimens "see" a higher flux than the vessel and thus, will conservatively indicate detrimental material changes. Two of the eight capsules, which contain these specimens, are scheduled for examination at intervals within the first five years of operation. The data from these specimens and from the accomplished inspections will be used to evaluate the vessel after five years of service. This evaluation will be submitted for AEC review. We expect the established inspection program to provide sufficient data to determine adequately the suitability of the reactor vessel for service during the first ten years of operation. However, the following additional inspections are scheduled throughout the first ten years, contingent upon the development of appropriate equipment, and should provide further useful data:

<u>Item</u>	<u>Description of Inspection</u>
1.4	A volumetric inspection of the inner radius of the outlet nozzles. These inspections are planned for refueling outages during the third and sixth year.

<u>Item</u>	<u>Description of Inspection</u>
1.7	A volumetric inspection of the safe end welds for the outlet nozzles. These tests are planned to coincide with those in Item 1.4.
1.12	A volumetric inspection of the integrally-welded vessel supports. These tests are planned to coincide with those in Item 1.4.

We are confident that the needed inspection equipment will be developed within the next ten years. There are four firms actively developing this type of equipment. Southwest Research Institute, for one, has already performed remote ultrasonic examinations on two reactors, one foreign and one domestic. However, this equipment was custom-built and used procedures and methods that were individually developed. Southwest Research Institute has equipment under development for inspections at San Onofre and Point Beach. This equipment may be suitable for use at Indian Point Unit No. 2 without significant modifications. In any event, similar equipment could be custom-built for Indian Point Unit No. 2. Also, pre-service inspection base line data

is being taken for all inspection areas. These data will be used as a reference to establish any changes in the vessel. Thus, Con Edison considers its in-service inspection to be both adequate and realistic.

The ten-year interval required by ASME Section XI has been determined on the basis of searching for possible deleterious long-term service effects. These inspection intervals are frequent enough to detect growth of flaws before they reach a critical size. A sampling inspection is required by Section XI (IS-242) in intervals as short as 3-4 years in certain high-stress regions. If, as a result of these inspections during short intervals, anomalies are uncovered, then the number of inspections must be increased as required in Section XI (IS-244).

B1 MR M4  
1 CHAIRMAN JENSCH: Next it would be  
2 better for clarity to have a little further identification  
3 on the record of the Intervenors because there are two  
4 Intervenors represented by Mr. Roisman, I believe: Citizens  
5 Fund for the Protection of the Environment, and the  
6 Environmental Defense Fund.

7 MR. ROISMAN: Citizens Committee for the  
8 Protection of the Environment and the Environmental Defense  
9 Fund. That's correct.

10 CHAIRMAN JENSCH: Very well. And your organiza-  
11 tion is the Natural --

12 MR. MC BETH: Natural Resource Defense Council  
13 is the firm which I'm connected with. But I'm representing  
14 the Hudson River Fisherman's Association.

15 CHAIRMAN JENSCH: And you're for the Atomic  
16 Energy counsel, State of New York?

17 MR. SCINTO: Yes.

18 CHAIRMAN JENSCH: It should be noted that Mr.  
19 Harrison is here. Will you proceed.

20 MR. TROSTEN: Mr. Chairman, I shall now  
21 address certain questions to Mr. Fletcher for the purpose  
22 of adducing testimony in response to the questions of  
23 Board members Briggs and Jensch dealing with containment  
24 spray system for the Indian Point 2 Facility. These  
25 questions for purposes of identification appear on pages

686 and 689 of the transcript from March 24, 1971.

Mr. Fletcher, the preliminary safety analysis report at one time referred to the plant to use sodium thiosulfate as a chemical additive for the containment spray. Presently, however, the chemical additive is described as sodium hydroxide. Could you first tell us the reasons for the need of any chemical additive?

MR. FLETCHER: Well, the containment spray functions as a heat sink. And it also provides a perfect medium by which forms of iodine can be absorbed during the postulated post accident period of the loss of coolant accident. Now, the spray system as such rains down through the containment atmosphere and will absorb the vapor iodide the vapor molecular iodine.

B1 MR M5

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End B1

B2 MR B1 1 The chemical nature of the spray is such that it would  
2 always contain boric acid. As such it is an acidic media  
3 and it will absorb a limited amount of the molecular vapor  
4 iodine. In certain applications one would want to enhance  
5 the removal properties of the spray solution, cause a  
6 reaction to occur between the vapor molecular iodine  
7 and the spray solution which would convert the iodine  
8 to non-volatile forms. Therefore, to enhance this  
9 removal characteristic of the spray a chemical additive  
10 would be added which could and would react with the  
11 molecular ion. Now, on this basis by way of history  
12 the identification of a need for adding a chemical to the  
13 spray by Westinghouse was made in 1966. In early 1967  
14 we began our development program to evaluate the  
15 characteristics of various spray additives and the spray  
16 solution. We started initially using sodium thiosulfate  
17 in 1967. Our studies also included a study of the  
18 sodium hydroxide additive through 1969. Then Tinted with  
19 or<sup>in</sup>parallel with this studies were made by the National  
20 Laboratories of the same two additives.

21 MR. TROSTEN: Once you establish this need  
22 for a chemical reactant for iodine removal what candidates  
23 were considered for addition to the spray solution?

24 MR. FLETCHER: As I mentioned sodium  
25 thiosulfate was an additive that was considered for this

B2 MR B2 1 application. As was sodium hydroxide; sodium thiosulfate  
2 being a classical reactant for molecular iodine was selected  
3 initially for study. Sodium hydroxide also known for its  
4 ability to hydrolyze iodine to nonvolatile forms was  
5 also selected as a potential additive.

6 MR. TROSTEN: Having selected sodium thiosulfate  
7 as a possible spray solution additive what research work  
8 was performed to evaluate its properties?

9 MR. FLETCHER: The spray additive evaluation  
10 program that was undertaken included a study development,  
11 study of a thermal stability of the additive, the radiation  
12 stability of the additive, the corrosiveness of the  
13 additive towards plant materials and an observation of  
14 solids which could be formed either by the additive or  
15 from the additive itself or from the additive reacting  
16 with plant materials. The methods of study involved the  
17 use of autoclaves to evaluate the short term high  
18 temperature characteristics.

19 Following that atmospheric pressure reflux  
20 tests were performed to evaluate the longer term lower  
21 temperature behavior of the additive. The radiation  
22 resistance or the result of irradiating the additive was  
23 performed in a cobalt 60 gamma radiation facility. As  
24 is normal technique also corrosion specimens were included  
25 in each of these tests to evaluate the corrosiveness of

B2 MR b3 1 the solution.

2 MR. TROSTEN: Would you describe the results  
3 of your research and testing program with sodium thiosulfate  
4 additive?

5 CHAIRMAN JENSCH: Excuse me for interrupting.  
6 I don't want to alter his intended answer. Are any of  
7 these matters to which the witness is referring reflected  
8 in documentary material such as results of experiments  
9 and could we have that documented material sometime ,  
10 not necessarily this morning, but I think it would be  
11 quite difficult for the witness I assume to summarize in  
12 a few words the very complex bit of research and develop-  
13 ment. I presume there are documentary reflections of that  
14 experimental work. Is that correct?

15 MR. TROSTEN: Mr. Chairman, we are introducing  
16 our evidence on the additive program and the research  
17 performed in oral form because we felt first that this  
18 would be an appropriate way to respond --

19 CHAIRMAN JENSCH: Please do in that regard.

20 MR. TROSTEN: And secondly because some of the  
21 results, studies that have been performed are contained in  
22 proprietary reports. There are certain studies that have  
23 been performed in national laboratories which have been  
24 reported in the public domain and we would be very pleased  
25 to provide copies of these to the Board for its information

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and copies to the other parties. We have copies of these  
with us and we would be pleased to provide them to  
everybody.

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1 It is our hope, however, to avoid the use of proprietary  
2 data in this hearing. We believe that we have and can  
3 provide sufficient data in a public record without the  
4 necessity of using proprietary data, and for that reason  
5 we would prefer not to involve the use of these proprietary  
6 reports in this hearing.

7 CHAIRMAN JENSCH: Well, don't let me interfere  
8 with your intentions, but <sup>my</sup> own thought is the documentary  
9 material might be more specific and therefore helpful  
10 too. But proceed, if you will, please.

11 MR. TROSTEN: Mr. Fletcher, I had just asked you,  
12 I believe, the question would you describe the results  
13 of your research and testing program with sodium  
14 thiosulfate additives?

15 MR. FLETCHER: Testing with sodium thiosulfate  
16 really involved two separate studies. One study involved  
17 the solution where sodium thiosulfate was added to  
18 boric acid alone, the initial properties in the solution  
19 being such that they were acidic in nature. The resultant  
20 acid or slightly acidic solution, approximately pH5 was  
21 subjected then to the thermal radiation stability testing.  
22 Corrosive properties of the solution were evaluated.  
23 It was determined rather readily that the acid solution,  
24 when taken to the temperatures of approximately 270 degrees  
25 Fahrenheit, that the Sodium thiosulfate additive decomposed

BS b2

1 and the solution became even more acidic. It became  
2 acidic through the formation of sulfuric acid, so that  
3 both in thermal studies and the radiation resistance  
4 studies sodium thiosulfate in this acidic condition  
5 did become more acidic and became quite aggressive for  
6 the containment materials.

7 In addition to that, one of the observations  
8 we were making was to determine if solids were formed  
9 in this process or in the exposure of the solution to  
10 the thermal radiation conditions and indeed that was the  
11 case. The second solution that was studied involving  
12 sodium thiosulfate was one in which excess sodium dioxide  
13 was added to neutralize and overcome the effects of the  
14 formation of sulfuric acid. This alkaline solution,  
15 having an initial pH of approximately 9.3 was quite  
16 thermally resistant. Its stability was such that approxi-  
17 mately half of it would be decomposed in approximately  
18 20 days or 24 days. The solution did not become acidic.  
19 The excess sodium hydroxide present was sufficient to  
20 prevent that from occurring.

21 The corrosion properties of the solution were  
22 evaluated and all the materials are quite compatible with  
23 the alkaline solution with the exception of copper and  
24 aluminum.

25 Copper decomposed at approximately the rate

C BS b3

1 of ten to twelve mils per month, aluminum approximately  
2 10 mils per month.

3 Now, attendant with the radiation exposure  
4 of the solution, solids were again noticed in the  
5 solution. The solids were elemental sulfur produced  
6 from the sulfur-substituted sulfide, which sodium  
7 thiosulfate is.

8 So that the results really then were that the  
9 acidic solution was quite unacceptable in our feeling,  
10 the alkaline solution was much better, but there was  
11 still attendant potential problems in the corrosion  
12 properties of the solution as well as solids formation.

13 MR. TROSTEN: Would you please state in summary  
14 your conclusions regarding the use of sodium thiosulfate  
15 spray additive?

16 MR. FLETCHER: Well, because of the solid  
17 formation and the corrosion, corrosive nature of the  
18 alkaline sodium thiosulfate towards copper and aluminum  
19 we decided that sodium thiosulfate in either the acidic  
20 or alkaline form should not be used.

21 MR. TROSTEN: Once you encountered the potential  
22 problems that could be encountered with the use of  
23 sodium thiosulfate additive, what course of action did  
24 you then follow?

25 MR. FLETCHER: Well, as I initially identified,

C BS b4  
1 sodium hydroxide has another spray additive we evaluated,  
2 sodium dioxide, added to the boric acid solution in the  
3 same manner that we evaluated sodium thiosulfate.

4 In this case the addition of sodium hydroxide  
5 to the boric acid solution forms an alkaline sodium borate  
6 very close to what would be considered sodium tetraborate.

7 The solution has an initial pH<sub>A</sub> of approximately  
8 9.3, and from just the chemistry of that solution we  
9 anticipated that it would be extremely stable and neither  
10 the sodium nor boric acid forms which make up that  
11 solution would be subject to thermal degradation or  
12 radiation degradation.

13 We subjected the solution to the same tests  
14 that the thiosulfate solutions were studied under and found  
15 indeed that it was correct, that the sodium alkaline  
16 sodium borate solution was stable, the pH did not change,  
17 the sodium did not disappear or the borate did not  
18 disappear. There was no change in the concentration  
19 when subjected to the full design post-accident conditions.

20 There were no solids formed. The solution is  
21 quite stable in that respect, both thermally and when  
22 subjected to radiation.

23 We evaluated also the corrosion properties  
24 of the solution and found in this case that the mildly  
25 alkaline solution having its pH of 9.3 was quite compatible

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with all materials in the containment with the exception  
of aluminum.

C1 BS M1 1 Now aluminum in an alkaline solution will  
2 corrode and as a result of that then aluminum, the use of  
3 aluminum is restricted, and it is not a construction  
4 material and any equipment in the containment.

5 CHAIRMAN JENSCH: You will have to speak a  
6 little louder. I am afraid I didn't get that last.

7 MR. FLETCHER: I said aluminum is not a  
8 construction material and any of the safety equipment in  
9 the containment.

10 CHAIRMAN JENSCH: Where is it used?

11 MR. FLETCHER: Where is it --

12 CHAIRMAN JENSCH: Where is aluminum used?

13 MR. FLETCHER: Oh, there may be some aluminum.  
14 There is an inventory that is given in the FSAR. There are  
15 some non-essential items, I think there may be some, oh,  
16 valve covers.

17 CHAIRMAN JENSCH: Well, maybe you had better  
18 not just leave it to recollection. Perhaps you would give  
19 us a specific list at some later time.

20 MR. FLETCHER: A specific list is in the FSAR,  
21 Chapter 6.

22 CHAIRMAN JENSCH: Would you give us the  
23 identification of that?

24 MR. MAHER: Yes.

25 CHAIRMAN JENSCH: What is the chemical formula

1 of this last solution to which you have referred.

2 MR. FLETCHER: The chemical formula would be  
3  $\text{Na}_2\text{D}_4\text{O}_7$ , if you were to take the solution and collect solids  
4 from it. The dissolved solids, they dissolve as sodium  
5 plus boric acid. The comparable --

6 MR. BRIGGS: Excuse me. What is the chemical  
7 reaction by which it ties up the iodine?

8 MR. FLETCHER: It's a hydrolysis process in  
9 which the iodine is converted to iodide and iodate, both  
10 of which are non-volatile.

11 The composition of the solution would be  
12 approximately 1.1 percent boric acid and .3 percent  
13 sodium hydroxide.

14 CHAIRMAN JENSCH: If I heard correctly,  
15 somewhere you used sodium pentaborate.

16 MR. FLETCHER: Tetraborate. That would be the  
17 stoichiometric mixture at pH9.3, 9.13.

18 CHAIRMAN JENSCH: Thank you. Proceed. Excuse  
19 me, did you finish?

20 MR. BRIGGS: Yes.

21 CHAIRMAN JENSCH: Proceed then.

22 MR. TROSTEN: Would you please describe the  
23 results of your research and testing program with alkaline  
24 sodium borate solutions.

25 MR. FLETCHER: In the same regard that we

1 measured the stability of the solution I think what is  
2 important here are perhaps the acidic corrosion rates of  
3 materials. Now in the FSAR in Chapter 6 there is quite  
4 a detailed review, a presentation of the results that we  
5 had obtained with the alkaline sodium borate solution.  
6 By way of comparison with the thiosulfate in the alkaline  
7 sodium borate solution we measured a corrosion rate of  
8 copper, for example of .2 mils per month, as opposed to  
9 10-20 which we observed with the sodium pentasulfate  
10 solution.

11 Aluminum, as I said before, was quite high,  
12 ranging up to approximately 100 mils per month. These  
13 figures that I am quoting are 200 degrees Fahrenheit.

14 CHAIRMAN JENSCH: 200 degrees?

15 MR. FLETCHER: 200 degrees Fahrenheit.

16 CHAIRMAN JENSCH: I thought you used the figure  
17 of 270 degrees Fahrenheit.

18 MR. FLETCHER: That would be higher. The  
19 relationship between corrosion rate and temperature is  
20 specifically given in the FSAR.

21 CHAIRMAN JENSCH: Do you have the figures of  
22 what it would be at 270 degrees Fahrenheit?

23 MR. FLETCHER: That's given in the FSAR. I  
24 do not have that here.

25 CHAIRMAN JENSCH: All right, proceed.

C1 BS M4 1 MR. FLETCHER: Carbon steel, corrosion rate,  
2 for example, with the alkaline sodium borate solution is  
3 quite low. It's of the order of 3/1000ths of a mil per  
4 month. The corrosion rate of other materials would  
5 similarly be low, such as the stainless steel or copper-  
6 nickel alloys or any of the varieties that one might have.  
7 There were no solids formed in any of these tests. The  
8 solution did not change its chemical composition. The  
9 solution met the objectives that we had initially set.

10 CHAIRMAN JENSCH: In addition to the work that  
11 was performed by Westinghouse, are you aware of other work  
12 relating to either sodium thiosulfate or sodium hydroxide  
13 as an additive for containment sprays?

14 MR.FLETCHER: Yes. As was mentioned earlier,  
15 a parallel program was conducted by the Natioanl Laboratories  
16 investigating the chemical properties of spray additives.  
17 Included in this research program were sodium thiosulfate  
18 and sodium hydroxide as additives. The results of this  
19 testing that has been performed at the Oak Ridge National  
20 Laboratories is presented in the April 1971 issue of the  
21 publications that were referred to.

22 MR.TROSTEN: Since you have been involved in  
23 this research work since early 1967, and a considerable  
24 amount of work has been performed both by your group at  
25 Westinghouse and the National Laboratories, is there any

C1 BS M5

1 reason to reconsider the selection of sodium hydroxide as  
2 the spray additive?

3 MR. FLETCHER: We are constantly interested  
4 in the development of --

5 CHAIRMAN JENSCH: Will you give that question  
6 a specific answer and then explain it, please? Yes or no?

7 MR. FLETCHER: The question was --

8 CHAIRMAN JENSCH: Could you reconsider?

9 MR. FLETCHER: Have I reconsidered or would we  
10 reconsider?

11 MR. TROSTEN: Is there any reason for you to  
12 reconsider?

13 MR. FLETCHER: The answer is no.

14 CHAIRMAN JENSCH: All right, proceed.

15 MR. FLETCHER: We are constantly aware and  
16 interested in developments in spray technology. The work  
17 that was performed at the Oak Ridge National Laboratories  
18 is in substantial agreement with our own work. Other work  
19 that has been performed has led us to conclude that we  
20 have made the right selection and there is no reason to  
21 change.

22 MR. TROSTEN: Mr. Chairman, Mr. Fletcher has the  
23 reference in the FSAR for the inventory of aluminum, which  
24 he can give you.

25 CHAIRMAN JENSCH: May I have that.

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MR. FLETCHER: Mr. Chairman, with regard to the inventory of aluminum in the containment, that's Table 6.3-3 of Question 6.3.

CHAIRMAN JENSCH: Thank you.

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1 MR. TROSTEN: That concludes the questions that I have for  
2 Mr. Fletcher in response to the two questions of the Board.  
3 We have no additional evidence to adduce at this time.

4 CHAIRMAN JENSCH: I will just remind the lady  
5 who just came in there is no smoking in the room. Thank  
6 you.

7 Do the parties desire to cross-examine at  
8 this time?

9 MR. KARMAN: I have no questions at this time,  
10 Mr. Chairman.

11 MR. MC BETH: No questions.

12 MR. ROISMAN: No questions at this time, Mr.  
13 Chairman.

14 MR. SCINTO: No questions at this time, Mr.  
15 Chairman.

16 MR. ROISMAN: Excuse me. I do assume that  
17 the witness would be available to come back for the purpose  
18 of cross-examination.

19 CHAIRMAN JENSCH: I think he will come back.

20 MR. TROSTEN: Yes.

21 CHAIRMAN JENSCH: If there are further questions  
22 at a later time.

23 Let me go back to that inquiry I made. The  
24 Board would desire a review of all the documentary material  
25 upon which the testimony of this witness is based,

C2 BS M2 1 proprietary or non-proprietary, because this subject, I  
2 believe, involves some pretty fundamental questions and I  
3 think we should have something other than an oral recital.

4 MR. TROSTEN: All right, Mr. Chairman. In response  
5 to your request we will, first as I indicated, be happy to  
6 furnish to the Board and the parties copies of the National  
7 Laboratory reports which I mentioned. We will furnish the  
8 Board in response to your request copies of certain  
9 Westinghouse proprietary reports for the purpose of, as I  
10 understand it, Mr. Chairman, your evaluating whether there  
11 is adequate information in the record to support the safety  
12 findings and to conclude that the witness' testimony is  
13 adequate. If any of the parties to this proceeding desires  
14 to see these reports we would be prepared to furnish the  
15 reports to that party, provided that, of course, an appropriate  
16 agreement were executed, limiting its use to an examination  
17 of these reports for the purposes of determining that the  
18 witness' testimony is accurate and that there is adequate  
19 information.

20 CHAIRMAN JENSCH: Does that involve a determina-  
21 tion of whether in fact it is proprietary? If any of the  
22 matters recited in the documents to which you have referred  
23 are public domain does that preclude the classification  
24 of proprietary?

25 MR. TROSTEN: Well, Mr. Chairman, the entire

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1 reports are proprietary as such. It is exceedingly  
2 difficult to go through these reports and determine whether  
3 a particular sentence or a word or what have you is or is  
4 not proprietary. We are advised by the Westinghouse  
5 Electric Corporation that these entire documents have been  
6 classified by them as proprietary.

7 CHAIRMAN JENSCH: Yes, I understood that.

8 Until an issue arises in connection with it,  
9 however, perhaps we need not try to make a disposition of  
10 the matter. But I just call it to your attention that I  
11 think that in some instances the classification proprietary  
12 has been affixed to certain documents containing data which  
13 are in the general domain, and they provide a classification  
14 in support of it. And if that issue is present here, we  
15 may have an issue for some determination in that regard.

16 MR. TROSTEN: I understand that.

17 When the reference is made to experimental work  
18 undertaken by the National Laboratories does that mean  
19 independent study by the National Laboratories or under  
20 some contract arrangement or holder-in-part of any of the  
21 vendors?

22 I would like to have Mr. Fletcher respond to  
23 that question.

24 MR. FLETCHER: The work performed by the  
25 National Laboratories was completely independent. It was

C2 BS M4 1 supported by the Atomic Energy Commission, to the best of  
2 my knowledge. It was independently undertaken to evaluate  
3 the proposed use of these additives in the power plant.

4 CHAIRMAN JENSCH: And not under any specifi-  
5 cations for experimental work prescribed by vendors in  
6 any regard, is that correct?

7 MR. FLETCHER: Indeed not.

8 CHAIRMAN JENSCH: Perhaps that is as far as  
9 we can go today. I think that at the time of cross-  
10 examination I would appreciate some further information  
11 from this witness as to whether he has assumed a uniform  
12 mixing of the containment spray in the containment  
13 atmosphere and whether there are any so-called dead spots  
14 in the containment area which may affect the assumption  
15 of uniform mixing.

16 I think as I understand from the several times  
17 that this subject has been under consideration in some  
18 proceedings that it is with some difficulty that the  
19 assumption can be entertained that there will be uniform  
20 and perfect mixing, and furthermore there may be a problem  
21 of extrapolating from a small experiment to a larger  
22 experiment, although as I understand it in a recent  
23 instance of a small experiment it has been asserted with  
24 some certainty that you cannot extrapolate from a small  
25 experiment to a larger area. If it doesn't have to do

C2 BS M5 1 with containment spray, but it may have to do with another  
2 safety mechanism. So I have that problem that if it's  
3 difficult in one instance to extrapolate for a certain  
4 sort of mixing to a larger size, I wonder how we can  
5 assume that we can extrapolate from these experiments to  
6 the containment atmosphere, which I think is a separate  
7 consideration.

8 MR. TROSTEN: Mr. Chairman.

9 CHAIRMAN JENSCH: Yes.

10 MR. TROSTEN: Mr. Chairman, our witnesses are  
11 here today to respond to the Board's questions and we will  
12 be happy to go forward, and they are indeed desirous of  
13 responding to your questions.

14 CHAIRMAN: JENSCH: I don't think it's necessary.  
15 I think the other parties will probably go forward with  
16 their cross-examination first. I wouldn't want to interfere  
17 with their contemplated cross-examination in that regard.  
18 I do think these matters may come up and looked into after  
19 the cross-examination stage.

20 As I recall some of the previous discussions  
21 about containment spray, the staff made a statement I  
22 think Indian Point 3<sub>A</sub> as to this effect, that the research  
23 and development program relating to the drop size spectrum,  
24 the drop coalescence and the possible effect of the liquid  
25 phase mass transfer resistance is not in itself sufficient

C2 BS M5 1 to resolve the present uncertainties, and I wondered just  
2 what has been done to remove those uncertainties.

3 This may be directed to the staff in inquiry  
4 for presentation in that regard when their presentation  
5 of evidence is made, but the Applicant, likewise, may  
6 desire to address himself to those factors.

7 And then as I recall, and I notice Mr. McAdoo  
8 is here, I think these questions came up in connection with  
9 some testimony that he gave on Indian Point 2 or 3,  
10 something about a design margin, and as I recall the  
11 situation, he felt that there should be a certain design  
12 margin in these considerations of safety, but at that  
13 particular time he was not able to indicate what the  
14 design margin should be, and perhaps when the evidence comes  
15 on he would indicate if he has selected it and how he  
16 forms that design margin and how effective is it and on  
17 what experimentation report that design margin was made.

18 MR. TROSTEN: Mr. Chairman, without meaning  
19 to belabor this point, since Mr. McAdoo is here now would  
20 you desire to have him go forward with this?

21 CHAIRMAN JENSCH: Let me go forward with a few  
22 more items in connection with containment spray and then  
23 we will give consideration to the other matters later.

24 End C2

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C2 BS b1  
3  
1 I wonder, and this will involve the staff as well, as  
2 to how the compliance inspector will determine if the  
3 spray system meets the performance specifications, and  
4 of course that raises the assumption or raises the  
5 question what are the performance specifications for  
6 the containment spray and how can it be determined to be  
7 performable. I just happened to be going over some phases  
8 of the construction permit decision in Indian Point 3 that  
9 I think has some relevance to Indian Point 2, since the  
10 same types of containment spray systems are used. Is  
11 that correct?

12 MR. TROSTEN: Mr. McAdoo?

13 MR. MC ADOO: Yes.

14 MR. TROSTEN: Yes.

15 CHAIRMAN JENSCH: In connection with that  
16 I think we got into some considerations of plateout factors  
17 and all those matters and if they could be discussed,  
18 composition on the containment wall, and what is the  
19 temperature of the containment wall, and I think there  
20 was some question about whether there will be TID 14844  
21 assumption plateout factor or whether the containment  
22 wall is going to be higher so that that portion is no  
23 longer realistic. I am sure Mr. McAdoo will be called  
24 for these inquiries and my questions and will deal  
25 fully with these various aspects which were considered

1 in Indian Point 3 on the containment spray. I'd be very  
2 appreciative of that.

3 It may be that any of these questions can better  
4 be submitted in written answer form at some regress after  
5 today rather than undertaking a complete presentation now.

6 Well, I won't take anymore time with my notes  
7 in that regard, but it may be that the parties will desire  
8 to address themselves to a written answer in that regard  
9 in order to have it more complete, whichever is convenient  
10 to the parties.

11 Does any other party desire to speak in  
12 reference to the evidence adduced or intentions about  
13 producing evidence, or is there anything further to be  
14 considered as evidence at this proceeding? I hear no  
15 such request.

16 I might mention the subject to the Staff,  
17 if I may, I think in the course of one of these conference  
18 hearings we had some reference to the statements by the  
19 Advisory Committee on Reactor Safeguards enumerating  
20 items of concern for certain water reactors and I think  
21 the Staff enumerated what those concerns were as reflected  
22 in the communications from the ACRS in the course of the  
23 last three or four years. The inquiry was what updating  
24 we could have respecting those concerns and it should be  
25 perhaps noted on the record that the Staff did send to us

BS b3

1 a document which is of some size and entitled WASH 1146,  
2 entitled Water Reactor Safety Program Plan. I have tried  
3 to give at least a cursory review to that document,  
4 which is over a hundred pages long, and it outlines,  
5 as I review it, what is planned for certain R & D work,  
6 and it's in some detail for each of the several matters  
7 set forth in there, and there are several references to  
8 information, status, and needs, current and planned  
9 programs for many items. That seems to be the general  
10 division for each of the programs and plans.

11 It occurred to me that perhaps my question  
12 wasn't clear. I'm not too much interested in the planning  
13 as I am in the results, and if you could take this  
14 document, 1146, which I think would be a good guide,  
15 and then fill in just what the results are, we will assume  
16 that these plans are still in effect; if they are not  
17 fully performed they are still being undertaken, but if  
18 you could give us documents that would show the results,  
19 or any other presentation of the factual data of what  
20 has been done, I am sure it would be more responsive  
21 to the question.

22 And if the Staff does not have these dates  
23 or the Staff does not have a witness who is intimately  
24 familiar with these programs and then a reasonable request  
25 might be to bring somebody from the departments that do

C3 BS b4 1 have to do with the execution of this water reactor  
2 safety program as reflected in WASH 1146. That might  
3 involve the Director of Reactor Development Technology  
4 and if he would be available to present the matter  
5 directly under his supervision I am sure it would be a  
6 responsive presentation. He probably can give us a better  
7 overall picture than several witnesses from each of the  
8 several experimental programs.

9 By the way, isn't there a document at all in  
10 the Atomic Energy Commission that summarizes, say on an  
11 annual basis, what is being done on the research and  
12 development work other than what is reflected in the  
13 actual report to the Congress, which is, as I read it,  
14 quite general in nature?

15 For instance, I see this monthly publication,  
16 The Nuclear Safety Review, I believe it comes out of  
17 Oak Ridge, and I don't want to incorrectly or unfairly  
18 describe it, but maybe for purposes of illustration  
19 let me use something that occurs to me that maybe it  
20 can indicate why I thought if there were a compendium  
21 of the research and development it would be helpful.

C4 22 We get the separate component testing results.  
23 For instance, just to use the vernacular, there will be  
24 a report that the doorknob works, and then there will  
25 be a report that the hinge works, and then there may be

C4 BS b5

1 a report that the paneling on the door is satisfactory.  
2 Now, what I have in mind, is there a report that says  
3 the door will be handled and the hinges will work as  
4 hung together? And I wonder don't we have anything  
5 that brings those things together. And, of course,  
6 that really isn't applicable here, but it's the type  
7 of thing I had in mind. When you put everything together  
8 in the containment will it work, or when you put everything  
9 in the core vessel, will it work? And I think that rather  
10 than saying that the plastic cover for something has  
11 proven satisfactory, the Division of Reactor Safety,  
12 in fact I think it's set forth in the Indian Point 3  
13 construction permit decision, reference was made to a  
14 Division of Reactor Safety announcement by the Atomic  
15 Energy Commission that the best test is in the assembled  
16 form, and that's the kind of data response I think would  
17 be helpful. And if the Commission Staff doesn't have a  
18 summary report as elaborate as this plan before us, maybe  
19 something like that could be developed for this proceeding  
20 and could be utilized in many, many cases.

21 But, in any event, if we could have a data  
22 response.

23 MR. KARMAN: We will check. We will attempt  
24 to do it and check this request.

25 CHAIRMAN JENSCH: I thank you for that

1 statement. I hope it will be more than an endeavor.  
2 If the Staff doesn't have the data available, bring  
3 somebody from Reactor Development to this proceeding.

4 MR. KARMAN: We will look into that, Mr.  
5 Jensch.

6 CHAIRMAN JENSCH: We will look for your  
7 response to that.

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C4 BS b6

End C

D1 MR MI 1

2 CHAIRMAN JENSCH: The concern that I have  
3 also is reflected in the appropriations hearings. I  
4 believe these were last year but in many places the  
5 indication was given that certain experimental work could  
6 not go forward for lack of funds. And I wondered how that  
7 has affected or will affect the research and development  
8 work that may be pertinent for this proceeding. If some  
9 analysis could be made of that it would be appreciated.

10 MR. BRIGGS: I have not had time to go through  
11 the Applicant's responses to the last questions by the  
12 Board except to look briefly at some statements that are  
13 made. As <sup>you</sup> know, I've asked several questions about the  
14 inspection program. Not yet have I seen the statement  
15 concerning the program that the Applicant is undertaking  
16 to assure that the inspection can be made. I have not had  
17 any indication of how much money, for instance, is  
18 involved or what the program is that the Applicant has  
19 undertaken. However, it says here: We are confident that  
20 the needed inspection equipment will be developed within  
21 the next ten years.

22 It is indicated that there are four firms  
23 actively developing this type of equipment. I wonder  
24 whether some of the uncertainty might be removed if the  
25 technical specifications were altered to say that these  
inspections will take place; not that they will take

D1 MR M2 1 place if the equipment is developed in time. I think  
2 that's part of our problem, that the technical specifications  
3 say that these inspections will take place if the equipment  
4 is developed. In the testimony that we get from the  
5 Applicant it says: We are confident that the inspections  
6 will take place and that we have committed ourselves to  
7 making the inspections. Maybe a large part of the problem  
8 could just be solved by modifying the Tech-Specs to take  
9 out any statements that this will be done if the equipment  
10 is developed. Possibly the staff and the Applicant could  
11 consider this and might have some change to suggest or  
12 some additional information to provide at the next  
13 session of the hearings that we have.

14 CHAIRMAN JENSCH: We could go to another  
15 matter unless any of the parties desire to speak to these  
16 matters.

17 Hearing no such request, I will go on. I  
18 wonder if we could give consideration to this motion that's  
19 been made by the Environmental Defense Fund in support of  
20 its motion with reference <sup>to</sup> Appendix "D" which was adopted  
21 by the Atomic Energy Commission I believe on December 4th,  
22 1970. We have had during the course of these several  
23 sessions some discussion of these matters. A motion was  
24 filed. We had some discussion. There was a telegraphic  
25 request, later supplemented by a formal request to adduce

D1 MR M3

1 certain evidence that they said would support their  
2 position within the scope of the permission granted by the  
3 Atomic Energy Commission and the so-called Baltimore Gas  
4 & Electric and the Calvert Cliffs case. Briefs have been  
5 filed by all of the parties in that regard.

6 In our last letter from the Board we endeavored  
7 to reflect some of our thinking in that regard. Of the  
8 three categories mentioned by the Commission in the  
9 so-called Calvert Cliffs case the first was in reference to  
10 an attack upon the validity -- As to whether Appendix "D"  
11 was validly adopted. As was pointed out I think by one  
12 of the briefs this subject is under review by the U.S.  
13 Court of Appeals, District of Columbia, and it would be  
14 presumptuous, I'm sure, on the part of the Board to submit  
15 a determination in that regard. Until that is done the  
16 Board is inclined to the position that the regulation is  
17 binding on the Board and the Board will comply exquisitely  
18 with the direction of Appendix "D" of the Commission's  
19 regulations. And that so far the Board has not been  
20 persuaded that adequate basis has been presented to justify  
21 a submittal of that matter through the certification  
22 procedure to the Commission within the permission granted  
23 by the Calvert Cliffs case.

24 The briefs have also considered the possibility  
25 of an evidentiary presentations related to two aspects of Appendix "D",

D1 MR M4

1 that is, A, the need for electric power and, B, the  
2 necessity for orderly transition in proceedings that  
3 postponed the application of the National Environmental  
4 Policy Act until March 4, 1971.

5 Now, as to those matters the Board now would  
6 like to have some discussion about A and B in that regard.  
7 First, in our review of Appendix "D" there has been  
8 reference to the need for electric power and references  
9 are given not only in Appendix "D" but the public document  
10 rule likewise reflects data utilized by the Commission  
11 in that particular aspect of Appendix "D", that is, as  
12 to the need for electric power. Which raises the legal  
13 question: what constitutes an adequate basis for the  
14 determination of a regulation by a regulatory commission.  
15 Is there a substantial basis for the regulation? Is there  
16 adequate support for the regulation? Should there be  
17 redundant bases recited in this respect or does the  
18 regulation at the present time reflect an adequate basis  
19 for the Commission to determine that there has been a need  
20 for electric power as reflected in Appendix "D". If  
21 there is an adequate basis in that regard would any  
22 purpose be served by securing redundant data to support  
23 the same position?

24 Now, as to the B aspects to which I referred  
25 under Appendix "D" as to the orderly transition, the

D1 MR M5 1 Board will invite discussion now as to that as well, as  
2 to whether there is a reference in Appendix "D" or whether  
3 the public document rule reflects data utilized by  
4 the Commission for this aspect of Appendix "D" for orderly  
5 transition. And is there a basis of preparing an  
6 evidentiary record in this regard to submit to the  
7 Commission within the permission granted by the Commission  
8 in connection with the Calvert Cliffs case.

9 I did not detect in any of the briefs filed  
10 any attention to this latter aspect of Appendix "D"  
11 except that the Intervenor, Environmental Defense Fund,  
12 has urged that inquiry be made as to what is the basis  
13 or what are the data for the determination by the  
14 Commission that an orderly transition was required. And  
15 as to that the Intervenor has asserted it does not have  
16 any basis and it seeks to discover what the bases are.

17 The Board is inclined to the view that the  
18 regulation, although in a little different category in  
19 formulation than an adjudicatory determination, such as  
20 the decision, nevertheless reflects on its face what the  
21 Commission's views are. In a sense the document, the  
22 regulation, speaks for itself. A decision speaks for  
23 itself. The mental processes of the Commissioners are  
24 beyond inquiry.

25 If the regulation or if a decision is not

D1 MR M6 1 adequate, then the document doesn't reflect it and a  
2 Court review, for instance, can determine it. But we have  
3 found no decision that supports the mental processes of  
4 a Commission that formulated a decision and a regulation.

5 Now, the case of Overton Park versus Volpe,  
6 as I read that decision I think there was some indication  
7 that if the findings by the decisional group are not  
8 reflected in the document it might be a good thing to  
9 inquire from the decision makers concerning what the  
10 findings would be and then the later language in the  
11 Volpe case seemed to nearly be in line with that Morgan  
12 versus U.S. case, I think about 313 U.S. in which the  
13 Court held that certainly a decisional group is not  
14 subject to the inquiry as to the mental processes involved.

End D-1 15  
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D2 MR b1 X 1 I think that latter aspect reflects the general view  
2 of law. I do not believe that the Volpe case is intended in  
3 its ultimate determination to be any encouragement to  
4 examine into the mental processes of the decision makers.  
5 But I think there is a separate question as to whether  
6 there are adequate data for a regulation. I think that  
7 raises the question: What are the data reflected by  
8 the regulation or the public document rule as to the  
9 orderly transition. Since this is a motion by the  
10 Environmental Defense Fund we will ask them to so speak  
11 first.

12 MR. ROISMAN: The motion was made simultaneously  
13 by the Environmental Defense Fund --

14 CHAIRMAN JENSCH: Yes. I didn't mean to  
15 exclude them.

16 MR. ROISMAN: It happens in this particular  
17 case Mr. McBeth has done the primary work and I would  
18 like him to speak to the question which you have asked.

19 CHAIRMAN JENSCH: Will you proceed, please.

20 MR. MCBETH: Mr. Chairman, I would like to add,  
21 if I could, one more element to the series of issues that  
22 the Commission dealt with on the December 4th promulgation.

23 As I think I pointed out the last brief that  
24 was submitted there is a balancing that the Commission  
25 has done in the December 4th promulgation balancing

D2 MR b2

1 the need for the lack of power and the need for orderly  
2 period of transition against the need for environmental  
3 protection. And I think that that is another question,  
4 particularly in light of the situation that this  
5 proceeding in which we would like to adduce evidence.

6 Turning to the other questions, on electric  
7 power the problem primarily so far as we can see is the  
8 statement that the Commission makes in its December 4th  
9 promulgation where it refers to various authoritative  
10 statements and reports which remain unidentified in the  
11 promulgation. We would like to know which reports and  
12 statements the Commission is referring to so that --

13 CHAIRMAN JENSCH: May I interrupt a moment.  
14 That's the problem that I had in mind when I said  
15 would there be a redundancy do you feel?

16 MR. MACBETH: I simply don't know what it  
17 was the Commission was referring to when they talk of  
18 various authoritative statements and reports. Unless  
19 we can ask the Commission what it was they were referring  
20 to I don't know how we could make a reply. The  
21 Commission is in control of the knowledge and the facts  
22 in this situation. They know what facts are before them.  
23 If we can't ask them what those facts were I don't see  
24 how we could put <sup>anything</sup> in evidence that can in any way rebut  
25 them or which we could make any argument as to what the

D2 MR b3

1 Commission should have done with those facts before  
2 it or that if on reconstruction in light of this  
3 particular proceeding they would come to some different  
4 conclusion on Indian Point 2. Unless we know what the  
5 facts were that were before them I don't really see how  
6 we could proceed.

7 CHAIRMAN JENSCH: May I interrupt again?

8 Now, isn't your inquiry in that regard really directed  
9 to the Secretary of the Commission rather than to the  
10 Commissioners? The secretary being the custodial of the  
11 official records who would know what was --

12 MR. MACBETH: Certainly I think we made clear  
13 that we would address it to the employees or the officers  
14 of the Commission. The first question would be to have  
15 the Commission in some form identify the appropriate  
16 person to identify the reports.

17 Now on the question of the period of orderly  
18 transition I simply do not find in the December 4th  
19 promulgation any further discussion of it. I don't know  
20 what the factual considerations were that the Commission  
21 had in mind. Was it necessary to train personnel on  
22 the Staff? Was it necessary <sup>to</sup> give the applicants more time  
23 to put together statements? I can't tell what the necessity  
24 there was.

25 We have passed March 4th by two months. It

D2 MR b4 1        may well be that in the present situation that we face  
2        whatever the concerns were that were in the Commission's  
3        mind on the 4th of December are no longer relevant. But  
4        I can't make any argument to that effect based on the  
5        facts unless there is some sort of factual -- I can reach  
6        some sort of basis on what it was that the Commission was  
7        looking at: What was the factual situation?

8                    And finally on the third point, the  
9        Environmental Protection, the question there I think  
10       would be: Did the Commission have before it, in the  
11       light of Indian Point 2, the facts surrounding this  
12       particular situation. There have been very substantial  
13       fish kills in the intakes in Indian Point 1. There is  
14       litigation going on on that question now in the Supreme  
15       Court of the State of New York. I would like to know  
16       whether the Commission had information about Indian Point 1  
17       in front of it, and if it did not would it consider  
18       striking the balance in a different way knowing what the  
19       situation has been at Indian Point 1.

20                   CHAIRMAN JENSCH:        How many times was  
21       the phrase "orderly transition" used in Appendix D?  
22       My recollection is that it was used once. Is that correct?

23                   MR. MACBETH:        That's also my recollection.

24                   CHAIRMAN JENSCH:        Is there any reference in  
25       that use or that phrase to the data supporting the orderly

D2 MR b5

1 transition? I believe it's in subparagraph 3 of  
2 appendix D: "In order to provide an orderly period of  
3 transition in the conduct of the Commission's regulatory  
4 proceedings and to avoid unreasonable delays in the  
5 construction and operation of nuclear power plants urgently  
6 needed to meet the national requirements for electric  
7 power the issues describe it in paragraph 2 above may  
8 be raised only in proceedings in which the notice of  
9 hearing in the proceedings is published on or after  
10 March 4, 1971."

11 MR. MACBETH: That is my recollection of it.  
12 And I simply don't see any data there that goes to what  
13 the factual situation is that demands a period of orderly  
14 transition. I just can't see it there. And I don't see  
15 that the Intervenors can put in any facts on that  
16 question unless we can ask the appropriate officer or  
17 employee of the Commission what the facts were that  
18 required a period of orderly transition.

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and D-2

D3 MR M1

1 And I think I should add, too, the final point which is  
2 the problem of Vermont Yankee. The Vermont Yankee notice  
3 of hearing makes the Vermont Yankee hearings an exception  
4 to the March 4th rule. But no explanation is given there  
5 of why that exception is made. Presumably there is some  
6 bases on which the Commission makes exceptions. They  
7 made an exception for Vermont Yankee. We would also like  
8 to inquire on what the factual basis was for the Vermont  
9 Yankee exception. It might apply here. If it did, I  
10 assume the Commission would wish to be consistent, deal  
11 impartially with the applications of Consolidated Edison  
12 and Vermont Yankee consortium. But again if we can't  
13 ask the Commission or its officers and their employees  
14 what the factual basis for the Vermont Yankee exception  
15 was, we can't show whether or not the same exceptions  
16 should apply to Indian Point 2.

17 CHAIRMAN JENSCH: Very well. Have you  
18 finished?

19 MR. MAC BETH: Yes.

20 CHAIRMAN JENSCH: Would the staff care to  
21 speak to this matter?

22 MR. KARMAN: Mr. Chairman, I believe that you  
23 correctly indicated the analysis of the significance of  
24 the Overton Park case, U.S. Supreme Court, as not giving  
25 any additional strength or substance to the argument of

D3 MR M2

1 the Intervenors for a sweeping discovery proceeding against  
2 the Commission or the parties in this particular proceeding.  
3 We have been over this route before, Mr. Chairman. As  
4 you indicated, briefs were submitted by the Intervenors,  
5 answers by the Applicants, replies by both parties, and the  
6 record is rather replete with much of the information that  
7 is required in this matter.

8 The Government has submitted, and this is on  
9 behalf of the Atomic Energy Commission, a Defendant in  
10 the case now pending before the United States Court of  
11 Appeals of the District of Columbia, a Circuit --

12 CHAIRMAN JENSCH: Respondent.

13 MR. KARMAN: We are the respondent.

14 CHAIRMAN JENSCH: It puts it in a little  
15 different category.

16 MR. KARMAN: -- wherein the Government  
17 represented by the Attorney General and the solicitor of  
18 the Atomic Energy Commission, went in rather extensively  
19 into the question of the orderly transition of the implemen-  
20 tation of the NEPA legislation.

21 CHAIRMAN JENSCH: Into the factual matter of  
22 orderly transition?

23 MR. KARMAN: Into the factual matter of why  
24 the orderly transition was required.

25 CHAIRMAN JENSCH: Could you refer us to what

D3 MR M3 1 facts they presented in the Court in that regard? I  
2 didn't observe that.

3 MR. KARMAN: Are we talking about the Indian  
4 Point 2 case or the generic problem for the reason for  
5 the establishment of the March 4th cutoff date?

6 CHAIRMAN JENSCH: I'm talking about what you  
7 mentioned that they went into the Court of Appeals as to  
8 the background of the term orderly transition. And I  
9 wanted to know what the factual data was. I had not  
10 observed it in the brief. If you could tell us what those  
11 factual data are, I would appreciate it.

12 MR. KARMAN: By factual data, Mr. Chairman,  
13 I am addressing myself to the position of the defense of  
14 the Commission designating March 4th as a cutoff date  
15 for the --

16 CHAIRMAN JENSCH: I understand. Your  
17 statement was that they had gone quite thoroughly into it.  
18 I wondered if they had gone into any factual data.

19 MR. KARMAN: Not in the context in which the  
20 examiner means. We have incorporated that brief as part  
21 of our response to this -- To our brief in this proceeding.

22 Now, the Intervenor, Mr. MacBeth, has  
23 indicated both in his brief and at the last session of  
24 this particular hearing, and raises the issue of the  
25 Vermont Yankee case. I believe that the Chairman did

D3 MR M4

1 as well. As to why, why did the Commission seemingly  
2 ignore its cutoff date with respect to the notice of  
3 publication of the Vermont Yankee. In our brief of  
4 April 21, 1971, we quoted from the brief filed by the  
5 Commission and U.S. Government in the Court of Appeals  
6 case, District of Columbia, which I argue, Mr. Chairman,  
7 is the official position of the Atomic Energy Commission.  
8 This brief was filed on behalf of the Commission. Not  
9 only on behalf of the regulatory staff or anybody else,  
10 but on behalf of the Commissioners who are respondents  
11 in that case. And I quote the brief: "This notice,  
12 however --" And I'm referring now to the Vermont Yankee  
13 case. --"was issued several months in advance of what  
14 under prior practice would be the contemplated hearing  
15 date in implementation of the Commission's new practice  
16 of giving early notice as to the proposed operating license  
17 actions in order to facilitate public participation in  
18 and timely conduct of the ensuing proceedings. In view  
19 of the early notice aspect, the Commission did not deem  
20 the exception in paragraph 11A to be applicable.

21 I don't know how much further we can explore  
22 this problem. The Commission has indicated this is why  
23 they did not follow the procedure in the December 4th  
24 promulgation of Appendix "D" with respect to the March 4th  
25 cutoff date.

D3 MR M5

1 CHAIRMAN JENSCH: I think the question is,  
2 however, can't that same approach be applied to Consolidated  
3 Edison here? We understand that that is why they did it  
4 in the Vermont Yankee. I think the question that the  
5 Intervenor raise is why didn't you --

6 MR. KARMAN: We have not done it to any  
7 other proceeding. This is the specific exception and  
8 the Commission has indicated why it made such an exception.

9 CHAIRMAN JENSCH: We understand that Vermont  
10 Yankee. I think the question is why can't the same  
11 thing be applied to Con Edison. Is there something in  
12 your brief about what the factual data are for orderly  
13 transition determination?

14 MR. KARMAN: No, I refer to the Calvert Cliffs  
15 brief.

16 CHAIRMAN JENSCH: That came way before the  
17 Appendix "D" and I wondered what your discussion was as  
18 to the support for needing an orderly transition.

19 MR. KARMAN: To our way of thinking, Mr.  
20 Chairman, the need for power, which was specifically  
21 delineated in the December promulgation of Appendix "D",  
22 is irretrievably connected with an orderly transition. We  
23 feel that it is almost self-explanatory that when you  
24 are talking about the need for power that into this would  
25

D3 MR M6  
1 come an orderly transition in the course of the hearing --  
2 Which will be forthcoming after the promulgation of  
3 Appendix "D".

4 CHAIRMAN JENSCH: I am not disputing the  
5 right of the Commission to make that. I am looking at it  
6 from a legal point of view: What are the data to support  
7 it? For instance, I think we discussed it at a previous  
8 hearing. The Federal Power Commission, which has quite  
9 a substantial concern with the need for electric power,  
10 too, applied the National Environmental Policy Act  
11 immediately. And if that were so with the Federal Power  
12 Commission, then I wondered if there wasn't in a sense a  
13 need for factual data to support a sort of a relaxation  
14 of the application of the National Environmental Policy Act.  
15 If the Commission has a basis for their relaxation in that  
16 regard, I think that's the legal --

17 MR. KARMAN: Excuse me, but we don't consider  
18 it a relaxation. Implementation --

19 CHAIRMAN JENSCH: A postponement.

20 MR. KARMAN: We feel that, and it has been  
21 indicated in our brief and in the brief filed in the Court  
22 of Appeals, that we were probably amongst the foremost and  
23 first of the government agencies in the implementation of  
24 the National Environmental Policy Act; that we moved with  
25 dispatch. We had a statement out in April of 1970. We

D3 MR M7 1

had a statement out in June of 1970.

2 CHAIRMAN JENSCH: As to those, you said they  
3 did not apply at all. So I don't know how it implemented it.

4 MR. KARMAN: This was the interpretation of the  
5 statute by the Atomic Energy Commission at the time in  
6 the various stages of its development.

7 CHAIRMAN JENSCH: Is it your thought that that  
8 is an implementation of the Act when you say it did not  
9 apply?

10 MR. KARMAN: Certainly it is an implementation  
11 of the Act, Mr. Chairman. When the Act is promulgated,  
12 each agency has to determine itself whether or not it is  
13 applicable, the extent to which it is applicable and make  
14 its plans and issue its promulgations accordingly.

15 CHAIRMAN JENSCH: Did I understand you to say  
16 that you said that each agency can determine whether it  
17 can apply?

18 MR. KARMAN: Each agency can determine whether  
19 or not its actions would be covered by the National  
20 Environmental Policy Act.

21 CHAIRMAN JENSCH: I understood you to say  
22 that the agency could determine whether the law applied.

23 MR. KARMAN: No. The law is the law.

24 CHAIRMAN JENSCH: I hope we're going to  
25 conduct this proceeding that way.

D3 MR M8 1

MR. KARMAN: Neither the Commission nor I --

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CHAIRMAN JENSCH: Your answer then to this orderly transition is that it's so tied with the need for electric power that it automatically includes the --

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MR. KARMAN: We feel that that is so.

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CHAIRMAN JENSCH: Have you concluded?

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MR. KARMAN: Yes.

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CHAIRMAN JENSCH: Did you desire to speak to this?

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MR. TROSTEN: Yes. Since this issue was first inquired into by the Chairman on March 24th, the matter has been exhaustively briefed. I would call the Chairman's attention particularly to Sections 2 and 3 of our memorandum of law that was submitted on April 22nd and also to offer to Section 2 of our memorandum of law which was submitted on May 11. And I have just a few summary remarks to make with respect to this.

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In the first place, it is our view, Mr. Chairman, that there is no requirement under the Administrative Procedure Act or the Atomic Energy Act that the Commission spell out detailed findings or detailed bases for a --

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CHAIRMAN JENSCH: We will accept that as a premise.

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MR. TROSTEN: I'm making this point simply

D4 MR M1 1 to go to the underlying question of just what is it that  
2 the Commission is required to show with respect to this  
3 rule-making proceeding. Specifically it is required to  
4 make a concise general statement of the basis for the  
5 rule. In Section 3 of our brief we have cited the  
6 particular provisions in the statement of considerations  
7 which as explained in our brief fully complies with the  
8 requirements of the Administrative Procedure Act for  
9 stating the basis. The Commission, therefore, has done  
10 whatever was required of it and indeed has gone beyond  
11 what is precisely required by the Administrative  
12 Procedure Act. Apart from that, they have complied,  
13 I believe -- That what the Commission has said fully  
14 indicated why there is a need for an orderly transition.  
15 Because the Commission has shown the need for electric  
16 power, has explained the need for electric power and the  
17 need for an orderly transition for the introduction of  
18 so complex an issue as is presented by consideration of  
19 the Natural Environmental Policy Act; the need for  
20 transition in pending cases is very obvious I submit,  
21 Mr. Chairman. It is a little bit like trying to define  
22 the word. It should be quite clear I think that when  
23 you're introducing so complex a new provision into the  
24 regulatory jurisdiction of the Commission there is clearly  
25 a need for an orderly transition while the gears are

D4 MR M2 1

shifted, so to speak.

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In addition to that in our brief which we filed as amicus in the Court of Appeals, we did spell out some additional details. The reasons why we felt there was obviously a need for an orderly transition.

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CHAIRMAN JENSCH: That's the problem that I think we're going to have. I think there was some reference in some of these cases that the regulations have to depend upon what they say, not upon some post hoc rationalization about the regulation or the later submittal of details. What are the details that show a need for orderly transition? For instance, might there not be a different approach for a plant that is being constructed as to a plant that has already been constructed, so that maybe for an environmental concern you would have a different approach to a plant that has already been constructed. But if a plant has been constructed -- Take out the word "but" -- dealing with the plant that's already been constructed, you no longer have to consider maybe so much whether it should be there but what will be the effects now that it is there. And won't those things be discernible when you take a look at the plant when it's completely constructed? So, therefore, wouldn't the concern necessarily be at a later time than the construction aspect alone?

D4 MR M3 1 My point is, I'm trying to relate this all  
2 to what is the orderly transition.

3 MR. TROSTEN: The Commission had before it  
4 at the time it was considering the Appendix "D" the full  
5 spectrum of its pending and other cases. It obviously knew  
6 that there were cases that were in various stages of  
7 processing. It had before it the comments made by various  
8 parties including comments filed by counsel presently  
9 representing Intervenors in this proceeding urging it to  
10 immediately apply Appendix "D" to all cases and not to  
11 defer application of this proceeding.

12 Obviously the Commission, in considering this  
13 situation, decided that it was appropriate to have such  
14 an orderly transition and picked this March 4th date on  
15 the basis of what <sup>was</sup> clearly best in terms of implementing  
16 such an orderly transition. So I would say this, Mr.  
17 Chairman, that the Commission must obviously have had  
18 all of these facts before it and must have considered these  
19 facts and the Commission has said all about its consideration  
20 of these facts that it had to under the law.

21 CHAIRMAN JENSCH: May I interrupt. I think  
22 that is really what the Intervenors are saying, and that's  
23 all they are saying at this time. Just tell us what those  
24 facts are. You have said in your statement just now  
25 that the Commission obviously had those facts before it.

D4 MR M4 1 What facts I think they're trying to say. If you were  
2 coming to the conclusion that obviously they had it I  
3 take it you surmise because the regulation doesn't say  
4 what it did have before it for an orderly transition  
5 except insofar as staff counsel has said that it is  
6 related to a need for power. But some cases may not have  
7 a need of orderly transition even though there may be a  
8 need for electric power. I think that distinction between  
9 those two that all these Intervenors are saying at the  
10 moment is: Won't the Secretary give us a list of what  
11 it was that was before the Commission. Now, I think,  
12 and this is a problem I had with your brief, I think your  
13 argument was: My goodness, if we took this evidence, this  
14 might destroy the regulation. But you see the Commission  
15 has said in the Calvert Cliffs case, we're ready to  
16 consider any new facts, we're ready to reconsider our  
17 position at any time.

18 Now, part twenty was in a, if I may say, in  
19 a firmer category, if I can make that distinction, than  
20 Appendix "D" because part twenty recited the several  
21 documentary data utilized by the Commission, the National  
22 Council on Radiation Protection, the International  
23 Committee on Radiation Protection, the frequent reviews  
24 of radiation standards and several factual matters of  
25 that kind. Nevertheless, the Commission said: We're

D4 MR M5 1 ready to consider any new evidence that any party can  
2 bring in. We may destroy the regulation, revise it or  
3 modify it.

4 Now, the fact that they're asking for data  
5 so that they can present an argument to the Commission is  
6 all the Intervenors here are saying, just tell us what  
7 the facts are so we won't have to use that phrase.  
8 Obviously, they must have had these things before them.

9 MR. TROSTEN: I believe you misunderstood the  
10 point that we were making in our brief. We have not  
11 suggested, Mr. Chairman, that taking this evidence would  
12 destroy the regulation. What we have suggested is that  
13 requiring the Commission and this Applicant to go through  
14 a process of an evidentiary hearing such as what the  
15 Intervenors are suggesting would completely destroy the  
16 purpose of having rule making. Because it <sup>would</sup> require that  
17 even though there is a rule that is applicable to a  
18 particular proceeding the Intervenors just by the simple  
19 device that they have utilized here could convert every  
20 proceeding governed by a rule into an evidentiary hearing.

21 CHAIRMAN JENSCH: I think the mechanics may  
22 be your problem. I don't think that it is intended that  
23 while the witness is talking about containment spray, we're  
24 going to get into the environmental protection. I think  
25 we kind of could have an ancillary proceeding and maybe

D4 MR M6 1 we will meet on a Saturday morning or something. I don't  
2 think it involves lengthy proceedings. I understand what  
3 they're seeking here. First they're asking for  
4 permission to get a discovery proceeding to see what the  
5 facts are and then, on that record, they're going to ask  
6 that it be certified.

7 I would imagine that from what they have  
8 presented here, that it probably would be a day's session  
9 and some Saturday would do it.

10 MR. TROSTEN: I completely disagree with that.  
11 I regard what they have suggested as presenting an  
12 evidentiary hearing of completely unknown dimensions, as  
13 I see it.

14 CHAIRMAN JENSCH: If the Commission should  
15 alter this proceeding by saying that environmental  
16 matters could come into it, then it might add factors to  
17 this main proceeding. But this ancillary phase to which  
18 they have directed their discovery is something that would  
19 kind of go on on a Saturday afternoon while this would  
20 take its regular course here. I don't think this  
21 proceeding would be interrupted at all.

22 MR. TROSTEN: Again I respectfully disagree  
23 and I would suggest, Mr. Chairman, that an examination of  
24 the proposed discovery and of the proposed evidentiary  
25 hearing, that the Hudson River Fisherman's Association

D4 MR M7 1 and the Environmental Defense Fund have suggested here ,  
2 disproves that this could be done in so short time. Be  
3 that as it may, I will say this: I believe that we have  
4 going on from the point of what the Commission has said in  
5 support of this orderly transition, we have explained in  
6 Section 2 of our May 11 th brief why, under Calvert  
7 Cliffs, this is a completely inappropriate process in  
8 light of the sort of evidence that the Intervenors are  
9 proposing and in light of the nature of Appendix "D".  
10 We do not in any way construe the Calvert Cliffs memorandum  
11 as extending to the Intervenors or extending to the  
12 Board a mandate to conduct this type of an evidentiary  
13 hearing. We regard the Calvert Cliffs memorandum as  
14 regarding the type of evidentiary presentation that the  
15 Intervenors are proposing.

16 We are not suggesting that had the Intervenors  
17 at a very early stage of this hearing, Mr. Chairman,  
18 suggested some very different sort of evidentiary hearings  
19 than the one they're suggesting, that this would be so.  
20 Perhaps we might have had a different attitude if on  
21 January 1st the Environmental Defense Fund and the Hudson  
22 River Fisherman's Association had actually suggested a  
23 Saturday afternoon hearing whereby we would take some  
24 evidence as a predicate to certification. I feel quite  
25 confident our attitude towards this whole thing would be

D4 MR M8

1 quite different.

2 CHAIRMAN JENSCH: What would it be?

3 MR. TROSTEN: It would depend, Mr. Chairman,  
4 on what was the subject that they wanted to have an  
5 evidentiary hearing on. If they were suggesting that an  
6 evidentiary hearing be called for a very early stage in  
7 this hearing, for example, on the grounds that the  
8 Commissioners had exhibited their<sup>bad</sup> faith or that there was  
9 corruption among the Commissioners in the promulgation  
10 of Appendix "D", and I cite this merely as an example,  
11 perhaps we might have had no objection to something like  
12 that.

13 CHAIRMAN JENSCH: I think this should be clear.  
14 The fact that the discovery proposal may enumerate many  
15 aspects doesn't automatically determine the relevance of  
16 what they would propose to submit. It may be that some  
17 of their proposals are a little broader than the type  
18 of matter that would be necessary for the basis for  
19 certification.

20 MR. TROSTEN: I certainly would agree that they  
21 are exceedingly, extremely broad, Mr. Chairman.

22 I have one other basic observation that I  
23 would like to make and that is that I feel that since the  
24 Chairman has raised this question, and since we have  
25 argued this and briefed it rather exhaustively, if the

D4 MR M9 1 Chairman continues to be troubled by this problem, it seems  
2 to me that this a classic case for certification. We have  
3 urged this course upon the Chairman since the beginning of  
4 April. We believe that getting into the matter of an  
5 evidentiary hearing presents a matter of serious prejudice  
6 to us. We hope we have demonstrated to the Chairman that  
7 there is no basis for an evidentiary hearing at this time,  
8 and further, that it is untimely.

9 If the Chairman remains unconvinced by our  
10 presentation, it seems to me that this is certainly a case  
11 where the Chairman should certify this question, the  
12 question he has raised in his latest letter to the Safety  
13 and Licensing Appeal Board for its determination, since  
14 the Calvert Cliffs memorandum essentially constitutes, we  
15 feel, a matter of convenience to the Commission. And, hence,  
16 we feel that this is something that should be certified  
17 at this time, Mr. Chairman.

18 CHAIRMAN JENSCH: You're suggesting that should  
19 the procedure be utilized --

20 MR. TROSTEN: The question about whether the  
21 evidentiary hearing should be utilized should be certified  
22 to the Commission. That's correct.

23 CHAIRMAN JENSCH: I don't think we have  
24 reached that until we have decided whether or not the  
25 indicated discovery is worthwhile. I don't think at the

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moment we're even thinking of any interruption to this proceeding.

D5 R b1 1 The only question really at the moment is should the  
2 requested discovery be permitted. And then the question  
3 would arise when and where should those data be utilized.

4 MR. TROSTEN: Actually I think the motion  
5 for discovery which is pending before the Board is  
6 intimately related to the matter of an evidentiary  
7 presentation as a basis for challenging the appendix D.  
8 It seems to me that the two should be considered at the  
9 same time.

10 CHAIRMAN JENSCH: That may be but they have  
11 to be taken in separate steps because you may not reach  
12 the second one at all.

13 MR. TROSTEN: In any event, we feel that the  
14 motion for discovery, the question of whether discovery  
15 should be permitted, as the predicate for a challenge to  
16 Calvert Cliffs should be certified.

17 CHAIRMAN JENSCH: I don't think the Appeal Board  
18 has indicated a willing reception of procedural matters.  
19 They hoped that the Board would sort of make a stand up  
20 and be counted type of thing themselves and let the matter  
21 proceed. I don't think that a discovery aspect at all  
22 interferes with going to the evidentiary hearing. Since  
23 we're mentioning the evidentiary hearing that was going to  
24 be our next inquiry of the parties. When should we schedule  
25 the first session at least of the evidentiary hearing in

D5 R b2 1 this proceeding?

2 MR. TROSTEN: Shall I speak to that?

3 CHAIRMAN JENSCH: If you will, please.

4 MR. TROSTEN: Mr. Chairman, I know that today  
5 the Regulatory Staff has served upon the Citizens Committee  
6 for the Protection of the Environment. the answers to  
7 the round two questions I assume with the exception of  
8 those relating to core cooling. We have completed our  
9 responses to the round two of the Board's questions and  
10 we are presently working on the sets G and J which are  
11 covered by the Board's April 13th order.

12 And I would like to address myself a little  
13 later this morning to that.

14 In view of the fact that we have completed  
15 the responses to the round two questions as indicated  
16 we believe that the evidentiary hearing should commence  
17 on June 10th, and I picked that date simply because it  
18 is four weeks from today and it is consistent with the  
19 general understanding that we had reached with Mr. Roisman  
20 at a previous hearing. I appreciate the fact that we would  
21 not at that time be able to cover all of the subjects  
22 in a continuous session of hearings because of the  
23 unavailability at this time to the answers on the emergency  
24 core cooling system and the fact that we have not yet  
25 completed our responses to the electricity supply questions.

D5 R b3 1        However, I believe that the remainder of the hearing could  
2        very profitably commence on June 10th and continue for such  
3        period of time as is necessary to complete it.

4                CHAIRMAN JENSCH: I think we're having some  
5        conflicts and that's why we wanted to inquire of the  
6        parties here as to the convenience of scheduling. And  
7        as you know, there are other proceedings pending before  
8        the Commission, two of which have utilized the dates of  
9        June 17th and 18th for one case and also June 22nd. The  
10       Board has been thinking very generally about this subject  
11       and I wonder if you would address yourself to July 20th  
12       as a possibility. Would you have all your electricity  
13       supply situation in by then and will the Staff have its  
14       further evaluations completed by then? The thought being  
15       that if we reconvened on July 20th we'd sit as long as  
16       the parties found it convenient to convene and sit in  
17       continuous sessions.

18               MR. TROSTEN: Mr. Chairman, I'm sure we would  
19        have our answers to the electricity supply questions in by  
20        that time. I cannot speak for the Staff with respect to  
21        its answers but I must very strenuously object to a  
22        postponement on the hearing for that period of time.

23               CHAIRMAN JENSCH: It hasn't been set yet.  
24        Furthermore, how do you handle the conflicts if other cases  
25        get ahead of you?

D6 R b4 1 MR. TROSTEN: Excuse me, Mr. Chairman,  
2 there isn't a conflict involving June 10th.

3 CHAIRMAN JENSCH: Do you feel that if we sat  
4 for a few days on June 10th and then recessed --

5 MR. TROSTEN: I think it might very well be  
6 possible for us to complete this portion of the hearing  
7 in several days, yes, Mr. Chairman. I think if we start  
8 on June 10th we could complete the hearing within a week's  
9 time.

10 CHAIRMAN JENSCH: June 10th is a Thursday.  
11 Thursday, Friday and Saturday. And Monday and Tuesday.  
12 That's about as far as we could go because we have to get  
13 ready for the June 17th and 18th case. Do you want to go  
14 for five days then?

15 MR. TROSTEN: If it would be necessary. I  
16 rather doubt it would be. But if necessary. In any  
17 event, starting on June 10th. I rather think that less  
18 than five days would be needed.

19 CHAIRMAN JENSCH: Staff?

20 MR. KARMAN: We have no objection to commencing  
21 the evidentiary hearing on June 10th, sir. Although at  
22 this time I cannot with any degree of certainty assure  
23 the Board that we will have our responses to some of the  
24 Board's questions. Primarily those dealing with the  
25 emergency core cooling system as indicated in my ..

5 R b5  
1 letter to the Board. We would advise the Board as to the  
2 availability of the responses. However, I must agree with  
3 Mr. Trosten that much meaningful evidentiary material can  
4 be taken care of exclusive if needed -- if need be of the  
5 emergency core cooling system at the time of June 10th.  
6 June 10th is, as far as I could ascertain at this moment,  
7 does not conflict with any other of my cases at the moment.  
8 And we would have no objection.

9 CHAIRMAN JENSCH: How did you happen to pick  
10 the 10th?

11 MR. TROSTEN: As I explained it's picked  
12 simply because it's four weeks from today and at a previous  
13 discussion --

14 CHAIRMAN JENSCH: The factual basis for that  
15 selection may not be clear to us. How about picking  
16 June 7th or 8th?

17 MR. TROSTEN: Apart from the fact that it is  
18 four weeks from today, which is undisputable --

19 CHAIRMAN JENSCH: We will accept that.

20 MR. TROSTEN: It was picked because at a  
21 prior session Mr. Roisman and I agreed that three weeks  
22 from the receipt of the last answers he would have a  
23 trial memorandum prepared for the Board and one week  
24 after that, for a total of four weeks from today, he  
25 would be prepared to go to trial. That's the reason for it,

D5 R b6 1 Mr. Chairman. This is reflected in the March 24th transcript

2 CHAIRMAN JENSCH: Intervenors find it  
3 convenient to assemble on June 8th, do they? My thought was  
4 if we did try something that week, go through Saturday  
5 rather than coming back for two days the next week, we  
6 could utilize a Saturday session -- providing the technical  
7 members of the Board are agreeable to this kind of schedule.

8 MR. ROISMAN: On behalf of the Environmental  
9 Defense Fund who at this point has no evidentiary case  
10 they really take no position on the schedule in question.  
11 With regard to the Citizens Commission for the Environmental  
12 Protection , the date in June would not be acceptable. For  
13 a variety of reasons. But I should state as the Board already  
14 knows that I have a personal reason which would prevent me  
15 from attending or at least there is a good likelihood  
16 which would prevent me from attending any hearing until  
17 after another natural event over which no one here or  
18 the Atomic Energy Commission has any control has to take  
19 place. Insofar as June is concerned, with regard to the  
20 other members of my law firm, the difficulty is that, as  
21 the Board knows and as our discussion this morning on one  
22 aspect of the reactor indicated, the subject is extremely  
23 complicated. I don't intend to understand it. My partners  
24 don't even attempt to pretend to understand what it is  
25 that I don't understand. In short, it is not a very

D5 R b7 1 fungible item, At least not for a firm like ours which  
2 does not specialize in atomic energy work. There would be  
3 very little which they would be able to do on behalf of  
4 the Citizens Committee in my absence from the hearing in  
5 June. That in and of itself I think would go to personal  
6 reasons and I'm not sure that I would be fair if I said  
7 to the Board I want the Board to make this decision on  
8 that basis.

9 I think, however, that as Mr. Trosten has  
10 indicated the hearing which would occur in June would be  
11 a relatively short hearing if it occurred. The meat of  
12 this matter, at least a great deal of it, is the emergency  
13 core cooling system and in fact with regard to this I  
14 would like to ask Mr. Karman if he would be kind enough  
15 to explain to the Board, and ourselves, the meaning of  
16 the last paragraph of the April 29, 1971, letter to the  
17 Board which says: "We are conducting a reevaluation of  
18 the effectiveness of the emergency core cooling system  
19 for the Indian Point Nuclear Generating Unit No. 2."

20 We would like to know what was the basis  
21 of that statement and exactly what is happening. We  
22 read some publications that suggest big things are happening  
23 at the Atomic Energy Commission with regard to that very  
24 critical thing, but the publications are always subject to  
25 the usual charges. They don't have the facts straight.

D4 MR b8 1 We would like to hear from the horse's mouth on that.

2 MR. KARMAN: Thank you.

3 MR. ROISMAN: In any case, we feel that the  
4 bulk of this hearing isn't going to take place or even  
5 any significant part of it in June and Mr. Trosten has  
6 confirmed that because we don't know what we have  
7 accomplished by trying to have a day or two of hearings  
8 in June with everybody understanding that <sup>the</sup> meat of the  
9 thing is going to have to be in July. It's my thought  
10 that the best hearings are the continuous hearings, that  
11 breaking them up into small segments tend to make everybody  
12 forget what happened the last time even though transcripts  
13 are available and you tend to re-hash other things. The  
14 continuous hearing everybody gears for it and I think it  
15 is a more logical way to handle it.

16 Now, if we were talking about having four  
17 weeks of hearings in June, and then two weeks of hearings  
18 in July, and the applicant felt that it would be substantial  
19 delay in its approval or disapproval of the license in this  
20 proceeding, if the hearings were <sup>not</sup> held in June, then I  
21 think the situation might be different. But we don't have  
22 that situation. The hearing as a practical matter will be  
23 beginning some time in July or when the Staff's answers  
24 come in. That has nothing to do with my commitment which I  
25 still abide by. Within three weeks from today I will

D5 MR b9 1 provide the Board and the parties with a pretrial memo-  
2 randum on all the issues except those that I can't deal  
3 with because of the Staff's failure to answer on emergency  
4 core cooling. That part of it will be done in the  
5 three weeks and it is not a question of my not being able  
6 to work between now and some time in June. It is a question  
7 of not being able to be in New York during that period  
8 of time. So to briefly summarize, one, July 20th is fine  
9 with the Citizens Committee and we see no problem with  
10 that date; two, we see very little to be gained with  
11 starting in June, whether it be started on the 1st of  
12 the week of June 7th or the end of the week. Third, we  
13 think there is a big question in light of this last  
14 paragraph in the letter from Mr. Karman to the Board on  
15 April 29th about one very important aspect of the reactor,  
16 the reevaluation of emergency core cooling system. And  
17 depending upon <sup>what</sup> he answers this morning it may be that the  
18 cause for that reevaluation may affect the entire case  
19 if it is as it has been reported a matter of some test  
20 results which indicate that things are not as they were  
21 predicted to be; then that, of course, we believe would  
22 be evidence with regard to questions of whether or not  
23 other simulated tests are valid indications of what results  
24 will be when the real thing happens.

25 So it could be that the answer to that question

D5 MR b10 1        may even suggest that the hearing in June could discuss  
2 any questions relating to safety.

3                In any event we would prefer that there not be  
4 a hearing in June and speaking for myself personally I  
5 cannot be here unless events take place between now and  
6 then which would make it possible.

7                If it would be possible I would come.

8                CHAIRMAN JENSCH: Would you care to speak to  
9 that matter?

10               MR. KARMAN: I think Mr. Roisman will find  
11 that in our responses to his latest series of questions  
12 that possibly with one very, very minor exception all of  
13 his questions have been answered. So there are no gaping  
14 gaps in the answers to his questions. Now with respect  
15 to my letter to the Board of April 29th alluded to by  
16 Mr. Roisman, the Atomic Energy Commission contemplates  
17 and reevaluates the various safety aspects of any nuclear  
18 power reactor. At the moment as indicated in my letter,  
19 we are reevaluating the emergency core cooling system.  
20 More than that I cannot say at this time, Mr. Chairman.  
21 We are reevaluating it. I am not in a position at this  
22 time to indicate the extent or reason for such evaluation.  
23 The Board will be advised as I indicated at the earliest  
24 possible time as to the evaluation itself and the results  
25 of any such evaluation which will then place the Board in its

1 proper prospective in analyzing that aspect of the plant.

2 I can't say anything more than that at this  
3 time, sir.

4 MR. TROSTEN: Mr. Chairman, Mr. Roisman and  
5 I have discussed this matter last night and this morning  
6 in an effort to reach agreement on it and as I told him  
7 then the postponement of the hearing or the setting of a  
8 hearing date to the time that he has suggested is completely  
9 unacceptable to the Applicant.

10 Mr. Roisman has for the first time suggested  
11 that the bulk of this hearing or the majority of this  
12 hearing is going to involve the emergency core cooling  
13 system. As we have looked at the many, many questions that  
14 he has posed to us this comes as a surprise to us. There  
15 are many other aspects of his case that if he chooses to  
16 press he could press in early June.

17 Mr. Roisman is a member of a distinguished law  
18 firm and he has partners who can come to a hearing if he  
19 finds for entirely personal reasons that he does not choose  
20 to attend the hearing. He represents only one of the parties  
21 to this proceeding. The other parties are prepared to go  
22 forward in early June. There are other considerations  
23 involved, the convenience of the Board, the scheduling of  
24 other hearings, and we do not feel that -- as sympathetic  
25 as I may be with Mr. Roisman's personal problems -- that

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there is any warrant for postponing a hearing for a period of time because of his own personal convenience.

I would also note for the record, for whatever the Board may wish to do with it, that the Commission's policy, although it provides that hearings be held in the vicinity of the plant, also notes that due convenience may be given by the Board to the convenience of the parties and it is conceivable if the Board chooses to do so that a hearing could be held in another place that conceivably might be more convenient.

E bs b1 1 But I merely point that out to the Board. So in any  
2 event we feel that the hearing could very possibly go  
3 forward in the first week of June, and that it should  
4 go forward in the first week of June, and that it would  
5 be seriously detrimental to the applicant if it did  
6 not go forward at that time.

7 CHAIRMAN JENSCH: There was talk at one  
8 time by the Applicant that they were going to do some  
9 low-power testing that might be going on during the  
10 hearing. I haven't seen any motion to that.

11 MR. TROSTEN: No, sir, we have not yet made  
12 a motion with respect to this. We have had some  
13 correspondence with the Staff, and we expect to continue  
14 to discuss this matter with the Staff in an effort to  
15 reach a position where we will be able to present to the  
16 Board a motion for fuel loading and subcritical testing.  
17 It is our hope and expectation that we will be able to  
18 do this shortly. We had hoped that we would be able to  
19 do it by this time.

20 CHAIRMAN JENSCH: Well, isn't the plant far  
21 enough along for such an application for low-power  
22 testing?

23 MR. TROSTEN: Well, Mr. Chairman, I would  
24 like to have Mr. Cahill address himself to that question.

25 CHAIRMAN JENSCH: Well, if there are some

E bs b2  
1 incomplete matters maybe that is kind of a good reason  
2 to hold off until your plant is a little farther along,  
3 for the evidentiary hearing. Would you speak to that  
4 matter too, Mr. Cahill.

5 MR. CAHILL: Well, with regard to the status  
6 of plant completion, it is at the point where within a  
7 very short time, certainly this month, we would be ready  
8 to load fuel in our judgment. We do want to assure  
9 ourselves that the AEC Staff Compliance and Regulatory  
10 Group would support our judgment in this matter before  
11 we come to you with a motion with regard to whether or  
12 not the evidentiary hearing should go forth. We see,  
13 and I am sure everyone expects, a long series of hearing  
14 sessions, and it would be of great benefit to us to get  
15 as much of it behind us as possible. Therefore, we  
16 are very anxious to see this hearing continue in June,  
17 and contrariwise it would be extremely detrimental  
18 to us because of the possible delay involved if the  
19 hearing were put off until July.

20 CHAIRMAN JENSCH: I don't understand that  
21 statement. You contemplate a series of sessions; if  
22 they are going to extend over long periods of time, I  
23 take it you are balancing that as against a continuous  
24 session, and if you are going to have a long series of  
25 sessions so the case won't be completed in June anyway

E bs b3

1 how is it so detrimental that continuous session be  
2 attempted at least in July?

3 MR. TROSTEN: Well, Mr. Chairman, if I may  
4 respond to your question.

5 CHAIRMAN JENSCH: Well, I was really trying  
6 to get a response to his statement.

7 MR. CAHILL: Well, whatever matters are heard  
8 and resolved in June and take up time there is that much  
9 less time involved in July.

10 CHAIRMAN JENSCH: If anything is resolved.

11 MR. CAHILL: Excuse me?

12 CHAIRMAN JENSCH: If anything is resolved in  
13 June. I understand you expect a series of sessions so  
14 there wouldn't be anything really resolved in June.

15 MR. CAHILL: I would expect about the matters  
16 put to evidence and subjected to cross-examination in areas  
17 that have been responded to at this time or shortly  
18 subsequent to this time could be resolved in June.

19 MR. TROSTEN: Also, Mr. Chairman, the way  
20 these hearings are conducted, as you of course know, there  
21 are sometimes matters that come up at a pre-session hearing  
22 which require further thought and perhaps testimony. For  
23 the hearing to start in July would involve a serious  
24 potential of delay in our judgment in the event that such  
25 a matter should come up in the hearing. We want to be

E bs b4 1 able to say exactly what Mr. Roisman's case is going to be,  
2 and if necessary to put in additional evidence, if this  
3 appears to be appropriate, in June.

4 In addition, the Board has asked a number of  
5 questions which we want to be able to respond to in June.  
6 So to put this off until July is simply going to result in  
7 a serious delay in our judgment before all of these matters  
8 can be resolved.

9 MR. ROISMAN: Mr. Chairman, if I could address  
10 myself to a couple of those things.

11 First of all, the case that the Citizens  
12 Committee will make, with the exception of this emergency  
13 core cooling question, and I was very, very surprised to  
14 hear Mr. Karman state the answers to the questions,  
15 incidentally, that he referred to -- we just got them this  
16 morning so I have not looked at them -- but if there is a  
17 reevaluation of the emergency core cooling system for  
18 Indian Point 2, then I don't know how the Staff answered  
19 the question that we asked about the emergency core cooling  
20 system in any responsible way. Either it is or it is not  
21 being reevaluated.

22 But completely independent of that -- as I  
23 have already stated Mr. Trosten wants to know what our case  
24 will be. Three weeks from today he will know that case.  
25 He will know it in terms of what points we intend to make,

1        how we intend to prove them, whether we think we already  
2        have the evidence. He will know probably more than any  
3        applicant has known in any AEC proceeding before hearings  
4        began as to what an Intervenor was going to do. So he  
5        will have his map of action.

6                What we are talking about in terms of the  
7        June versus July date is four or five days at the most  
8        worth of hearings. Now, any place you stick those four  
9        or five days, whether you put them in June or July, we  
10       are still not talking about very many days, a few hours  
11       really of time in delay. It doesn't seem very great.

12               And again, independent of the personal  
13       questions, I think that the continuous session of hearings  
14       where we start on day one and we just continue until  
15       it's finished is a much more sensible way of dealing with  
16       it. Splitting them up I don't think is necessarily useful.  
17       We will do our homework before that proceeding so that  
18       we don't have to require interruption, and we will  
19       provide the documents that make our homework possible to  
20       the Staff and the Applicant before the hearing so they  
21       don't have to worry about interruption.

22               Now, for instance, if the witness who testified  
23       this morning, if we had called that witness to testify  
24       on the containment question and said we wanted to cross-  
25       examine him as we probably will, we will identify exactly

E bs b6 1        which documents we want him to have with him. We will  
2        identify which portions of them we want him to read. And  
3        we will, in effect, give him an outline of the questions  
4        we intend to ask. He will know the ESAR references  
5        or he will have to indicate that he is unprepared.

6                    But our doings will set him up properly. If  
7        he is not prepared that will be some fault of his own.  
8        So it seems to me the procedure that we have already  
9        agreed to that we think is the way to handle this gets  
10       to all of the reasons that Mr. Trosten gives for having  
11       June 10th or any day in June for that matter for hearings,  
12       with the possible exception of removing a couple of days  
13       of hearings from July back into June.

14                   One last point. I was disappointed in Mr.  
15       Karman's response with regard to what it means when he  
16       says that they are reevaluating the emergency core cooling  
17       system for this plant. If the position of the staff  
18       persists, as I assume Mr. Karman stated it correctly this  
19       morning, then the Citizens Committee will have no choice  
20       but to file within a few days a request for documents  
21       and discovery from the Staff with regard to this matter  
22       of the evaluation.

23                   We cannot prepare our case in the dark. If  
24       there is a reevaluation going on we want to be a part of  
25       that. It's very important to us. And in terms of the

E bs B7

1 ultimate conclusion of the hearings if we know now what  
2 is going on we can raise our concerns why the reevaluation  
3 is taking place, so that the Staff will be responsive to  
4 it at the time the reevaluation occurs and not a month  
5 or so afterwards when we are in a hearing and we start  
6 raising problems, because we are just getting documents  
7 for the first time.

8 So that if the Staff persists in following the  
9 route that Mr. Karman has suggested this morning, in effect,  
10 "Hear no evil, see no evil and speak no evil," on this  
11 question, we will then proceed to seek discovery from the  
12 Staff with regard to these matters, all of which we think  
13 are relevant, none of which we think are privileged.

14 MR. TROSTEN: Mr. Chairman, I would like to add  
15 that in a situation such as this, in an operating license  
16 proceeding that has been going on now for six months,  
17 in which a great deal of effort has already been expended  
18 through the course of the hearing to bring this matter to  
19 trial on an expeditious basis, to permit the personal  
20 convenience of one party to result in the postponement of  
21 the hearing for approximately a month, I think is entirely  
22 uncalled for, sir.

23 CHAIRMAN JENSCH: Well, don't understand that  
24 the Board has made any decision.

25 MR. TROSTEN: Yes.

E bs b8 1 CHAIRMAN JENSCH: I haven't given it personally  
2 my own self any thought. I don't know what the personal  
3 situation is. I am looking at it on the basis of the fact  
4 that it seems to me there is quite a bit of additional data  
5 coming in, and as I understand from Mr. Cahill they haven't  
6 gotten the plant to the point where it is ready in a short  
7 time for loading, and I don't know if we can get all the  
8 completed construction points before the Board.

9 Of course this reference to the fact that the  
10 proceeding has been going for some time is consistent with  
11 what the Commission wants done, that there shall be many  
12 pre-hearing conferences in order that the parties will  
13 resolve their inquiries and disputes, if they can, so we  
14 are not calling witnesses at a hearing and having, as I  
15 understand it, the expensive witnesses waiting to be called  
16 to testify.

17 So that this procedure of having questions  
18 submitted and questions answered is entirely what the  
19 Commission wants done, and I am sure the Commissioner will  
20 be somewhat dismayed to think that in his encouragement  
21 of the use of pre-hearing conferences he is being  
22 castigated for letting hearings go on and on getting to  
23 the evidentiary hearing.

24 Maybe the thing to do is to certify that phase  
25 of it to the Commission and say, "Please don't set these

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E1 BS M2 1 down for hearing until the plants are constructed fully,"  
2 and that would mean that we wouldn't have the hearing  
3 underway at the time. So I don't think the fact that we  
4 have had three hearing conferences in this proceeding  
5 should be used as an argument any more than the personal  
6 convenience of an attorney. I think we have to look at  
7 what the record is and what is likely to be accomplished.

8 MR. TROSTEN: Mr. Chairman, I would like to  
9 make the observation that the hearing sessions that we have  
10 held in our view are certainly more than pre-hearing  
11 conferences. It's true we have been conducting conference-  
12 type discussions here, but during this entire period of  
13 time, the Applicant has been working extremely hard and  
14 closely with the Intervenor in an attempt to bring the  
15 evidentiary hearings closer, and in an attempt to reduce  
16 the size and scope of the evidentiary hearing. We have  
17 also throughout the course of this been prepared to come  
18 forward with evidentiary responses, as appeared appropriate  
19 at the time.

20 CHAIRMAN JENSCH: That's what the Commission  
21 would like to have done.

22 MR. TROSTEN: Yes, sir.

23 Now, in addition to that, the nature of the  
24 operating license here, as the Chairman knows, is such that  
25 it is not necessary that the plant be entirely complete

E1 BS M2 1 at the time that the hearing is noticed, and certainly  
2 at the time that the evidentiary phase of the hearing  
3 goes forward. It is entirely possible under the Commission's  
4 regulations that the plant will not be entirely complete  
5 at the time that the evidentiary hearing proceeds, and  
6 so we do not feel that the fact that the plant has not  
7 been 100 percent constructed should serve as any bar to  
8 the going forward and completion of the evidentiary hearing.

9 CHAIRMAN JENSCH: Mr. Staff Counsel.

10 MR. KARMAN: Mr. Chairman, the only problem,  
11 the main problem, that the staff has with respect to  
12 scheduling is, and in this respect I am not as sanguine  
13 as Mr. Roisman, that we would have a few days of continuous  
14 evidentiary hearings and go on ready for the initial  
15 decision. As the Chairman is well aware, the Atomic  
16 Energy Commission is in the midst of a hearing at the  
17 present time which is in the third final stage of  
18 completion, which was scheduled to be completed at least  
19 three times, but one thing led to the other and at each  
20 stage of the evidentiary hearing matters arose which  
21 required additional testimony and the hearing was postponed.  
22 So that for that reason, Mr. Chairman, I feel that July  
23 20th might be considered an inordinate delay to get what  
24 I consider the first phase of the bulk of the evidentiary  
25 hearing in the record, because I cannot be as assured as

E1 BS M3 1 Mr. Roisman is that we conclude this whole thing in four  
2 or five days and finish it.

3 Even if we had all of the evidentiary matters  
4 completed and ready to be introduced into the hearing.  
5 I feel it's a pretty long stretch between now and July 20th.

6 CHAIRMAN JENSCH: Of course, we have  
7 accomplished quite a bit already. We have got all the  
8 Applicant's evidence in, all the staff evidence in.

9 MR. KARMAN: That is correct, sir.

10 CHAIRMAN JENSCH: So it really isn't --

11 MR. KARMAN: I didn't want to indicate that  
12 that was so. I think we have made much progress in this  
13 hearing.

14 CHAIRMAN JENSCH: I think the tendency has  
15 been in some cases, however, that if some more time had  
16 been spent in pre-hearings or conference-type hearings or  
17 discussion hearings, that we wouldn't have witnesses  
18 sitting around to consider matters that could have been  
19 concluded within written question form and answers given.  
20 And I think that the Commission's observation is that  
21 these hearings will move better when every possible question  
22 has been asked.

23 Now, there is no minimizing the importance of  
24 your letter of April 29th, or whatever it is and the last  
25 paragraph, including all words thereof, and I think

E1 BS M4 1 whatever be the significance of that is a matter at least  
2 that might warrant some further consideration as to when  
3 this proceeding should go forward, although we can  
4 certainly interrogate about some things. I don't know  
5 whether Tuesday through Saturday in June will do more  
6 than more written questions might do.

7 MR. TROSTEN: Well, Mr. Chairman, I think an  
8 important point to bear in mind here is that as far as  
9 we are concerned, we are ready to have this hearing start  
10 and completed on June 10th, with the exception of this  
11 one aspect having to do with the emergency core cooling  
12 matter, which will have to take some additional time. We  
13 are ready to go forward with the rest of the case.

14 CHAIRMAN JENSCH: I understand the Applicant's  
15 position. They are ready. I think that we also have to  
16 consider what kind of cross-examination will be undertaken.  
17 That's a right that the other parties have.

18 MR. TROSTEN: Yes, sir.

19 CHAIRMAN JENSCH: And in order to know what  
20 their cross-examination will be, one way to shorten it  
21 would be to get their questions answered. Maybe they will  
22 get their cross-examination down to three or four days if  
23 they get those questions in.

24 MR. TROSTEN: Well, we have already answered  
25 their questions, Mr. Chairman. As I understand the

1 position taken by Mr. Roisman, he may have some cross-  
2 examination, additional cross-examination, presumably will  
3 have some additional cross-examination for us, but as a  
4 matter of fact the informal question and answer process  
5 has already served the bulk of his cross-examination, so  
6 we have actually been going through this informal process,  
7 actually tried part of this case in terms of this particular  
8 party, and that is the reason why we already know what  
9 his cross-examination is going to be, and we are going to  
10 know further in three weeks in great detail what it's going  
11 to be.

12 MR. MAC BETH: Mr. Chairman.

13 CHAIRMAN JENSCH: Yes.

14 MR. MAC BETH: I'd like to make the position  
15 of the Hudson River Fishermen on this matter clear. I  
16 assume that we have been discussing so far simply a hearing  
17 on the questions of radiological health and safety. Mr.  
18 Trosten and I have exchanged letters on behalf of the  
19 Fishermen and Consolidated Edison Company and Consolidated  
20 Edison Company has reached an agreement on various points  
21 with the Fisherman's Association, and on the basis of that  
22 the Fishermen will not be contesting the issue of radio-  
23 logical health and safety. I would like to offer to the  
24 Board to be placed in the docket record of this proceeding  
25 the exchange of letters between Mr. Trosten and myself.

E2 BS M1 1

2 CHAIRMAN JENSCH: Well, if you desire to  
3 send them to the correspondence record, we will accept  
4 your statement in that regard. However, if there is any  
5 part of those documents that you'd like to read into the  
6 record --

7 MR. MAC BETH: I think if they are accepted  
8 as read into the record, that's perfectly sufficient.

9 CHAIRMAN JENSCH: All right. The Reporter  
10 is directed to copy into the record those letters.

11 (The following are those letters referred to.)

12 'Leonard M. Trosten, Esq.  
13 LeBoeuf, Lamb, Leiby & MacRae  
14 1821 Jefferson Place, N.W.  
15 Washington, D.C. 20036

16 In Re: Consolidated Edison Company of New York, Inc.  
17 Indian Point Station Unit No. 2  
18 AEC Docket No. 50-247

19 Dear Mr. Trosten:

20 I am writing on behalf of the Hudson River  
21 Fishermen's Association with regard to the matter captioned  
22 above.

23 I have reviewed Section 4.10 of the Technical  
24 Specifications, and the Association is particularly interested  
25 in being assured that the environmental monitoring survey

E2 BS M2 1 described therein be maintained throughout the period of  
2 the license for Indian Point Unit No. 2 and that all the  
3 equipment necessary to the program will be kept in proper  
4 functioning order for the thorough performance of the  
5 survey.

6 I understand that from time to time  
7 Consolidated Edison or the Atomic Energy Commission may  
8 feel it necessary to make alterations in the environmental  
9 monitoring survey. It is my understanding that Consolidated  
10 Edison will undertake to give the Association direct and  
11 timely notice of any proposed change in the requirements  
12 of the survey so that the Association may express its  
13 views to the Commission, should it feel that its interests  
14 would be affected by the proposed change.

15 It is also my understanding that Consolidated  
16 Edison will undertake to test samples collected by the  
17 Association or by its agent. Such samples (a) will be  
18 taken in the presence of a Consolidated Edison employee or  
19 agent, at Consolidated Edison's option, (b) will be taken  
20 at a mutually convenient time on reasonable notice to  
21 Consolidated Edison, (c) will consist of four samples per  
22 quarter year of Hudson River vegetation, Hudson River  
23 bottom sediment or Hudson River fish, or any combination  
24 of these, and (d) will be tested in the manner described  
25 in Table 4.10-1 of the Technical Specifications.

E2 BS M3

1           The testing of these samples will be  
2 performed by Consolidated Edison employees or agents using  
3 equipment furnished by Consolidated Edison. Consolidated  
4 Edison will perform these tests on three days' notice to it,  
5 whenever feasible. If the laboratory workload prevents  
6 this, Consolidated Edison will notify the Association and  
7 advise of the earliest available date on which the tests  
8 can be made.

9           It is also my understanding that the Association  
10 may choose to take samples by methods which differ from  
11 those described in lines 8, 9 and 10 of Table 11.11-1 of  
12 Exhibit B-8 , Volume and Safety Analysis Report, in that  
13 samples of vegetation or fish may consist of the particular  
14 specie or species available at the sampling point, and  
15 sediment may be near Indian Point Unit No. 2 but not  
16 necessarily those presently designated by Consolidated  
17 Edison for sampling.

18           I would appreciate receiving from you an  
19 assurance on these points. On the basis of this assurance  
20 the Hudson River Fishermen's Association will not contest  
21 the issuance of an operating license for Indian Point  
22 Unit No. 2 on radiological health and safety grounds.

23           Yours sincerely,

24           Angus MacBeth."

25           MR. MAC BETH: If the question the Board is

E2 BS M4 1 considering now is evidential hearing on any of the  
2 motions that we were discussing earlier, perhaps it would  
3 be worthwhile for me to make it clear in just a few words  
4 what I think the Intervenors would have to present, what  
5 they would intend to present.

6 There would be hopefully a series of factual  
7 replies to the questions that would be put to the  
8 Commission's officers, employees, and the Intervenors would  
9 then plan to put in simply a very short amount of evidence  
10 on the questions of electric power and environmental  
11 protection, necessity for environmental protection at this  
12 plant. I think we made clear in our last brief that the  
13 Consolidated Edison Company in this regard and the  
14 Attorney General's suit is already preparing replies to  
15 those questions that will present no further burden to  
16 Consolidated Edison Company, nor do I think there would be  
17 any lengthy process needed to introduce that material into  
18 evidence, depending, of course, on what the Commission  
19 says the factual basis for the period of orderly transition  
20 is. There might be some further evidence that we would  
21 wish to put in in rebuttal, and thus establish there is a  
22 substantial factual question in the light of this particular  
23 plan and this particular hearing that should be certified  
24 to the Appeals Board.

25 But I certainly don't think as Mr. Trosten

E2 BS M5

1 suggested earlier that that would need any kind of  
2 extensive and prolonged evidentiary hearing, and assuming  
3 that the Board rules on my question before too long, we  
4 probably could take that up in the middle of June sometime.  
5 All material should be in then. Thank you.

6 MR. BRIGGS: Mr. Trosten, in connection with  
7 your motion that you expected to make at some time for  
8 permission to load the reactor and conduct low power  
9 experiments, when one begins to operate the reactor at  
10 any significant power at all, do things begin to become  
11 radioactive?

12 MR. TROSTEN: Excuse me, Mr. Briggs.

13 MR. BRIGGS: Yes.

14 MR. TROSTEN: We were not proposing to ask for  
15 permission to operate at low power. This is fuel loading  
16 and subcritical testing, sir.

17 MR. BRIGGS: We might take this other one up,  
18 just one comment here, and it deals with the critical  
19 testing also. Once you start loading the fuel it becomes  
20 inconvenient to unload the fuel again and to take out the  
21 innards from the reactor. In connection with your motion,  
22 I would like to see a reply to a question, if you wish, by  
23 someone who is doing development work on ultrasonic testing  
24 of reactor vessels. I would like to see information  
25 concerning the effect of the surface roughness of the

E2 BS M6 1 reactor vessel on the results that one can get from the  
2 inspection.

3 At one hearing I remember the manufacturer  
4 had chosen to change from inspecting the vessel from the  
5 inside to inspecting the vessel from the outside. The  
6 impression I have, or the understanding I have, was that  
7 the inspection could be done more satisfactorily because  
8 this way it was done when the vessel was fabricated. The  
9 vessel outside was smoother than the vessel inside, and that  
10 this would have some effect on the results of the inspection.

11 I'd like to be assured, before the reactor  
12 vessel becomes radioactive, that meaningful inspections  
13 by ultrasonic methods can be conducted from the inside  
14 without having to polish the surface, smooth the surface  
15 where the inspection is going to take place, or that the  
16 surface has been smoothed where the inspection is going to  
17 take place.

18 In other words, I wouldn't like someone to come  
19 back and say, "Well now, we have made the plant radioactive;  
20 it's not convenient to get in to smooth the surface. The  
21 inspection isn't going to be as good as it would have been  
22 had we done this initially."

23 CHAIRMAN JENSCH: This is approximately the  
24 time of the recess. We have not had one during the day, and  
25 at this time we will recess to reconvene in this room this  
afternoon at 1:30.

F BS b1 1 CHAIRMAN JENSCH: Please come to order. We  
2 haven't heard from anyone from New York State regarding  
3 the timing of this procedure.

4 MR. SCINTO: We have no objection to proceeding  
5 on June the 10th, or that week. We would have no objection,  
6 of course, to proceeding later either.

7 CHAIRMAN JENSCH: Very well.

8 The Board has concluded that in view of the  
9 different matters that we considered this morning that  
10 we should reconvene on July 13th in this room, and we  
11 are prepared to sit for some time. A formal order will  
12 be issued and all persons who have heretofore requested  
13 that a copy of the order be presented to them will have  
14 transmitted to them a copy of that order, and if there is  
15 any other person here who desires to be informed respecting  
16 that or any other matter, we will address an inquiry to  
17 the Atomic Energy Commission and I'm sure that they will  
18 make arrangements to notify all parties.

19 There is a gentleman here who has indicated  
20 this morning his desire to make a statement by way of  
21 a limited appearance. The time for making statements  
22 by way of limited appearance has expired, but the  
23 gentleman wrote in some time ago and I understand he has  
24 prepared a statement. He came to the table this morning  
25 and I understood he had copies and I asked if he would

F BS b2

1 give copies to the parties and before we recessed he  
2 indicated he had done that. Is there any objection by any  
3 of the parties that the statement by the gentleman be  
4 received into the transcript as if read?

5 MR. TROSTEN: No, there is no objection.

6 MR. KARMAN: No objection.

7 MR. MACBETH: No objection.

8 MR. ROISMAN: No objection.

9 MR. SCINTO: No objection.

10 CHAIRMAN JENSCH: If you desire, sir, to give  
11 a very brief summary of what you have said, you need not  
12 read all you have, but if you desire to make some sort of an  
13 oral presentation I think you have three or four typewritten  
14 pages, correct?

15 MR. CRUGER: About two and a half, Mr. Chairman.

16 CHAIRMAN JENSCH: Would you give your name and  
17 address into the microphone so we may all hear you, the  
18 Reporter can get your name and address.

19 MR. CRUGER: My name is Richard Cruger. I live  
20 in Peekskill, New York. Shall I give my statement in its  
21 entirety?

22 CHAIRMAN JENSCH: Give us a brief summary.

23 MR. CRUGER: Brief summary.

24 CHAIRMAN JENSCH: If you can.

25 MR. CRUGER: What I am concerned with is relative

F BS b3

1 to the low level releases that are going to be emitted  
2 from Indian Point No. 2, their effect on the environment  
3 and on the public. I understand that none of the  
4 intervenors will cover these issues because, well, I'm  
5 not sure exactly why, but the Environmental Defense Fund  
6 I understand is not going to cover radiological environmental  
7 effects. So I request that the Board consider some of  
8 these issues and perhaps raise questions concerning them.  
9 I will try to summarize briefly my report.

10 As far as I am aware, Consolidated Edison has  
11 not substantiated their relatively low liquid effluent  
12 estimates for Indian Point No. 2 to the satisfaction of  
13 the U. S. Department of Health, Education and Welfare,  
14 which questioned the releases in a statement contained  
15 in the "Detailed Statement on the Environmental Considerations  
16 for Indian Point No. 2." They claim that Con Edison has  
17 "not presented new design information" to support their  
18 relatively low liquid effluent estimates. Con Edison's  
19 reply was given in the same report. "This estimate was  
20 based on the design criteria for the plant. Until the plant  
21 operates it is impossible to state a number for the possible  
22 variance of the plant from design criteria."

23 This suggests to me that Consolidated Edison  
24 does not have sufficient information to justify their  
25 estimates. Consolidated Edison has estimated relatively

F BS b4

1 low effluent releases from Indian Point No. 2. However,  
2 in the FSAR, Volume 5, page Q11.1-17 they state that  
3 "When primary to secondary leakage is introduced into  
4 the analysis, many combinations of leakage and percent  
5 defective fuel exist which would result in the plant  
6 discharging at 10CFR20 limits."

7 In other words, there is a variety of  
8 operating conditions where the maximum permissible limits  
9 would be discharged. Presumably no one knows how often  
10 such operating conditions would actually occur.

11 Although Con Edison gives relatively low  
12 effluent estimates they admit the possibility of reaching  
13 the 10CFR20 limits during actual operation.

14 CHAIRMAN JENSCH: You have all that set out  
15 in your statement, have you?

16 MR. CRUGER: Yes, Mr. Chairman.

17 CHAIRMAN JENSCH: Very well. Have you concluded?

18 MR. CRUGER: I'd like to make one additional  
19 statement.

20 CHAIRMAN JENSCH: Very well. Proceed, please.

21 MR. CRUGER: It appears from my calculations  
22 based on Con Edison's figures that radioactive gaseous  
23 concentrations at a point on the site boundary would be  
24 approximately 2,000 times greater from Indian Point No. 2  
25 than the average concentration from Indian Point No. 1 for

F BS b5 1 the years 1967 through 1969. I conclude from this that  
2 local residents could expect to receive a much greater  
3 dose from Indian Point No. 2 than from Indian Point No. 1,  
4 possibly hundreds of times greater.

5 CHAIRMAN JENSCH: Mr. Cruger, I don't know what  
6 your statement contained, but I wonder if you could give  
7 us this supplementary information to be helpful to us.

8 We have had many appearances in the past  
9 sometimes from members of the school faculty. Are you  
10 connected with one of the faculties here in --

11 MR. CRUGER: No, Mr. Chairman. I'm a licensed  
12 professional engineer, Master's Degree in Electrical  
13 Engineering.

14 CHAIRMAN JENSCH: Very well.

15 Now one other question. Will you have an  
16 opportunity to attend these hearings and respond, or if not  
17 will you do this. As you know, the Atomic Energy Commission  
18 has provided a central repository for all documents and  
19 transcripts related to this proceeding, and that is over  
20 at the Henry Hudson High School just down the road here a bit.  
21 You know where that is.

22 MR. CRUGER: Yes. I have been there, Mr.  
23 Chairman.

24 CHAIRMAN JENSCH: Will you have an opportunity  
25 if you cannot attend to read the transcript to know whether

F BS b6 1

2 the answers are coming in and whether your questions are  
3 answered, and that sort of thing? Because the Commission  
4 wants you and all members of the public to be informed.  
5 But some of the experiences we have had, when statements  
6 are given by way of limited appearance the speakers vanish  
7 and they never stay and the parties will assemble data  
8 and present all the factual matter that they have in  
9 reference to these matters, and I think the Commission  
10 feels that maybe we on the Board aren't trying to see  
11 that the answers are made available to the speakers,  
12 and the only way we can do it is to invite you to attend,  
13 urge you to attend or request that you read the transcripts.

14 Now, did you see some of the transcripts over  
15 at the high school when you were there?

16 MR. CRUGER: Yes, I did, Mr. Chairman.

17 CHAIRMAN JENSCH: If you will do this. If  
18 you will read those transcripts and if at any time in the  
19 course of this hearing you feel that your questions have not  
20 been answered or have been analyzed only in part, if you  
21 will come back and talk with the Staff I'm sure the Staff  
22 will be glad to talk with you as to what further can be  
23 done. Maybe they will propound some questions for you,  
24 because the Commission wants the concerns of the members of  
25 the public to be considered in the proceedings, and anything  
you can do to assist in that endeavor of the Commission I'm

F BS b7 1 sure will be appreciated by the Commission.

2 And the Staff is here to help you.

3 Will you try to do one of those two things?

4 MR. CRUGER: Well, as far as informing myself,  
5 Mr. Chairman, I have been doing that for quite some time.  
6 In fact, I have been making somewhat a study of the situation,  
7 reading the various and sundry literature on the subject  
8 with respect to the classifications for Indian Point No. 2,  
9 the FSRA, the environmental considerations, Detailed  
10 statement of Environmental Considerations, and actually  
11 this statement of mine represents sort of a summation of  
12 what I have been to glean so far. I am not certain myself  
13 that there would be anything in the transcript that would  
14 be directly answering my question.

15 CHAIRMAN JENSCH: There may not yet be, but  
16 I'm sure the parties hearing your statement here today  
17 would give consideration to your concerns and decide whether  
18 and in what manner a response can be submitted into the  
19 record.

20 MR. CRUGER: Very good.

21 CHAIRMAN JENSCH: And if you do not get your  
22 response, we invite you to come back and talk with the Staff  
23 and see if the Staff can undertake some method to assist  
24 you further in that regard. Will you do that?

25 MR. CRUGER: Yes, sir.

F1 BS M1 1 (The following is written statement submitted  
2 by Richard Cruger, to be considered as if read.)

3 My name is Richard Cruger and I live in Peekskill,  
4 N.Y. I am a licensed professional engineer with a Masters  
5 Degree in electrical engineering. Although I am a member  
6 of the Citizens Committee for the Protection of the  
7 Environment and the Environmental Defense Fund, intervenors  
8 in these proceedings, I wish to speak as an individual because  
9 it is my understanding that certain questions relating to  
10 the controlled release of radioactivity to the environment  
11 may not be raised by any of the intervenors. Even though  
12 I believe there are several reasons why this Board should  
13 deny Con Edison an operating license for Indian Point Unit  
14 No. 2 (IP-2), such as the possibility of a catastrophic  
15 accident and the dangers involved in caring for high-level  
16 radioactive wastes, I will only discuss factors relating  
17 to effluent emissions during regular operation of the  
18 plant.

19 Before going further, I would like to emphasize  
20 one point. Con Edison estimates that the radioactive  
21 effluents released from IP-2 will be small fractions  
22 of the maximum permissible limits of 10CFR20, the federal  
23 regulations governing such emissions. Some people may think  
24 that if the effluents are kept below these limits there  
25 will be no danger to the public or to the environment in  
general. There is, I believe, no scientific basis for

F1 BS M2

1 this assumption. On the contrary, radiation is dangerous,  
2 even in relatively small doses. As stated in the AEC  
3 pamphlet titled "The Genetic Effects of Radiation":  
4 "However small the quantity of radiation absorbed, mankind  
5 must be prepared to pay the price in a corresponding  
6 increase of the genetic load."

7           Recognizing this, several important questions  
8 can be asked. What are the estimates of liquid and gaseous  
9 effluents for IP-2 and how well substantiated are they?  
10 How would operation of IP-2 affect the public's health?  
11 What have been the emissions from IP-1 and has Con  
12 Edison kept these to a minimum? I believe that considerable  
13 evidence pertaining to these questions indicates that an  
14 operating license for IP-2 should be denied. I will now  
15 give some of that evidence, all or most of which this  
16 Board is probably already aware, together with a few  
17 conclusions of my own.

18           Included in the "Detailed Statement on the  
19 Environmental Considerations..." (DSEC) for IP-2 is a  
20 statement by the U.S. Department of Health, Education &  
21 Welfare (page 113) that Con Edison "has not presented  
22 new design information" to support their relatively low  
23 liquid effluent estimates. Con Edison's reply is given  
24 in this same report (page 189): "This estimate was based  
25 on the design criteria for the plant. Until the plant

F1 BS M3

1 operates, it is impossible to state a number for the  
2 possible variance of the plant from design criteria."  
3 This suggests that Con Edison does not have sufficient  
4 information to justify their estimate.

5 In the FSAR, volume 5, page Q11.1-17, in answer  
6 to the question of how IP-2 will comply with 10CFR20, Con  
7 Edison states that "when primary to secondary leakage is  
8 introduced into the analysis, many combinations of  
9 leakage and percent defective fuel exist which would result  
10 in the plant discharging at 10CFR20 limits." In other  
11 words, there is a variety of operating conditions where the  
12 maximum permissible limits would be reached. Presumably,  
13 nobody knows how often such operating conditions would  
14 occur. Although Con Edison gives relatively low effluent  
15 estimates, they admit the possibility of reaching the  
16 10CFR20 limits during actual operation.

17 The graphs of effluents supplied by Con Edison,  
18 in answer to the Board's question no. 28 of January 19,  
19 1971 about emissions from IP-1, indicate that releases of  
20 liquid effluent (except for tritium) have been much  
21 higher than the IP-2 estimate. The following figures are  
22 exclusive of tritium. For example, according to the graph,  
23 about 40 curies of liquid effluent was discharged by IP-1  
24 during 1968. This is more than 1000 times the liquid  
25 effluent estimate for IP-2 of 0.0252 curies/year given

F1 BS M4 1 in the "Applicant's Environmental Report - Operating  
2 License Stage," dated August 6, 1970. This could be  
3 interpreted to mean that the actual IP-1 liquid effluent  
4 was unnecessarily high or that the IP-2 estimate is  
5 unrealistically low.

6 In the report just cited (page 18) the estimated  
7 liquid effluent (again, excluding tritium) for IP-1, -2 and  
8 -3 combined is given as 36.95 curies/year. It is said to  
9 be based on the average IP-1 releases for 1967-1969. In  
10 Con Edison's "Environmental Impact..." report for IP-2,  
11 dated December 17, 1970, (page 20) the estimated combined  
12 liquid effluent is given as 0.0873 curies/year and is  
13 based on a "new blowdown purification system" for IP-1.  
14 If such a drastic reduction (from 36.95 to 0.0873 curies/  
15 year) can be achieved, why was this change not made years  
16 ago? It might be pertinent to mention here that the N.Y.  
17 State Department of Environmental Conservation, in a report  
18 contained in the DSEC (page 182), noted unusual levels of  
19 radioactivity in aquatic vegetation and fish in the  
20 Hudson River during 1968 and 1969. They attributed these  
21 levels to emissions from IP-1.

22 As concerns gaseous effluents from IP-1, it is  
23 revealing to quote HEW again (from DSEC page 115):  
24 "...gaseous releases during normal operations at Indian  
25 Point unit 1 have been much higher than at other similar

F1 BS M5 1 operating FWR's...". This suggests that Con Edison has  
2 failed to minimize its gaseous emissions. Also, the IP-1  
3 effluents have apparently varied considerably. For example,  
4 the gaseous effluent was about 23 curies in 1967 and over  
5 400 curies in 1969, according to the graph previously  
6 referred to. If similar variations can occur for IP-2,  
7 how seriously can we take Con Edison's estimates?

8 Con Edison's estimate of gaseous effluent for  
9 IP-2 is given as 9850 curies/year in the "Environmental  
10 Impact..." report (page 21). For IP-1, I obtained  
11 an approximate average value of 190 curies/year for the  
12 years 1967-1969 from the graph of gaseous effluent  
13 previously referred to. The gaseous concentrations at a  
14 point on the site boundary can be calculated using the  
15 atmospheric dilution factors given in the Technical  
16 Specifications (page 3.9-3). I calculated the site boundary  
17 concentrations to be about 3.6 picocuries/meter-cubed for  
18 IP-1 and about 7800 picocuries/meter-cubed for IP-2.  
19 According to these figures, the ration of the gaseous  
20 concentration expected from IP-2 to the average concentra-  
21 tion from IP-1 (for the years 1967-1969) is 7800:3.6 or  
22 about 2000:1. The large difference in concentrations is  
23 due mainly to the lack of a stack for IP-2, and the higher  
24 estimate of gaseous effluent for IP-2 compared to IP-1.  
25 I conclude from this that, although the effect of a stack

F1 BS M6 1 would presumably become less as the distance from the  
2 plant increased, local residents could expect to receive a  
3 much greater dose from IP-2 than from IP-1, possibly hundreds  
4 of times greater. Even if the increased dose from the  
5 Indian Point facility were less than the dose due to  
6 natural background radiation it should not be ignored.

7 A N.Y. State Department of Health report dated  
8 February 6, 1970 concluded that there was no evidence of  
9 changes in the mortality rates in the area attributable  
10 to the operation of IP-1. In this report is the following  
11 qualification: "With the known period between exposure to  
12 radioactivity and its lethal effects, it would be extremely  
13 unlikely that any measurable impact could have been readily  
14 detected in so short a period of time." The difficulty  
15 of drawing any conclusions about the effects of IP-1  
16 is compounded by the variations observed in gaseous effluents  
17 the value of which was apparently much greater in 1969 than  
18 in any previous year. I am not aware that the Department  
19 of Health has done a study of birth defects or specifically  
20 of infant mortality in this area, which would seem essential  
21 considering the much greater susceptibility of a human  
22 fetus to radiation compared to an adult.

23 Even if it could be proven, and it cannot, that  
24 the effect of IP-1 on the public's health has been, and  
25 will be, absolutely zero, this would say nothing about

FL BS M7 1 IP-2. This is because of the much greater doses  
2 expected from IP-2, compared to IP-1, as already mentioned.  
3 Presumably, no one knows for sure what effect the regular  
4 operation of IP-2 would have on the public's health. I  
5 believe that what is known is sufficiently disturbing to  
6 warrant a refusal to actually make the experiment."

7 CHAIRMAN JENSCH: Very well.

8 MR. BRIGGS: A question, Mr. Trosten. I have  
9 here answers of Applicant to questions raised by the  
10 Atomic Safety and Licensing Board on March 24th. This is  
11 part one. It's intended that there be additional answers?

12 MR. TROSTEN: Yes, sir, that's correct.

13 CHAIRMAN JENSCH: Do you have some idea when  
14 these will be forthcoming?

15 MR. TROSTEN: Yes, sir. I would say this,  
16 Mr. Briggs, that we would expect to have answers in writing  
17 to probably most of those questions by early June, perhaps  
18 before then, but certainly by early June. It may be that  
19 some of the questions would be deferred and the answers  
20 to some of these questions would be deferred until a later  
21 period of time, particularly those that might relate to  
22 the matter of the emergency core cooling system.

23 MR. BRIGGS: That was the interesting question.

24 MR. TROSTEN: Yes.

25 MR. BRIGGS: Thank you.

F1 BS M8

1 CHAIRMAN JENSCH: Is there any other matter  
2 that any party desires to bring up at this time?

3 MR. TROSTEN: Yes, Mr. Chairman. I have one  
4 other point I would like to make. It concerns the  
5 answers which we are preparing to the questions to us  
6 by the Citizens Committee for the Protection of the  
7 Environment in accordance with the Board's April 13th  
8 order. We are preparing answers to these questions and  
9 hope to submit them to the Citizens Committee with respect  
10 to those questions that we agree are encompassed by the  
11 terms of the order within about the next ten days. We  
12 are responding to these questions in view of the Board's  
13 order, even though we do not agree that the answers are  
14 necessarily relevant to the issues in this proceeding.

15 Depending upon the use which the Intervenors  
16 choose to make of these answers we reserve the right to  
17 object to the introduction into evidence of the answers  
18 to these questions.

19 The Board's communication of April 13th  
20 contains the statement on page five that, "Applicant's  
21 opening statement, though not evidence, nevertheless  
22 carries with it the responsibility of presenting evidence  
23 in support of the opening statement."

24 Mr. Chairman, I would like to observe that the  
25 Applicant considers that the opening statement, which was

FI BS M9 1 made by Mr. Woodbury, Applicant's Vice President, conforms  
2 with the purpose of the Commission's public hearing  
3 process, which the Applicant understands to be to inform  
4 the public as fully as possible concerning the facility.  
5 And the Applicant does not consider that the intent of  
6 the Commission's public hearing process or the  
7 Commission's rules is to limit the opening statement to  
8 matters which fall directly within the issues in the  
9 hearing itself. However, the language of the Board's  
10 order, to which I just referred, appears to place some  
11 independent obligation upon the Applicant in this  
12 proceeding to introduce evidence in the proceeding  
13 relating to the electric power supply.

14 Mr. Chairman, Applicant does not agree that  
15 it has been placed under such an obligation by virtue of  
16 the oral statement, and Applicant does not agree that the  
17 cases that were cited by the Chairman in the April 13th  
18 order support the proposition that we are placed under  
19 some independent obligation to introduce evidence in  
20 support of that opening statement.

21 Now we are placed in somewhat of a dilemma  
22 by the provisions of the Board's order, and we believe that  
23 in order to eliminate any possible question whether such  
24 an obligation exists that it is appropriate for us at this  
25 time to withdraw that portion of the oral statement which

1 was made by Mr. Woodbury on December 17th, which doesn't  
2 deal directly with the matters which are covered by  
3 10CFR2 Appendix A, and hence we are withdrawing that  
4 portion of the oral statement, Mr. Chairman, and we ask  
5 that this portion of the oral statement be disregarded  
6 by the Board.

7 CHAIRMAN JENSCH: Well, I don't think it's  
8 quite so easy to erase the record that way. This statement  
9 was made, as I understood it, as an opening statement.  
10 The Commission has permitted an opening statement, and  
11 this is the language of the Commission's arrangement.  
12 "In order to facilitate public understanding of the  
13 proceeding it is anticipated that the Applicant who has  
14 the burden of proof in licensing proceedings will at  
15 an appropriate time early in the proceeding make an oral  
16 statement describing in terms that will be readily understood  
17 by the public the manner in which the safety of the public  
18 will be assured by such provisions of citing safety  
19 features of the reactor, including engineered safeguards,"  
20 and so forth.

21 Now the intention as I discern it from that  
22 statement was that the Commission wanted the Applicant  
23 to have the opportunity to discuss in layman's language  
24 safety matters and the provision that I had of the  
25 Commission's view refers to a statement in the singular.

1 Now that's kind of been expanded, because we kind of all  
2 get very permissive in things, so the Applicant's counsel  
3 makes a statement and they have a selected layman make  
4 a statement and then we could have thought here in this  
5 proceeding that there would be a third statement.

F1 BS M11

End F1

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G MR b1 1 Now, this statement that dealt with electric power shortages,  
2 the trouble they've had in getting interconnections, the  
3 difficulty of finding power for brownouts, the great  
4 endeavors to find sources of low sulfur oil, the trouble  
5 with the coal, everything else, seems somewhat remote from  
6 the safety considerations that the Commission envisions.  
7 That statement was made to a group of some two hundred  
8 people who, of course, have it in their mind that electric  
9 shortage is going to be a very vital factor in this  
10 proceeding. Since the listeners are not all here to have  
11 it told to them that they must now erase it from their  
12 mind I think it is too late to withdraw the statement  
13 at this time.

14 MR. TROSTEN: Mr. Chairman, may I address some  
15 further remarks to that. The Commission's procedures have  
16 a dual purpose. First, the introduction of evidence and  
17 the adjudication of specific issues which are set forth  
18 in the notice of hearing. In our judgment they also provide  
19 a public informational function and as I've just mentioned  
20 I believe that it is entirely consistent with the  
21 informality which is stressed as a consideration in  
22 Commission procedures, that Mr. Woodbury's opening statement  
23 covered the matters that it did. But be that as it may,  
24 since obviously we have a disagreement with the Chairman's  
25 interpretation of the purpose of the opening statement,

MR b2

1 the oral statement, I nevertheless feel, Mr. Chairman,  
2 that we certainly are not under any obligation by virtue  
3 of the fact that those statements were contained in the  
4 oral statement. We feel that the Board is an expert trier  
5 of fact, it is the Board and not the members of the public  
6 who are listening to these public proceedings which must  
7 make decisions in this respect. And hence we feel that  
8 we are entirely justified in withdrawing the opening  
9 statement as a means of removing any burden which might  
10 exist. We, as I say, do not agree that such a burden does  
11 exist as a result of the opening statement but in any  
12 event it is removed by having withdrawn it. So it is our  
13 position, Mr. Chairman, that withdrawing this opening  
14 statement that we have no burden to introduce evidence in  
15 this proceeding with regard to electric power supply.

16 CHAIRMAN JENSCH: Very well. Is there any other  
17 matter that we should consider before we recess?

18 The Board will endeavor to issue an order in  
19 reference to the discovery situation in the early part of  
20 next week. And hopefully all matters in connection therewith  
21 can be completed before we resume on July 13th. If there  
22 is nothing further I guess that this is about as far as we  
23 can go today. Nobody has any other evidence to adduce at  
24 this time? This conference-type of hearing and evidentiary  
25 session is now concluded and we will recess to reconvene

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