

ORIGINAL

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF NEW YORK

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GENERAL PUBLIC UTILITIES CORPORATION,	:	
JERSEY CENTRAL POWER & LIGHT COMPANY,	:	
METROPOLITAN EDISON COMPANY and	:	
PENNSYLVANIA ELECTRIC COMPANY,	:	
	:	
Plaintiffs,	:	
	:	
-against-	:	80 Civil 1683
	:	(R.O.)
THE BABCOCK & WILCOX COMPANY and	:	
J. RAY McDERMOTT & CO., INC.,	:	
	:	
Defendants.	:	

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Deposition of The Babcock & Wilcox
Company, by BERT MERRIT DUNN, taken by
Plaintiffs, pursuant to Notice, at the
offices of Kaye, Scholer, Fierman, Hays &
Handler, Esqs., 425 Park Avenue, New York,
New York, on Wednesday, March 11, 1981, at
9:50 o'clock in the forenoon, before Charles
Shapiro, a Certified Shorthand Reporter and
Notary Public within and for the State
of New York.



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Also Present:

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SHIGERU TAZAWA

KERSTEN OSCHMAN

LOU LANESE

DAVID TAYLOR

* * *

1
2 IT IS HEREBY STIPULATED AND AGREED by
3 and among the attorneys for the respective
4 parties hereto that the sealing, filing and
5 certification of the within deposition be,
6 and the same hereby are, waived; and that the
7 transcript may be signed before any Notary
8 Public with the same force and effect as if
9 signed before the Court.

10 IT IS FURTHER STIPULATED AND AGREED
11 that all objections, except as to the form
12 of the question, are reserved to the time of
13 trial.

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15 * * *
16

17
18 B E R T M E R R I T D U N N, having
19 been first duly sworn by the Notary Public,
20 was examined and testified as follows:

21 EXAMINATION BY MR. SELTZER:

22 Q State your full name, please.

23 A Bert Merrit Dunn.

24 Q By whom are you presently employed?

25 A Babcock & Wilcox.

1

2

Q What is your office address?

3

A Post Office Box 1260, Lynchburg, Virginia,
24505, I think.

5

Q What is your title at B&W today?

6

A Manager, Emergency Core Cooling System
Analysis.

8

Q To whom do you report?

9

A Mr. Doug Lee.

10

Q What is his title?

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A Manager, Plant Engineering Section.

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Q Could you take a look at GPU Exhibit

75 and tell me if you are familiar with its contents?

A To some level.

2 Q Which, if any, parts of GPU Exhibit 75
3 did you prepare?

4 A I prepared the section in the memo which
5 is entitled "Resume of Bert M. Dunn."

6 Q Did you supervise or review the
7 preparation of any other parts of GPU Exhibit 75?

8 A The exhibit was developed within my unit in
9 the fashion that I am the Manager of that unit.
10 I was aware that -- or caused in some fashion for
11 the exhibit to be generated.

12 Q You caused the exhibit to be generated,
13 is that what you said?

14 A I was contacted at the time that
15 such an exhibit was asked for and gave instructions
16 to people to generate such an exhibit.

17 Q Who contacted -- I'm sorry, I didn't
18 mean to interrupt.

19 A No, that's all right.

20 Q Who contacted you to request the
21 preparation of materials which are in this exhibit?

22 A I am not sure.

23 Q Who is Geer?

24 A I believe this refers to -- well, it's
25 almost a certainty that this is Tom Geer. He is

1
2 a Senior Engineer within the unit.

3 Q Within your unit?

4 A Yes.

5 Q Whom did you ask to prepare the materials
6 in GPU Exhibit 75 marked for identification?

7 A I requested that such material be prepared
8 by the unit through one of my Supervisors, Mr. W. L.
9 Bloomfield.

10 Q Did Bloomfield show you drafts of these
11 materials before they were submitted to others at
12 B&W?

13 MR. SELTZER: Let me revise that.

14 I will withdraw that.

15 Q Before GPU Exhibit 75 was sent on
16 from your unit to others at B&W, did you review
17 it?

18 A I don't believe so.

19 Q Did you review parts of it other
20 than your resume?

21 A I don't believe so.

22 Q When is the first time that you saw
23 a complete copy of GPU Exhibit 75?

24 MR. FISKE: I take it that question
25 excludes preparation for this deposition?

1
2 MR. SELTZER: No. If that was the
3 first time that he saw it, I think that is
4 relevant.

5 MR. FISKE: Well, I will let it go.

6 A I don't think I can give a definite answer
7 to that.

8 Q Do you believe that you saw a copy
9 of this document prior to your preparation for
10 your deposition today?

11 A Yes, I believe I would have seen a copy
12 of this document.

13 Q As the Unit Manager, is this the
14 kind of thing which you would receive?

15 A Not necessarily.

16 Q What is your understanding of the
17 reason why you were asked to have this prepared?

18 A I don't think I can give a definite answer
19 to that question either.

20 Q What is your understanding of what
21 you were being asked to prepare?

22 A A short synopsis of unit capabilities, areas
23 of technical and engineering expertise with backup
24 resumes for key personnel.

25 Q Is it your understanding that other

2 Unit Managers were being asked to prepare similar
3 documents?

4 A Again, I don't think I can give a definite
5 answer to that question.

6 Q Can you give a general answer to the
7 question?

8 A For lack of cover information on this
9 exhibit, I believe this relates to a work prepared
10 in support of a foreign contract. However, it
11 may relate to work prepared in support of some
12 other contracts and without being able to
13 identify which, I couldn't give you a response
14 to that question.

15 Q Has your unit prepared material such as
16 this on other occasions?

17 A In general, materials such as this, has been
18 prepared from time to time.

19 Q In what way does material such as
20 this support a contract?

21 A I think that could be very difficult. This
22 material seems to be associated with qualifying
23 for a contract more than supporting it directly.

24 Q How does it qualify for a contract?

25 A It's a statement of capabilities, what we

1
2 envision we can do, and a statement of the
3 qualifications of the key personnel within the
4 unit describing their experience and capabilities
5 to either supervise or perform the work.

6 Q Is it your understanding that this
7 document or documents like this are submitted
8 to prospective customers of B&W?

9 A I think that would generally be true.

10 Q So this is a selling piece to advise
11 a prospective customer of the capabilities of
12 a unit at B&W, is that right?

13 A Articles and documents like this have
14 a use in the sales area.

15 Q And I take it from time to time you have
16 been aware that other units at B&W have prepared
17 similar documents for use in the sales function
18 at B&W, is that right?

19 A Aware? In a definite sense, no.

20 In a general sense, yes.

21 Q You have used this distinction between
22 aware in a definite sense and aware in a general
23 sense at least three times this morning.

24 What is the distinction that you are
25 drawing in your mind between those two concepts?

1
2 A Well, I believe I would fully expect other
3 units and organizations within B&W to be preparing
4 these types of documents. Any specific knowledge
5 that one unit or another unit had done so is not
6 something that I recall at this time or would
7 even have chosen to recall.

8 Q In other words, you are saying it
9 would be consistent with B&W's practice as you are
10 aware of it to ask other units to prepare similar
11 documents?

12 A You have used the term "B&W's practice."
13 I would rather say that if my unit was asked to
14 generate such a document, it is likely that
15 other units were as well.

16 Q Are you ever called upon to make a
17 presentation as part of a B&W sales effort?

18 A On occasion.

19 Q In your presence are other Managers
20 also called upon to participate in a sales
21 presentation?

22 A They have been.

23 Q On any of those occasions have
24 they had materials such as GPU Exhibit 75 with
25 them?

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A I don't know.

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Q Do you maintain a chronological file of correspondence and memos which you have created?

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A Yes.

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Q For how many years have you kept chronological copies of such correspondence and memos?

10

A Approximately five years.

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Q Is that roughly the period that you have been the Manager of the ECCS Unit?

13

A That is correct.

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Q Where is that file maintained?

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A My secretary maintains that file in a file cabinet associated with her work station.

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Q Do you know whether your chronological file has been produced in this litigation?

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A No. I do not know whether it has been produced. I believe production refers to an interaction between the law firms involved.

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Q Do you know whether you turned over your chronological file to any lawyer working for B&W for the purpose of its review and possible production in this lawsuit?

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A Yes, I believe I did.

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Q In the chronological file do you just have everything that you have written and had typed up in date sequence without any other logical subdivisions?

A That would be correct, the date sequence would be approximate.

Q What types of reports do you prepare on a periodic basis?

A Administrative reports.

Q Is that a statement or a question?

A That's a statement.

Pay reports, time-charging reports, and progress reports.

Q Could you identify, please, each type of administrative report which you periodically prepare?

A Well, I think I did identify that. That should have been a -- the pay reports and the time charging reports are a subdivision of the word "administrative report."

Q Are those the only types of administrative reports which you prepare periodically?

1
2 A On a periodic basis, yes.

3 Q Could you describe by title or other
4 specific description each of the types of
5 progress reports which you prepared periodically?

6 A We prepare one progress report, and its title
7 is Progress Report for ECCS Analysis for the Month
8 of, whatever, whatever month is appropriate.

9 Q Do you prepare one every month?

10 A Yes.

11 Q Have you been preparing a monthly
12 progress report for the full time that you
13 have been the Manager of the ECCS Analysis Unit?

14 A I have either prepared the report or
15 assigned the report to other individuals in my unit.

16 Q On occasions when you assign it to
17 others in your unit to prepare, do you review it
18 before it is submitted? Do you generally review
19 it before it is submitted?

20 A If possible.

21 Q In other words, if you are out
22 of the country when the report is prepared and has
23 to be submitted, you would not review it before it
24 is submitted?

25 A That is correct.

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Q Have you recently been out of the country?

A Yes.

Q How recently?

A A week before last.

Q Where were you?

A Germany.

Q Where?

A The Mannheim area.

Q Is that a trip that you took in connection with B&W's participation in the design of the Mannheim Kaerlich plant?

A The word would be Muelheim-Kaerlich.

Q I stand corrected.

A No.

Q What was the purpose of your trip?

A Participation in a design effort associated with the Neupotz plant.

Q Is that a plant being designed by B&W?

A No.

Q What, if any, involvement does B&W have in the design of the Neupotz plant?

A We provide certain services to the designer on a contract basis.

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Q Who is the designer?

3

A Brown Boveri Reactorate.

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Q Is B&W's participation in the design of the Neupotz plant different from B&W's participation in the design of the M-K plant?

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A Yes.

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Q How would you distinguish the two?

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A In either case B&W -- B&W's participation was by contract from Brown Boveri Reactorate and the degree of participation was decided by Brown Boveri Reactorate and differs point to point.

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Q To the best of your knowledge, in which plant was B&W's participation in the design more extensive?

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MR. FISKE: Mr. Seltzer, let me interrupt for a minute. I am not sure that Mr. Dunn should be required to testify about what is an ongoing B&W project in 1981.

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I think this is obviously involving ongoing business at B&W literally two years after the accident and I at least have some question as to whether this is appropriate.

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2 MR. SELTZER: I don't think that I am
3 going to get very involved or very
4 interested in the 1981 German plant. I am
5 more interested in finding out Mr. Dunn's
6 familiarity with work done on the M-K plant.
7 I just wanted to get a scale factor by
8 comparison with the Neupotz plant.

9 MR. FISKE: Your basic question is
10 what does Mr. Dunn know about B&W's work on
11 the M-K plant?

12 MR. SELTZER: And I think I was asking
13 whether it was his understanding that B&W
14 was involved more extensively in the design of
15 the M-K plant than it is in the Neupotz plant.

16 MR. FISKE: You may answer that
17 general question.

18 THE WITNESS: Which one?

19 MR. FISKE: The one he asked.

20 THE WITNESS: The last one?

21 Q Yes, please.

22 A Your question was is it my understanding
23 that B&W was more extensively involved in the
24 design of the M-K plant than it is in the design
25 of the Neupotz plant, and I don't think I am

qualified to answer your question.

Q Do you have any impressions on the subject?

A Yes.

Q What is your impression?

MR. FISKE: I think I am going to object to the form of the question, Mr. Seltzer. I don't object if you ask Mr. Dunn what he knows about the B&W participation in the M-K plant.

MR. SELTZER: He has interjected that he doesn't think he is qualified. I don't think that his sense of whether he is qualified or not is dispositive.

I want to know whether he has a mental impression of whether B&W is doing more design work for the Neupotz plant than it did for the M-K plant, and if he has such a mental impression, I would like it.

MR. FISKE: You can't just ask him what he knows about B&W's work on the M-K plant, and we can get on to something else.

I mean --

MR. SELTZER: I would rather ask my

question than yours.

MR. FISKE: Go ahead.

A Excuse me. Can I have the question again?

Q Is it your understanding or mental impression that B&W is doing more design work, that B&W did more design work for the M-K plant than it is envisioned they will do for the Neupotz plant?

A In response to that particular question and treating it as my mental impression, the answer is that we would -- we will have participated more in the M-K situation than in the -- we will in the Neupotz situation.

Q To what extent, if any, were you involved in any aspects of design or analysis for the M-K plant?

A As I mentioned, B&W participates as a subcontractor to Brown Boveri Reactorate. Thus I have a question as to whether that can be called direct participation in the design of the plant.

Q Let me clarify something. I am not here to split hairs with you.

If B&W makes a contribution to the design of a plant -- that is what I am concerned

1
2 with; I don't care whether it is through a joint
3 venture with BBR as a subcontract with BBR -- if
4 the purpose of B&W's work is to contribute to the
5 design of the M-K plant, that is what I am seeking.

6 A Well, let me continue with my previous answer.

7 We participated in counseling BBR personnel
8 on the performance of licensing evaluations for
9 the emergency core cooling systems; we provided
10 personnel for the performance of those calculations
11 from time to time; we performed calculations to
12 determine hydraulic loadings which result from a
13 loss of coolant accident.

14 We performed stress evaluations of
15 certain components. I do not know exactly which
16 components.

17 Q Were they components in the reactor
18 coolant system?

19 A I would believe so.

20 We may have participated in stress
21 evaluations of components outside the reactor
22 coolant system or attached to it as well.

23 And in general under a licensing agreement, the
24 Muelheim-Kaerlich plant is an adaption of
25 the Babcock 205 plant.

1
2 Q As an adaption of the B&W 205 plant,
3 are many of the generic analyses performed for
4 the 205 series of plants applicable to the
5 Muelheim-Kaerlich plant?

6 A I really can't answer that question.

7 Q What does the term "topical report"
8 mean to you?

9 A A topical report is basically a stand-alone
10 document describing a design or an analysis or a
11 verification of a design and most frequently has
12 generic implications.

13 Q It's a fact, isn't it, that B&W has
14 prepared topical reports which have generic
15 application to the 205 FA plants, isn't that right?

16 A That is correct.

17 Q It's also correct, isn't it, that
18 some of those topical reports which have generic
19 application to the 205 FA plants would have
20 applicability to the Muelheim-Kaerlich plant?

21 A I don't think I can answer that.

22 Q Do you have any reason as you sit here
23 today to believe that none of the 205 topical
24 reports would be applicable to the M-K plant?

25 A No.

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Q As you sit here today, are you aware that there are generic analyses done by your unit for the 205 plant that are applicable to the Muelheim-Kaerlich plant?

A I don't think there are any.

Q To what extent is the Muelheim-Kaerlich plant an adaptation of B&W's 205 plant?

A The basic system configuration, that is, the main components of the RCS, are similar in orientation and design. The specific differences would not be something I would have in my memory.

Q Have you ever reviewed any of the specific differences in emergency core cooling of the Muelheim-Kaerlich plant as contrasted with 205 FA plants built by B&W in the United States?

A Yes.

Q What are the principal differences?

A The principal differences in the ECCS systems are the number of systems employed and their injection capabilities for emergency water and the injection locations.

Q In what way are the number of emergency core cooling systems different?

A The Babcock 205 plant has two levels of

1
2 redundancy, generally for the emergency
3 core cooling system, whereas the Muelheim-Kaerlich
4 plant has four levels of redundancy generally.

5 Q When you talk of two levels of
6 redundancy, do you mean that there are two loops
7 or trains that serve an identical function?

8 A Yes. The term "level" may have been wrongly
9 applied.

10 I would mean two trains of systems.

11 Q The fact that the Muelheim-Kaerlich
12 plant has four trains for some ECCSS compared
13 to two trains in your United States 205 plants
14 does not mean that they have four times the injection
15 capability, isn't that correct?

16 I'm sorry, it doesn't mean that
17 they have twice the injection capability, does it?

18 A Well, to answer the question, we would
19 have to have the specific flow rates for the
20 trains, and I don't remember the specific values
21 for Muelheim-Kaerlich.

22 Q How many trains of high-pressure
23 injection do you have on the standard 205 plant
24 in the United States?

25 A Two.

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Q How many are there in the M-K plant?

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A Four.

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Q Are you aware that the gallons per minute pumped by each of the four high-pressure injection pumps at the M-K plant is less than the GPM capacity of the high-pressure injection pumps on your 205 plants in the United States?

9

A Excuse me?

10

THE WITNESS: Could we --

11

MR. FISKE: Just read the question

12

back again, please.

13

(Question read by the reporter.)

14

MR. FISKE: The first part of the

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question you talked about GPM pumps, and

16

the second half you talked about capacity.

17

Do you mean those as the same thing?

18

MR. SELTZER: Yes.

19

A There is no unique answer to the question.

20

Q Is that because some of the 205 plants

21

in the United States have capacities that are

22

different from other plants?

23

A No.

24

Q Why is there no unique answer?

25

A Because the head capacity service for the

two systems is different in head range to the extent where the answer would vary.

Q What do you mean by that?

A Depending on system pressure, there may be more capacity for injection in the Babcock plant per train or less capacity per train.

Q So you are saying, to your knowledge, the pressure that exists in the reactor coolant system will make a difference in whether the M-K plant's high-pressure injection pump capacity is greater or less than the high-pressure injection pumps on the domestic 205 plants?

A In terms of the number of GPM of water injected, yes, per train.

Q Is the head different in the M-K design versus domestic 205 design?

A The shut-off head is different.

Q Which has a higher head?

A Well, the term "head" is a measurement of what the pump is doing in any given flow condition, so it's not a unique number. The shut-off head was higher for the domestic or Babcock 205 than the shut-off head for the Muelheim-Kaerlich plant.

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2 Q You said that the injection locations
3 were different in the domestic 205 design
4 compared to the Muelheim-Kaerlich plant.

5 Could you explain that?

6 A Yes.

7 The injection locations for high-
8 pressure injection in the domestic 205 plant are
9 in each of the cold legs between the pump discharge,
10 the reactor coolant pump discharge, and the
11 reactor vessel.

12 For the Muelheim-Kaerlich plant, the
13 injection locations are in two of the four cold
14 legs between the reactor coolant pump discharge
15 and the reactor vessel, and two locations directly
16 into the reactor vessel at a location somewhat
17 above the nozzle belt area.-- or rather somewhat
18 to the top side of the nozzle belt area.

19 Q Are there any other differences
20 in location of injection systems?

21 A Yes. For the core flood systems and the
22 low-pressure injection systems, the Muelheim-Kaerlich
23 injection locations are the same as for the
24 high-pressure injection systems locations.

25 For the domestic Babcock 205, the

core flood tanks and low-pressure injection, pump injection locations are directly to the reactor vessel in the upper region of the nozzle belt area.

Q Is it correct that the locations of safety injection in the domestic 205 plants are similar to the location of the safety injection nozzles in B&W's 177 plants?

A Yes, that's correct.

You did use the word "similar," didn't you?

Q Yes.

In the U.S. plants of 177 design, is it correct that the high-pressure injection is into the cold legs between the reactor coolant pump discharge and the vessel?

A Yes.

Q Has your unit been involved in the design or the review of the design for the control of safety injection systems on the M-K plant?

A No.

Q Are you familiar with the modes under which the safety injection systems are actuated in the M-K plant?

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A To an extent.

Q To what extent does high-pressure injection automatically get reset if it has been manually terminated on the M-K plant?

A I am not sure of that. As a matter of fact, I don't think I know whether it does or does not.

Q Are you familiar with the extent, if any, to which domestic B&W plants have provisions for automatic resetting of high-pressure injection actuation?

A No, I am not.

Q Do you know of any domestic B&W plant that has provision for automatic resetting of the high-pressure injection?

A Not one way or another. I think the answer would require some knowledge about the conditions under which an automatic reset would be called for. I don't think you are being unique in your question.

Q I'm sorry, I didn't understand what you just said. What did you mean?

A Well, I don't think it's unique to just say "automatic resetting."

1
2 Q I am talking about automatic resetting
3 after there has been a manual bypassing of
4 high-pressure injection.

5 Are you familiar with any U.S. plant
6 supplied by B&W that has such a feature?

7 MR. FISKE: I guess by "automatic"
8 you mean in all cases?

9 MR. SELTZER: Not in all cases; in
10 any case.

11 A I don't know whether it automatically resets
12 or not.

13 Q Which plant are you thinking about?

14 A The general plant, the generic 177, for
15 example.

16 Q In contrasting the number of safety
17 injection systems on the 205 plants in the United
18 States with the M-K plant in Germany, you said that
19 the 205 plants in the United States had two redundant
20 trains whereas the M-K plant had four, is that
21 right?

22 A Yes, I believe that's correct.

23 Q It's also correct that the 177 plants
24 have two redundant trains, isn't that right?

25 A That is correct.

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Q Are you familiar with the fact, do you know that the M-K plant has a design which automatically closes the block valve if the pilot-operated relief valve sticks open?

A No, I am not familiar with that fact.

Q Have you ever heard that?

A I am not sure.

Q Have you ever read a report that compares the design and performance of the M-K plant with Three Mile Island Unit 2?

A No.

Q Are you aware that such a report was prepared shortly after the Three Mile Island accident?

A I may be.

Q You don't know that the M-K plant has a provision for automatically closing the block valve?

A That's correct.

Q Does a feature such as that automatic closing of a block valve enter into the type of ECCS analysis that your unit does?

A Not normally.

Q When would it?

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2 A If we were asked to do a specific evaluation
3 of some aspect or event which involved those
4 systems, then there is a possibility that
5 we would have to simulate such a function.

6 Q When you perform ECCS analyses on the
7 177 plants -- and I take it you and your unit
8 have done such analyses, have you not? --

9 A We have.

10 Q -- isn't it a fact that you have to
11 make some assumption about whether the pilot-operated
12 relief valve is opened or closed? For some of
13 those analyses?

14 A It would have to make some sort of assumption
15 as to whether it was opened or closed for all
16 such analyses.

17 Q In some of those analyses do you have
18 to make an assumption about whether the valve
19 has functioned correctly in opening and then
20 closing and reseating?

21 A Within the ECCS analysis performed generally,
22 that is, in the support of the license for the plant,
23 the answer would be no.

24 Q Why did you answer my previous
25 question and say yes, you do have to make an

1
2 assumption about whether it is open or closed?

3 MR. FISKE: Well --

4 MR. SELTZER: I am confused.

5 MR. FISKE: Your first question was
6 whether they had to make an analysis as to
7 whether it was opened or closed. The second
8 one was whether it functioned properly
9 in opening and closing.

10 Aren't those two different questions?

11 Q Is your counsel focusing on what has
12 made the difference between your answer to the
13 first question and your answer to this last
14 question?

15 A I don't know. You will have to ask him.

16 Q You are the one who answered. He
17 is suggesting a reason why the answers are
18 different.

19 MR. FISKE: I am suggesting why the
20 two questions are different.

21 MR. SELTZER: The question is whether
22 what you have fastened on, Mr. Fiske, is what
23 has made the difference for the witness in
24 giving the two different answers.

25 MR. FISKE: Do you understand where

1
2 you are?

3 THE WITNESS: No, but let me try
4 something.

5 The licensing spectrum for support of
6 the plant does not normally involve accidents
7 in the area of the PORV and the assumption is
8 typically made that the PORV is closed.

9 BY MR. SELTZER:

10 Q Are you saying that in most analyses
11 you don't concern yourself with the possibility of
12 a loss of coolant accident in the area of the
13 pilot-operated relief valve?

14 MR. FISKE: I think it would be
15 helpful, Mr. Seltzer, at this point to
16 clarify for Mr. Dunn whether you are talking
17 about analyses they are making now or whether
18 you are talking about analyses that they made
19 before the Three Mile Island accident.

20 Q Let's talk up to the day of the
21 Three Mile Island accident.

22 A O.K.

23 THE WITNESS: Would you repeat that,
24 please.

25 MR. SELTZER: I will restate it.

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Q In the analyses that you were doing prior to the Three Mile Island accident, did you analyze breaks occurring in the steam space at the top of the pressurizer?

A The analysis performed for support of the license up to the time, for example, of the accident at Three Mile Island considered such events as being bounded in results by accidents in other locations of the system.

Q Did you have any analyses that were not done for licensing purposes that specifically studied breaks at the top of the pressurizer?

A Yes.

Q Did you have any analyses that studied a pilot-operated relief valve failing open?

A Specific analysis?

Q No, general. I don't care.

A As I mentioned, we considered it from the standpoint of satisfying --

Q I am not talking about bounded analysis. I am talking about a specific analysis that would be of a break the size of a stuck-open pilot-operated relief valve in the location at the top of the pressurizer.

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2 A I am not sure.

3 Q Before the Three Mile Island
4 accident, did you study a break involving a stuck-open
5 code safety valve?

6 A I believe so.

7 Q What, if any, records could you
8 check to determine whether, prior to the Three Mile
9 Island accident, there had been ECCS analysis
10 work done on a stuck-open pilot-operated relief
11 valve?

12 A We would have to check the company filing
13 system.

14 Q How would you do that? In other words,
15 where in the company file would you look to
16 determine whether there had been analysis of a
17 stuck-open pilot-operated relief valve?

18 A I would have to check almost the entire
19 filing system for ECCS analysis, and I would do that
20 within my own copies of the files for the time
21 period covering between now and approximately five
22 years ago.

23 For the early time period, I would have
24 to check the -- probably the entire filing system,
25 and I would do that probably by talking to individuals

1
2 to attempt to get some recollection as to where
3 such a record might be.

4 Q How extensive are the files that you
5 would look through for the past five years?

6 A Approximately two full lateral files, about
7 four foot wide and five shelves high.

8 Q Are the reports that are filed there
9 maintained in any subject order?

10 A No.

11 Q Are they filed by customer?

12 A No.

13 Q How are they filed?

14 A They are filed by number, a number, an
15 arbitrary number assigned by Document Control, the
16 same number which would appear in the company filing
17 records.

18 Q Do you keep an index to these
19 materials?

20 A The procedure that my unit uses is to have,
21 in general, a lead package for a given overall
22 subject which would contain references to the
23 supporting documentation.

24 Q Where is the lead package kept?

25 A In the same file cabinets, and in the company

1
2 records.

3 Q Would it be practical to review the lead
4 packages to try to find this analysis or possible
5 analysis of a pilot-operated relief valve sticking
6 open rather than reviewing all of the file drawers?

7 A Such a review would eliminate some of the
8 supporting calculations.

9 Q I take it your unit has done analyses
10 of loss of coolant accidents in which part of the
11 sequence of events is the opening of the
12 pilot-operated relief valve, is that right?

13 MR. FISKE: Could we again just clarify
14 whether you are asking about before or --

15 MR. SELTZER: Let's talk about before
16 the accident.

17 MR. FISKE: O.K.

18 A The question was --

19 MR. FISKE: Let him read it back.

20 MR. SELTZER: I will restate it.

21 Q Prior to the Three Mile Island
22 accident, it's correct, is it not, that your unit
23 has done loss of coolant analyses for transients
24 in which one of the sequence of events, one of the
25 events in the sequence was the opening of the

1
2 pilot-operated relief valve?

3 A I don't believe so.

4 Q Are you saying that you have never
5 done a loss of coolant analysis of a transient
6 in which one element of the transient would be
7 the normal opening of the pilot-operated relief
8 valve when it was tripped by the pressure set
9 point for the pilot-operated relief valve?

10 A Yes, I think that's true. Other than the
11 bounding nature of the evaluations I mentioned
12 earlier.

13 MR. FISKE: I think we better make
14 clear what that "true" means. It's true that
15 you have not?

16 THE WITNESS: I believe it is true
17 that we have not performed a specific
18 evaluation of an event which included the
19 operation of the PORV.

20 Q Your unit analyzes loss of coolant
21 accidents, is that right?

22 A That is correct.

23 Q Were there any other units at B&W,
24 prior to the Three Mile Island accident, that had
25 responsibility for analyzing loss of coolant

1
2 accidents?

3 A If by analyzing loss of coolant accidents
4 we mean verification of the capability of the ECCS
5 system to mitigate the consequences of the
6 accident, we are the prime organization. There are
7 some supporting calculations provided to us or
8 to licensing by other people.

9 Q It is correct, is it not, that the
10 pilot-operated relief valve, prior to the Three
11 Mile Island accident, had a pressure set point that
12 was below the pressure set point for reactor
13 scram, isn't that right?

14 A The pressure set point was below one of the
15 pressure set points for reactor scram.

16 Q It is correct, is it not, that one
17 of the design purposes of the pilot-operated
18 relief valve was to relieve pressure in sufficient
19 time to keep the reactor on line or critical, isn't
20 that right?

21 A For certain situations, that is correct.

22 Q For any of the loss of coolant
23 accidents which you studied before the Three Mile
24 Island accident, was it a possibility that the
25 pilot-operated relief valve would have been called

1
2 upon to open prior to the occurrence of the loss
3 of coolant accident?

4 MR. FISKE: I am sorry. I don't think
5 I understand that question.

6 MR. SELTZER: What part of it don't
7 you understand?

8 MR. FISKE: I don't understand the
9 part about the possibility. In other words,
10 are you asking him did he analyze a
11 situation which assumed that that was going
12 to happen? I mean, anything I guess is a
13 possibility.

14 MR. SELTZER: I don't know whether
15 anything is a possibility. I wouldn't go that
16 far.

17 I am talking about the discrete loss of
18 coolant accidents that Mr. Dunn or his unit
19 were analyzing and asking him whether, in that
20 limited universe, there were accidents which
21 were such that there could have been a
22 preceding rise in reactor coolant system
23 pressure sufficient to actuate the pilot-
24 operated relief valve.

25 MR. FISKE: Well, I guess if you just

1
2 change "could have been" to "was," I
3 wouldn't have any problem.

4 MR. SELTZER: We have established
5 that the pilot-operated relief valve is a
6 pressure-tripped valve.

7 MR. FISKE: Right.

8 MR. SELTZER: I am now asking whether,
9 in any of the loss of coolant accidents that
10 Mr. Dunn and his unit studied, was there any
11 event in which the pressure would rise to the
12 point of tripping the pilot-operated relief
13 valve.

14 A Within the spectrum of evaluating
15 licensing purposes, in four of our plants up to
16 the time of Three Mile Island, the accident at
17 Three Mile Island, the LOCAs studied were all
18 depressurization events, other than the decision
19 on bounding.

20 Q Did you ever analyze any loss of coolant
21 accident which was preceeded by a rise in pressure?

22 A I am not sure.

23 Q Now, you limited your next to last
24 answer by saying that in the analyses done for
25 licensing purposes.

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2 My question wasn't limited to analyses
3 done for licensing purposes, so let me ask you, for
4 the rest of the universe, in any analyses done,
5 whether for licensing purposes or other,
6 did you study any event in which there would have
7 been a prior rise in pressure before the
8 depressurization loss of coolant accident?

9 A Yes.

10 Q When was that analysis done?

11 A That was an evaluation of the events that
12 occurred at Davis-Besse on September 24th, I believe,
13 1977.

14 Q Who performed that evaluation?

15 A The evaluation was more in the form of a
16 review, and I was at least one participant.
17 I can't tell you accurately the remaining people.

18 Q What is your best recollection
19 of who the other people were who were involved
20 in that review or evaluation?

21 A I would have to use the word "probable."

22 Q Please do.

23 MR. FISKE: Well, I think --

24 MR. SELTZER: Bob, let me suggest that
25 this is a discovery deposition. If there

1
2 were other people that were probably
3 involved, I could ask them. If they said
4 they weren't involved, we are not going to
5 say that impeaches Mr. Dunn's credibility.

6 MR. FISKE: I will let this go.

7 A Mr. Bob Jones and Mr. Ed Anderson.

8 Q Both of them are in your ECCS Analysis
9 Unit?

10 A That's correct.

11 Q How soon after the September 24, 1977
12 transient was this review or evaluation done?

13 A Within a few weeks.

14 Q What was the purpose of the review or
15 evaluation?

16 A To determine or satisfy ourselves that
17 our techniques for evaluating loss of coolant
18 accidents would have predicted the events of that
19 day.

20 Q Predict what particular events?

21 A Well, the events important to the codes'
22 predicted capability such as the force of the
23 pressure history, the movement of fluid within the
24 system.

25 Q The occurrence of saturation?

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2 A Yes.

3 Q The rise in pressurizer water level?

4 A Yes.

5 Q Did any of the participants in that
6 review or evaluation prepare any writing
7 which documented the review?

8 A I don't believe we prepared any writing.

9 Q Was any hand, pencil or typewriter put
10 to paper during any of that review or evaluation?

11 A Not that I can recall.

12 Q Was this all done cerebrally?

13 A Oh. No, I would not expect it to have been
14 done cerebrally, but I was thinking in terms of
15 reports or something.

16 MR. FISKE: Maybe we can just take five
17 minutes.

18 MR. SELTZER: Sure.

19 (Recess taken.)

20 BY MR. SELTZER:

21 Q I think that either I wasn't as articulate
22 as I was trying to be or there was a failure of
23 communication. I had asked you whether anybody had
24 done anything with paper as part of this review or
25 evaluation you had.

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2 I meant issue a final report, and I
3 meant to include any work, any writing, calculating
4 that was done as part of the review or evaluation,
5 and I think before the messenger came in, you were
6 about to say that there was some writing that was done
7 as part of this review, is that correct?

8 A Well, I think it would be very hard to do
9 it all in your head, so I suspect there must be
10 some back-of-the-envelope at least or notepad work.

11 Q Did you do any scratching or writing
12 as part of that review?

13 A I believe I can give the same type of answer
14 I gave before, that I don't think I could have
15 reduced the information entirely in my head and
16 and I must have.

17 Q Did you do any computer analysis?

18 A No.

19 Q You didn't run any codes?

20 A Not at that time.

21 Q Have you subsequently run codes on the
22 Davis-Besse September 24 transient?

23 A No.

24 Q Have you subsequently modeled any
25 variation of the September 24 transient?

1
2 A After Three Mile Island, in support of the
3 operating B&W plants, there were evaluations performed
4 of stuck-open PORV accidents; some of those would
5 be considered, I believe, possible variations of
6 the situation on September 24th.

7 Q Who was the catalyst for the review or
8 evaluation that was done by your unit shortly
9 after the September 24 Davis-Besse transient?

10 A I believe I was.

11 Q Why did you believe that such a review
12 or evaluation should be performed?

13 A As we became aware of the particulars of the
14 accident, the events were such that it appeared they
15 could provide us with some insight or measurement of
16 our LOCA evaluation techniques in that the plant
17 had in a fashion undergone a loss of coolant accident
18 for some period of time and that fluid was being
19 ejected from the system through the PORV.

20 Q I see.

21 Are you saying that the opportunities
22 for empirical comparison of observed results
23 or predicted results isn't that frequently available?

24 A In a full-scale commercial power plant that's
25 true, the opportunities are extremely limited.

1
2 I think I can recall three such opportunities.

3 Q What were the other opportunities?

4 A A pump seal failure -- this was a long time
5 ago -- at the Oconee plant, and the Three Mile
6 Island accident itself.

7 Q What did you conclude about the
8 predictability of your codes in light of the review
9 and evaluation done of the September 24th transient?

10 A That the codes would have predicted the
11 trends and the results of that day very well.

12 Q How had you first heard of the Davis-Besse
13 September 24 transient?

14 A At this time I do not recall.

15 Q How do you know that the results
16 empirically observed agreed with what your codes
17 would have predicted without running the codes?

18 A We applied our experience and knowledge of
19 how the codes worked to determine for ourselves that
20 the codes involved the necessary simulations
21 of physical phenomena to predict those results.

22 Q Are you saying that you did not actually
23 run the code to determine whether the quantity of
24 fluid that would escape was the same as the quantity
25 of fluid that actually escaped at Davis-Besse?

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A That is correct.

Q Are you also saying that you didn't run the code to see if the changes in temperature and pressure that were actually observed would have been the same as the changes actually observed at Davis-Besse?

A That is correct.

Q How difficult would it have been to run the codes to check for those benchmarks?

A It would have probably required about two manmonths of engineering time and on the order of two to three computer hours in terms of expense.

Q Did you give any consideration at the time to running the codes to see whether the predicted results would agree with the empirical results?

A I don't recall whether I considered that or not.

Q Did you run the codes on the Oconee event that you referred to earlier?

A No.

Q Did you run the codes on the Three Mile Island event?

A Yes.

Q Many times?

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A Within the Three Mile Island situation data became available of varying degrees of accuracy at different times and the analysis involved some minor iteration but basically we ran the codes one time.

Q In 1977 how would you characterize your relationship with Joe Kelly

A Well, Joe is a member of the Babcock & Wilcox staff --

Q I had heard that.

A -- who we worked with on occasion; we knew who he was. I suppose that's about it.

Q He was in Plant Integration, is that correct?

A That's correct.

Q Where was his office in relation to your office? In the same building?

A Yes.

Q How close?

A I would guess within 50 yards.

Q On the same floor?

A Yes.

Q Joe Kelly testified before the President's Commission, I believe, and Mr. Fiske can correct me

1
2 if I am wrong, that you were at a meeting which
3 he addressed shortly after the Davis-Besse
4 transient; there was a meeting attended by
5 approximately 30 B&W employees; Kelly described to
6 that meeting some of the parameters of the September
7 24, 1977 transient.

8 Do you recall attending such a meeting?

9 A Yes.

10 Q Do you recall hearing at that meeting a
11 description of the September 24 transient?

12 A Yes.

13 Q I asked you earlier if you could recall
14 when you first heard of the sequence of events
15 that occurred at Davis-Besse I on September 24,
16 1977, and you said you couldn't recall.

17 Do I understand your testimony to be
18 that you believe you may have heard of the Davis-Besse
19 transient prior to the meeting with some 30 B&W
20 employees in attendance?

21 A Yes.

22 Q From whom do you believe you first
23 learned of the September 24 transient?

24 A I cannot recall.

25 Q Do you have any probablies in your

2 mind as to who it probably was?

3 A No.

4 Q Why does it stick in your mind that
5 you heard of the September 24 transient and
6 what had occurred prior to the meeting of
7 approximately 30 B&W employees?

8 MR. FISKE: I think he said he may have
9 heard.

10 Q Well, do you believe that you did hear
11 of it before the large meeting was convened?

12 A Yes.

13 MR. SELTZER: Could you read back
14 the question that I had pending.

15 (Question read by the reporter.)

16 A I don't know.

17 Q What do you recall hearing about the
18 September 24 transient prior to the meeting
19 attended by some 30 employees of B&W?

20 A I believe I knew or heard, rather, a general
21 description of the events that the PORV had stuck
22 open, that the operators had at some time diagnosed
23 that or closed the blocked valve for other than a
24 diagnostic reason, and that the plant had been
25 managed to acceptable conditions; I suppose I

1
2 would describe them as a cold shutdown thereafter.

3 Q Do you believe that you heard before
4 the meeting attended by some 30 employees that
5 there had been a manual termination of high-pressure
6 injection between the time when the PORV, as you
7 called it, stuck open, and the block valve was
8 stuck shut?

9 A I can't be very positive on that but I believe
10 I heard that before.

11 Q When did it first occur to you that that
12 was a seriously wrong thing for the operators to have
13 done, namely, terminate high-pressure injection
14 while the pilot-operated relief valve was stuck open?

15 A Well, I have described my feelings on that
16 as being that I felt the action was inappropriate.

17 Q I will accept that.

18 A And your question was when did I first
19 start feeling that way?

20 Q Yes.

21 A I would have to say it was within the same
22 general time frame. We are talking about a few days.

23 Q In other words, at or about the same
24 time that you were first informed that they had
25 terminated high-pressure injection in response to

1
2 a rising pressurizer level with the pilot-operated
3 relief valve failed open, you formed a belief that
4 that was an inappropriate operator action, is that
5 true?

6 MR. FISKE: You added one ingredient
7 in that question, Mr. Seltzer, that Mr. Dunn
8 hasn't testified to before.

9 MR. SELTZER: What, the rise in
10 pressurizer level?

11 MR. FISKE: Yes.

12 Q Is the fact of rising pressurizer level
13 something that you learned at or about the same point
14 in time?

15 A Well, certainly I was presented with that
16 in the meeting in Training Room B.

17 Q Is it correct that at or about the
18 time you learned that the operators had terminated
19 the high-pressure injection with the pilot-operated
20 relief valve failed open, you formed the belief
21 that that was an inappropriate operator action?

22 A Very early in hearing about the Davis-Besse
23 incident, and in becoming cognizant of the
24 system conditions and the sequence of events, I
25 formed an opinion that, based on that sequence of

1
2 events and the plant conditions that occurred,
3 because of that sequence of events, the termination
4 of high-pressure injection was in my view
5 inappropriate.

6 Q Since that period a few days after
7 the September 24 Davis-Besse transient, you have
8 discussed the operator response during that
9 transient, namely, the termination of high-pressure
10 injection with others at B&W, have you not?

11 A That is correct.

12 Q Have you found anybody at B&W who
13 believed that the operator response in terminating
14 high-pressure injection was an appropriate response?

15 A I assume we are talking about at that time?

16 Q No, ever; from September '77 until
17 March 11, 1981. Have you ever talked with anybody
18 at B&W about the operator's termination of
19 high-pressure injection and learned that that B&W
20 employee thought that that was the appropriate
21 operator response?

22 A I don't think I did. I couldn't testify
23 positively to that question.

24 Q Can you recall any B&W employee who
25 thought that was the appropriate operator response?

1
2 A No, not positively.

3 Q Do you believe, without being able
4 to recall a specific name, that there are one or
5 more B&W employees who expressed the view that
6 that was an appropriate operator response, namely,
7 terminating high-pressure injection at Davis-Besse
8 on September 24?

9 MR. FISKE: Can I hear that again,
10 please?

11 (Record read by the reporter.)

12 MR. FISKE: I will object to the form of
13 the question.

14 You may answer it.

15 A I believe that there were people at B&W
16 that felt that that was an appropriate response.

17 I do not want to testify as to the
18 expressions they made.

19 Q Is your belief that there were people
20 who held the view that this was an appropriate
21 operator response based on hearing these people
22 make a statement to that effect?

23 A Based on these people making statements as
24 to how close they were to that effect. They
25 generated that impression in my mind, but I cannot

1
2 remember the specific words.

3 Q O.K. So the substance of what
4 they were saying conveyed to you the meaning that
5 they believed the Davis-Besse operators had made
6 an appropriate response in terminating high-pressure
7 injection while the PORV was still releasing
8 fluid, is that correct?

9 A Previous to this particular question you have
10 not qualified it as to the time during which the
11 PORV was opened. The answer to your question is
12 still yes.

13 Q The PORV was opened and unblocked for
14 approximately 21 minutes on September 24, 1977,
15 right?

16 A That's my understanding.

17 Q During part of that time it was
18 relieving steam and during part of that time
19 it was relieving a two-phase mixture of steam and
20 water, right?

21 A I believe that's correct.

22 Q What is your understanding as to
23 why the people who were expressing the view that
24 it was appropriate to terminate high-pressure
25 injection held the view that it was appropriate

1
2 to have terminated high-pressure injection?

3 MR. FISKE: Well, I will object to
4 that, Mr. Seltzer, unless it is based on
5 something they said.

6 MR. SELTZER: That's all I want,
7 what they said.

8 Q And what your understanding is of
9 what they were saying.

10 A I don't know the answer to your question.

11 Q Did you ever discuss with any of those
12 individuals why they believed it was appropriate
13 to have terminated high-pressure injection with
14 the pilot-operated relief valve open and unblocked?

15 A I don't believe so.

16 MR. FISKE: Off the record.

17 (Discussion off the record.)

18 (Whereupon, at 11:55 o'clock a.m. a
19 lunch recess was taken.)
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AFTERNOON SESSION

(2:30 p.m.)

B E R T M E R P I T D U N N, resumed.

EXAMINATION (Continued)

BY MR. SELTZER:

Q Mr. Dunn, I am sure you are aware that your testimony this afternoon continues to be under oath, are you not?

A Yes.

Q How were you advised that there was going to be a meeting in Training Room B at which the September 24, 1977 Davis-Besse transient would be discussed?

A I don't recall.

Q How many people do you recall by name spoke at the meeting?

A How many people do I recall by name?

Q Yes.

A That spoke at the meeting?

MR. SELTZER: Let me rephrase that more felicitously.

Q Can you identify the people who spoke at that meeting, please?

A I can identify one person who spoke at that

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meeting.

3

Q Other than Joe Kelly, can you identify

4

anyone else?

5

A No.

6

Q Kelly spoke at the meeting?

7

A Kelly spoke at the meeting.

8

Q How long was the meeting?

9

A I can't say I can remember. I expect it to

10

have been about one hour, maybe an hour and a half.

11

Q What time of the day, approximately, was

12

the meeting held?

13

A I believe it was in the morning, but

14

I am not sure of that.

15

Q Without recalling specifically the name

16

of anyone else who spoke, do you recall whether

17

anybody other than Kelly spoke at the meeting?

18

A Yes.

19

Q How many other than Kelly addressed

20

the meeting?

21

A Other than in an introductory fashion, two

22

people, I believe.

23

Q Had the other two people been at

24

Davis-Besse?

25

A Excuse me. I gave you the wrong answer before.

1
2 In addition to Kelly, other than
3 introductory, one person.

4 Q Had the other person who gave
5 remarks that were not introductory been at
6 Davis-Besse since the 9/24 transient?

7 A That was my understanding.

8 Q Who, if you recall, gave the
9 introductory remarks?

10 A I don't recall. I am not even sure there
11 was one, but there might have been.

12 Q Do you have a "probably" recollection
13 of who the other person besides Kelly was who
14 gave remarks that were not introductory?

15 A Yes.

16 Q Who was that?

17 A Fred Faist.

18 Q And is it correct that Fred Faist
19 was the B&W Site Representative assigned to
20 Davis-Besse Unit I at that time?

21 A I don't know whether that's correct or not.
22 That was I think my understanding of the
23 person that spoke in addition to Joe.

24 Q Who else, as best you can recall,
25 do you believe attended the Training Room B session

1
2 that we have been talking about?

3 A Well, there were I guess in my opinion on
4 the order of 40 or 50 people in the meeting.
5 I think I could recall a few of them.

6 Q Could you tell me those, please?

7 A I think the only person I can remember
8 that was there for sure was Bob Jones, who was on my
9 staff. I think I would have to say of other
10 individuals who I might name that I could well
11 expect them to have been there, and that might
12 be the reason I would identify them as opposed to
13 bothering to remember any faces at the meeting.

14 Q Do you remember that John MacMillan was
15 there?

16 A Not for sure, but it occurred to me as a
17 possibility that I remember him being there.

18 Q Rather than asking you right now to recall
19 specific people, how would you describe generally
20 the composition of the 40 to 50 people who were
21 in attendance?

22 A They were generally Lead Engineers in various
23 functional areas or Unit Managers or Section Managers.

24 Q From what sections or departments at B&W
25 were these Lead Engineers, Unit Managers, and Section

1
2 Managers?

3 A As a characterization, they were from the
4 sections responsible for more or less overall
5 plant activities such as there was a -- or I remember
6 there being a concentration of my comrades in the
7 Plant Design Section, Nuclear Service Representatives.

8 Q Were there people from other sections
9 in the Engineering Department?

10 A I would expect so. I don't know.

11 Q What other sections are there in
12 the Engineering Department other than the Plant
13 Design Section at that time in 1977?

14 A To give you a total answer, I would have
15 to look up an organization chart.

16 There was the Plant Design Section,
17 the Fuels Section, Auxiliary Equipment, Licensing
18 and Component Engineering and -- we'll, what I called
19 Auxiliary Systems may have in fact had a different
20 title and might be more than one section.

21 Q Among the 40 to 50 people who were
22 in Training Room B that day, were there people
23 from among the other sections of Engineering?

24 A Well, being, as I said, I don't remember
25 individuals that I think I would have to say I don't

1
2 know.

3 Q You said that there were people from
4 Nuclear Service.

5 Were they generally people of the
6 Section Manager and Unit Manager level?

7 A That was my impression, and in response
8 to your question, you asked me to characterize
9 the type of people --

10 Q Yes.

11 A -- that were there, not who was there.

12 Q Do you know Norm Elliott?

13 A Yes.

14 Q What is his title?

15 A I don't know.

16 Q Do you know what he does?

17 A Yes.

18 Q What do you think he does?

19 A He is responsible for the training
20 operation at B&W.

21 Q Did you think he is the Manager of
22 Training?

23 A He is a Manager. I don't know whether it's
24 called Training or something else.

25 Q Do you remember if Norm was at the

1
2 Training Room B meeting?

3 A No, I do not.

4 Q If I referred to this as an ad hoc
5 meeting, would you understand what I meant?

6 A Well, I have a definition of ad hoc meeting
7 that I use.

8 Q How many other times can you recall
9 in your tenure at B&W an ad hoc meeting such as
10 this Training Room B session for 40 or 50 people
11 being convened?

12 MR. FISKE: Without trying to be
13 technical, I am not sure Mr. Dunn has
14 yet characterized this as an ad hoc meeting.

15 Q Would you agree with the characterization
16 that this meeting to discuss the Davis-Besse
17 transient on September 24, 1977 was an ad hoc
18 meeting?

19 A No.

20 Q How would you characterize it?

21 A I would use the term meeting just by itself.

22 Q Was it convened for any purpose other
23 than to discuss the Davis-Besse transient?

24 A Not to my recollection.

25 Q Was it a meeting that had been

1
2 previously called to discuss anything else and
3 the meeting was rearranged to discuss just
4 Davis-Besse?

5 A I don't know the answer to that. I don't
6 think so.

7 Q Can you recall any other occasion
8 on which B&W assembled 40 to 50 Lead Engineers,
9 Unit Managers, and Section Managers to discuss a
10 transient that had just occurred at a B&W plant?

11 A I can't recall.

12 Q Did you take any notes at that meeting?

13 A I don't believe so.

14 Q Do you recall observing other people
15 taking notes?

16 A Not one way or the other.

17 Q As best you can recall, could you
18 state what information was imparted by the speakers
19 at the Training Room B meeting?

20 A Yes. As best I recall, there was an
21 introduction to the sequence of events which would
22 go something like at this time this occurred and
23 at this following time this other function
24 occurred, et cetera, et cetera, like that.

25 There was also a presentation of plot

2 or graphical data relative to the evolution of
3 the system parameters such as pressure, perhaps
4 pressurizer level, hot and cold leg temperatures,
5 and that's all I could fairly characterize at this
6 time.

7 Q You recall an introduction to the
8 sequence of events and a presentation of plot
9 or graphical data.

10 A Well, more or less a statement of the sequence
11 of events than the word "introduction."

12 Q O.K.

13 What, to the best of your recollection,
14 did Mr. Fred Faist present?

15 A I am not sure I can recall what difference
16 there was in the presentation between Faist -- if
17 in fact he was the other presenter -- and Mr. Kelly.

18 Q I believe you testified this morning
19 that at this meeting one of the speakers described
20 the termination of high-pressure injection, is
21 that right? Is it right that one of the speakers
22 described the termination of high-pressure injection?

23 A Well, I don't think I testified to that this
24 morning, and I don't believe I could testify now
25 whether that particular issue was presented at

1
2 the meeting in Training Room B.

3 Q You testified this morning that you
4 believe you learned before the Training Room B
5 meeting that there had been an inappropriate
6 termination of high-pressure injection during
7 the Davis-Besse transient, right?

8 A Subject to the exact words we had this
9 morning, I think that's correct (indicating).

10 Q Was there any conversation or discussion
11 from the floor at the Training Room B meeting?

12 A There were questions and answers.

13 Q I am not asking you to speculate
14 but I am trying to refresh your recollection.

15 Since you have testified that you
16 believe you learned prior to the Training Room B
17 meeting that the high-pressure injection had been
18 terminated, don't you agree that if the speakers at
19 the Training Room B session had not brought out the
20 fact that high-pressure injection had been terminated,
21 you are a forthcoming-enough individual that
22 you would have raised it from the floor at the
23 Training Room B meeting?

24 MR. FISKE: I am going to object
25 to that question, Mr. Seltzer.

1
2 I don't think you should answer that,
3 Mr. Dunn. That's totally hypothetical.
4 I don't care if you ask him did he ask the
5 question, if you want to put that question to
6 him.

7 MR. SELTZER: My associate, Mr. MacDonald,
8 says his notes indicate that Mr. Dunn testified
9 this morning that he did hear at the Training
10 Room B meeting that the high-pressure injection
11 had been terminated so we will stand on that
12 sworn testimony.

13 MR. FISKE: Well, I don't know whether
14 we stand on it or not.

15 MR. SELTZER: We will see when the
16 reporter gives it back to us.

17 MR. FISKE: Fine, whatever is in the
18 record is in the record.

19 Q You said Jones from your section was at
20 the Training Room B meeting, right?

21 A Yes.

22 Q From your unit, I should say.

23 A From my unit.

24 Q Also your section.

25 A That's true.

1
2 Q At that time Dr. Roy was the head of the
3 Plant Design Section, right?

4 A Yes, I believe that's correct; that is
5 correct.

6 Q In fact, Roy continued to be head of
7 that section until August '78 when he was
8 succeeded by Al Womack, right?

9 A Yes.

10 I don't know that I remember the
11 date particularly, but about -- in that time
12 frame Dr. Roy was replaced by Allen Womack.

13 Q What is the first action that you recall
14 you took in response to the information that the
15 operators had terminated high-pressure injection
16 at Davis-Besse at a time that you believed was
17 inappropriate for them to have terminated high-pressure
18 injection?

19 A The first action that I took was to
20 announce to a few individuals that I felt that
21 the termination had been inappropriate and to have
22 a discussion with them to see if they could give
23 me an answer.

24 Q An answer to what?

25 A Perhaps as to why it might have been

1
2 appropriate or a reason for the termination.

3 Q You began your answer by saying you
4 announced to a few individuals that you believed
5 the termination had been inappropriate.

6 Who, to the best of your recollection,
7 were the individuals?

8 A Well, you asked for my first action and
9 I am not sure I can give you an exact sequence,
10 but it would have been Joe Kelly and Eric Swanson
11 and probably Bob Jones.

12 Q What did you perceive was Kelly's
13 reaction to your statement that the termination
14 was inappropriate?

15 A I think at this first stage I can't
16 characterize what I perceived about the -- those
17 reactions.

18 Q Did you have to do any convincing
19 of Kelly, Swanson, and Bob Jones before they
20 agreed -- if they ever agreed -- that the operator
21 action was inappropriate?

22 A As per Mr. Jones I would say no.

23 As per Mr. Kelly I believe I had
24 to outline my reasoning.

25 And for Eric, about the same.

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Q You had to outline your reasoning to Eric Swanson?

A Yes.

Q What was your reasoning?

A Primarily that successful mitigation of small break loss of coolant accidents involves, in general, the activation of the emergency core cooling systems early in the transient and, particularly under licensing assumptions, the maintenance of the high-pressure injection system in the on status throughout the transient, and I did not feel that, at the time that high-pressure injection had been interrupted at Davis-Besse, the fluid conditions within the primary system were sufficiently -- excuse me -- warranted the termination of the high-pressure injection.

Q Are you saying that the temperature and pressure parameters didn't warrant high-pressure injection termination?

A Yes. Very close to that.

Q What have I left out?

A Well, my view at that time, I was feeling that the termination should be based on liquid inventory which would be then, and is today

1
2 measured by pressure and temperature sensors.

3 Q Am I coming close to paraphrasing
4 you if I say that maintenance of a sufficient
5 liquid inventory is the key to effective core
6 cooling?

7 A For certain small breaks, the maintenance of an
8 effective inventory is crucial to the mitigation
9 of the accident without unacceptable clad
10 temperature excursions.

11 Q For larger breakdowns, you have
12 to maintain an effective inventory of water also?

13 A For at least a certain break size range
14 within the what we generally call the large
15 break spectrum an inventory of water other than a
16 few hundred cubic feet cannot be maintained
17 throughout the transient.

18 Q Before you outlined your reasoning
19 to Eric Swanson, was it your belief that Swanson
20 was not immediately of the impression that
21 terminating high-pressure injection at Davis-Besse
22 had been inappropriate?

23 MR. FISKE: I am going to object to
24 the questions about Mr. Dunn's belief, Mr.
25 Seltzer.

1
2 Q I am asking, just to make it clear,
3 for the impression that you drew from your
4 conversation with Eric Swanson. I am not asking
5 for a Freudian psychoanalysis of Eric Swanson.

6 MR. FISKE: I think you ought to ask
7 him what the conversation was, what was said
8 between them, and see where we go from there.

9 Q Did Swanson say things to you which
10 led you to believe or made you understand that
11 Swanson didn't share your immediate reaction that
12 terminating high-pressure injection had been
13 inappropriate?

14 MR. FISKE: Well, I will object to the
15 form of that question.

16 MR. SELTZER: All right, I will press
17 it.

18 Q You may answer.

19 MR. FISKE: I think you ought to ask
20 him what the conversation was, Mr. Seltzer.

21 MR. SELTZER: First I want to find out,
22 focus in on a particular part of the
23 conversation, and by asking whether Swanson
24 by his words imparted that meaning, and then
25 I will ask can he tell me in words or substance

1
2 what Eric Swanson said.

3 MR. FISKE: I think you ought to ask
4 him what the conversation was about the
5 termination of HPI.

6 Q I'm sorry, I believe I am entitled to
7 ask whether Swanson said things to you which you
8 understood meant that Swanson believed the action
9 in termination might have been appropriate; that's
10 my question.

11 MR. FISKE: I don't think there is a
12 basis for that question unless you identify
13 what it is that was said. Otherwise, you
14 are just asking Mr. Dunn for an impression.

15 MR. SELTZER: I am asking if Swanson
16 said things which -- from which he drew that
17 meaning --

18 MR. FISKE: I understand what you are
19 asking.

20 MR. SELTZER: I press it.

21 MR. FISKE: I think you should ask
22 him what Swanson said.

23 MR. SELTZER: You stated an objection
24 to my form and you could be right, Bob
25 Fiske, I won't quibble with you on whether

1
2 you are a better lawyer than I am.

3 MR. FISKE: That is not the question.

4 MR. SELTZER: I am entitled under the
5 Federal Rules to press the question until
6 you think you want to go to Judge Owen on a
7 direction not to answer. I am just not going
8 to get into a long debate with you on that
9 anymore.

10 MR. FISKE: I think the proper procedure
11 in questions like this is to ask him whether
12 or not he had a conversation, what was said
13 in the conversation, and you have to do that
14 before you can start asking him about a lot
15 of impressions and beliefs.

16 I don't know why you don't ask him the
17 direct question. You haven't done that since
18 the beginning of the deposition. You are
19 asking him about his belief, what he thinks
20 probably happened. You asked him about this
21 impression or that impression, and it seems
22 to me there is a very simple way to ask these
23 questions and get the direct evidence.

24 I think I am going to insist on that
25 procedure.

1
2 BY MR. SELTZER:

3 Q What section was Swanson in in the fall
4 of '77?

5 A Plant Design Section.

6 Q In which unit?

7 A Integration.

8 Q So both he and Kelly reported to
9 Karrasch at that time?

10 A Yes.

11 Q Did you have more than one conversation
12 with Swanson in which you and he discussed whether
13 the operator action had been appropriate at
14 Davis-Besse?

15 A I don't recall whether we had more than one
16 discussion of whether the operator action had
17 been inappropriate at Davis-Besse.

18 Q What were the circumstances under
19 which you met with Eric Swanson to discuss
20 the operator action taken at Davis-Besse?

21 A I am not sure I know what you mean by
22 "circumstances."

23 Q Did you walk into his office, did he
24 come into your office, something like that; did you
25 make an appointment with him and said "Eric, I think

1
2 there is something important that we ought to
3 sit down and discuss"? That's what I mean by what
4 were the circumstances that led to your meeting
5 with him.

6 A Well, Eric Swanson and myself are very
7 good friends, and I expect there was no particular
8 telephone conversation setting up a meeting, but
9 it would have been in either his or my office
10 with a statement very much probably to the extent
11 that you have just iterated.

12 MR. FISKE: I will object to any
13 testimony by Mr. Dunn as to what probably
14 was said. I think if we are talking about
15 a conversation, I think we ought
16 to have a recollection of the conversation,
17 not speculation as to what was probably said.

18 MR. SELTZER: Well, I would like
19 whatever your best recollection is. I don't
20 want you to be scared into a Watergate-don't-
21 recall kind of a posture by your attorney.

22 MR. FISKE: I am --

23 MR. SELTZER: Let me finish what I have
24 to say.

25 MR. FISKE: Not when you make a comment

1
2 like that.

3 MR. SELTZER: I'm sorry.

4 MR. FISKE: I said I would allow him
5 to testify as to his recollection. That's
6 what I urged you to ask him from the
7 beginning. I don't want you to ask him, and
8 I don't think he should have to testify as to
9 what somebody probably said at a meeting.

10 MR. SELTZER: If as he is sitting here
11 today he has a belief that somebody, to the
12 best of his recollection, said something and
13 he is not 110 percent sure, I am still
14 entitled to his best recollection.

15 MR. FISKE: Absolutely.

16 MR. SELTZER: And probably --

17 MR. FISKE: And --

18 MR. SELTZER: Please, let me finish.
19 You insist on interrupting me.

20 This man is an engineer. He understands
21 the notion of probability. I think there
22 are very few things in this world that people
23 can recall happening with a one hundred percent
24 assurance that it happened exactly as they
25 sit here and recall it, and when an engineer

1
2 says he believes something probably
3 happened, he might be thinking it was 99
4 percent probable that it happened, and if his
5 recollection is that something probably
6 happened in a way that he can recall it and
7 testify to it, I want that probable recollection
8 and I don't think it means that it is
9 speculation that he believes it probably
10 happened this way.

11 I think that when a man is under oath
12 and is testifying to what he believes
13 probably happened, he means that there is a
14 high likelihood that what he is recalling
15 is what is his best recollection of what
16 happened that day, and I am entitled to his
17 best recollection of what happened that day.

18 MR. FISKE: There is no point of getting
19 into a long semantics discussion about what
20 you mean by "probability" and whether Mr. Dunn
21 as an engineer is any more likely to have a
22 better definition of probability than anybody
23 else is.

24 The simple question is what does
25 he remember about the conversation, and I

1
2 have said it from the beginning and will
3 continue to say that he should tell you and
4 tell everybody what he remembers about the
5 conversations, but not to speculate as
6 to whether something might have happened,
7 possibly happened, probably happened or not.

8 If he remembers he should testify
9 about it.

10 MR. SELTZER: I will agree with you,
11 if it is just pure speculation, I don't want
12 that. If he thinks it might have happened,
13 in most cases a "might" is too speculative,
14 but if he believes it probably happened and
15 has a high degree of probability so that
16 his best recollection is that it did happen,
17 I want to know that, and I am entitled to his
18 best recollection, and I think that it is not
19 right and I believe that people went to
20 jail for instructing witnesses that you
21 should say you don't recall when in fact
22 witnesses do have a best recollection of an
23 event.

24 MR. FISKE: I will start where -- I come
25 back where I started.

1
2 I think that's a highly inappropriate
3 comment. No one has told Mr. Dunn not to
4 say he doesn't recall if he does recall.

5 All that I am saying is that if he
6 doesn't recall, he should say so and not make
7 a guess or speculate as to what the
8 percentage of probability is that it may or
9 may not have happened.

10 I think you and I are saying exactly
11 the same thing except you are mischaracterizing
12 it.

13 MR. SELTZER: I hope that I am
14 mischaracterizing you.

15 MR. FISKE: I feel you are. I think
16 you may know you are.

17 BY MR. SELTZER:

18 Q The issue, if we can return to it, was
19 your conversation with your good friend, your very
20 good friend, Eric Swanson, that took place either
21 in his office or your office. It is a conversation
22 that you testified took place after the Davis-Besse
23 transient at which you discussed the appropriateness
24 of the operator action in terminating high-pressure
25 injection.

1
2 Can you recall approximately when,
3 in relation to the September 24 transient, you
4 and Eric Swanson first had that discussion?

5 A Within a few days.

6 Q Is it your best recollection that you
7 had that conversation after the Training Room B
8 meeting?

9 A I don't recall whether it was before or after.

10 Q Was it after you had heard that the
11 operators had terminated high-pressure injection
12 at Davis-Besse?

13 A Yes, sir.

14 Q You had testified that you believed
15 you had probably said something like what I had
16 said, namely, that this is something serious that
17 we ought to discuss.

18 Is that your best recollection,
19 that you said words in substance or effect like
20 that to Eric?

21 A I believe I would rather say that I raised
22 the issue.

23 Q What issue?

24 A Of termination of high-pressure injection
25 with Mr. Swanson.

1
2 Q What, as best you can recall, did you
3 say to him and did he say to you in words or
4 substance?

5 A In substance I said that I felt that the
6 termination of high-pressure injection under the
7 conditions present at Davis-Besse was inappropriate.
8 In substance, at this time, I do not recall what
9 Eric's response was.

10 Q Did there come a time either that
11 day or subsequently when Eric Swanson agreed with
12 you that the operator action at Davis-Besse had
13 been inappropriate?

14 A I don't know.

15 Q You mean to this day you have no
16 knowledge whether Eric Swanson has ever agreed
17 that the operator action at Davis-Besse was
18 inappropriate?

19 A That is correct.

20 Q How many times would you say you have
21 talked with Eric Swanson since September 1977?
22 Hundreds of times?

23 MR. FISKE: You mean about anything?

24 MR. SELTZER: Yes.

25 A I would expect -- excuse me. I would say well

1
2 over a thousand.

3 Q Do you talk with him frequently about
4 subjects that relate to each of your business at
5 B&W?

6 A Not frequently.

7 Q You have testified earlier that
8 Swanson was one of the people who gave you a
9 suggestion as to whom you should circulate your
10 February 1978 memoranda regarding the
11 suggestion on when it would be appropriate to
12 terminate high-pressure injection.

13 MR. FISKE: Just a minute. Where was
14 that testimony?

15 MR. SELTZER: In the Rogovin Commission.

16 MR. FISKE: Yes. I will make a
17 suggestion; in fact, a request, that if you
18 refer to prior testimony of Mr. Dunn's,
19 that you either read it to him or show it to
20 him so we know what you are talking about.

21 Q Isn't it a fact that you asked
22 Eric Swanson for a suggestion as to whom in Nuclear
23 Service it would be appropriate for you to send
24 copies of your February memoranda?

25 A It may be.

1
2 Q Your February 9 and February 16
3 memoranda addressed what you called the serious
4 concern over the termination of high-pressure
5 injection following the initial stage of a
6 loss of coolant accident, isn't that right?

7 A That's correct.

8 Q At the time that Eric Swanson was giving
9 you a suggestion on to whom to send your February
10 memoranda, hadn't Swanson indicated to you in
11 words or substance that he agreed by that time
12 that the operator action in terminating high-pressure
13 injection following the initial stage of a loss
14 of coolant accident was inappropriate?

15 A To answer your question, we would have to
16 agree that it is a fact that he provided me the
17 list of people to send it to and participated in that.

18 Q At page 71 in your President's
19 Commission testimony, line 6, you said, "I think
20 what I did here was to ask advice from either
21 Mr. Kelly or Mr. Swanson about what people in Nuclear
22 Service I should try and kick in the tail, so to
23 speak."

24 Do you have any firmer recollection
25 today whether it was either Mr. Kelly or Mr. Swanson

2 whom you got advice from regarding whom to kick
3 in the tail?

4 MR. FISKE: I think before you
5 answer that question -- Mr. Seltzer, this
6 incident illustrates the desirability of
7 following a procedure where you do in fact
8 show Mr. Dunn the testimony rather than
9 just paraphrasing it to him because I believe
10 he stated previously that he had testified
11 before Mr. Rogovin that he had consulted
12 Mr. Swanson and I think it's apparent now
13 that he didn't give that testimony before
14 Mr. Rogovin or Kemeny.

15 What he said was he asked advice of
16 either Mr. Kelly or Mr. Swanson so I think
17 that just sort of inadvertent mistake indicates
18 that it's a desirable procedure to refer to
19 the actual testimony at the time. But I am
20 certain you can answer the question now,
21 Mr. Dunn.

22 A Well, I am lost.

23 MR. FISKE: Would you like to have
24 it read back?

25 Q The question is today do you recall

1
2 whether you asked Joe Kelly or Eric Swanson
3 or both of them who deserved your advice on
4 sending out information to customers on proper
5 use of high-pressure injection?

6 A I recall asking one of them.

7 Q Do you recall which one?

8 A No.

9 Q Subsequent to your initial conversation
10 with Eric Swanson on the question of appropriateness
11 of terminating high-pressure injection at
12 Davis-Besse, do you think that you had subsequent
13 conversations with Mr. Swanson regarding when it is
14 appropriate to terminate high-pressure injection?

15 A Yes, I think I had subsequent conversations.

16 Q In any of those subsequent conversations
17 did Mr. Swanson say anything which indicated
18 that he had agreed with you that the termination
19 of high-pressure injection at Davis-Besse had
20 been inappropriate?

21 A Not to my present recollection.

22 Q Did he say anything which indicated
23 that he believed the termination was appropriate?

24 A Not to my present recollection.

25 Q Were any of your subsequent conversations

1
2 with Swanson regarding termination of high-pressure
3 injection conversations which took place prior to
4 your sending out your now famous February 1978
5 memoranda?

6 MR. FISKE: I will object to the form.

7 Q Do you know which memoranda I am
8 referring to?

9 MR. FISKE: You may answer.

10 A Excuse me, would you give me the date on
11 the memorandum again?

12 Q The famous memoranda that I am
13 referring to are February 9, 1978, Mr. Dunn to
14 Mr. Taylor; and February 16, 1978, Bert Dunn to
15 Jim Taylor.

16 MR. FISKE: The questions are just
17 as good without the adjectives.

18 A As I understand your question, it is were
19 some of the discussions that I held with Mr. Swanson
20 prior to the issuance of my February 9th and, I
21 believe, February 16th memoranda. The answer is yes.

22 Q That wasn't the question, thought.

23 You told me that you had had one
24 conversation that was within a few days after the
25 Davis-Besse transient.

1
2 Now I am asking you whether you had
3 additional conversations regarding the
4 appropriateness of terminating high-pressure
5 injection with Eric Swanson prior to your writing
6 the February memoranda.

7 A Yes.

8 Q Where were those conversations held?

9 A Somewhere on our operating floor.

10 Q To the best of your recollection,
11 how many additional conversations do you believe
12 you had with Eric Swanson between the first one
13 and the date that you sent your February memoranda?

14 MR. FISKE: You mean on the subject
15 that we have been talking about?

16 MR. SELTZER: Yes.

17 Thanks.

18 A I am not sure.

19 Q Is it a subject that you recall
20 discussing from time to time with him, in other
21 words, not just one additional time but several
22 additional times?

23 A I would place it in two or three.

24 Q Two or three additional after the first
25 one? You have to say something so he gets it on

1

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the record.

3

A Oh.

4

Yes.

5

Q Was there an evolution in your

6

discussions, in other words, did the ideas that

7

you were discussing mature at all during your

8

successive conversations with Eric Swanson

9

between the first one in September that you

10

have already described and the succeeding ones

11

prior to the February memoranda?

12

A I don't believe so.

13

Q What do you recall telling Swanson

14

in the subsequent conversations?

15

A In substance I was requesting that

16

Integration take on a review of my concerns or

17

cause to be formed a forum for the review of my

18

concerns.

19

Q Did you make that same recommendation

20

to Joe Kelly who was also in the Integration

21

Unit?

22

A I believe so.

23

Q Did you make that same recommendation

24

to anyone else in the Integration Unit during the

25

period between September 1977 and February 1978?

2 A Not to my present knowledge.

3 Q What was Eric Swanson's response to
4 your suggestion that Integration proceed with your
5 idea and create a forum for its further discussion?

6 A I don't recall Eric Swanson's response.

7 Q What was Joe Kelly's response to that
8 same suggestion?

9 A In substance it is my belief that Joe
10 agreed with me.

11 Q He agreed that a Plant Integration
12 Unit ought to create a forum for the wider
13 discussion of your position, is that right?

14 A Or pursue the direct resolution.

15 Q Resolution of what?

16 A My concerns.

17 Q What needed to be resolved regarding
18 your concerns?

19 A In the process of any form of concern
20 for design work, there are several steps, one step
21 being identification.

22 Q Is that the first step?

23 A Usually.

24 Q Identification of what?

25 A Whatever you are dealing with.

1

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Q I don't understand.

3

You say this is a design process.

4

5

6

Let's talk specifically about your concern following the Davis-Besse transient. The first step is identification of what?

7

A Of the concern.

8

9

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11

12

13

Q So that the first step is identifying that there is a basis for concern over whether operator termination of high-pressure injection following the onset of a loss of coolant accident is an appropriate response, is that right?

14

15

16

A I think the first step is identifying that there is a concern. The second step is identifying that there is a basis for it.

17

Q What are the next steps?

18

19

A Establishing what must be done to eliminate the concern and finally doing it.

20

(Recess taken.)

21

BY MR. SELTZER:

22

23

24

25

Q I think you were describing to me that Joe Kelly had agreed with you on both need for a forum and the need to resolve your concerns, and when I asked you what you meant by "resolve

1
2 your concerns," you said there were four steps.

3 Do you recall that testimony?

4 A Yes.

5 Q What, if anything, did Joe Kelly say
6 he would do to attempt to get Integration
7 to resolve your concerns?

8 A I don't recall specifically what he
9 said he would do.

10 Q Generally what was the substance
11 of what he said.

12 A I was left with the impression that Joe
13 would pursue the process.

14 Q The process of getting Integration
15 to resolve your concerns, is that right?

16 A Getting Integration to resolve them or getting
17 a larger forum of people to resolve them if that
18 turned out to be necessary.

19 Q You said you were left with that
20 impression.

21 Is that an impression that was created
22 by what Joe Kelly had said to you?

23 A In part.

24 Q In addition to what he said, what
25 else was done to create that impression?

1
2 A I believe Mr. Swanson said something to that
3 effect, or to that substance to me as well.

4 Q Namely, Eric Swanson said to you in
5 words or substance that he would take steps
6 to get Integration to resolve your concerns or
7 to create a wider forum if that was necessary to
8 resolve your concerns?

9 A No.

10 Q What, what did he say?

11 A That Joe Kelly would do that.

12 Q You mean Eric Swanson said Joe Kelly
13 would do it? Is that what you are telling me?

14 A In substnace Eric said that. Or rather
15 I believe Eric said that to me in substance.

16 Q What is your best recollection about
17 what either Eric or Joe said Joe would do to
18 resolve the concerns within Integration?

19 A I think you already asked me questions
20 very similar to that.

21 MR. FISKE: Off the record.

22 (Discussion off the record.)

23 A I responded with that it was my impression
24 that they would pursue the issue.

25 Q All right. I didn't mean to be redundant

1
2 even though Bob gives me credit for intending to
3 be redundant.

4 What did you understand was the
5 process that they were going to try to instigate
6 within Integration to get your concerns
7 resolved?

8 A I did not understand the process.

9 Q Did they tell you anything that they
10 were going to do, any of the specifics of what
11 they were going to do?

12 A No.

13 Q Did either Joe Kelly or Eric Swanson
14 say that they would take the matter up with
15 Mr. Karrasch?

16 A Not to my knowledge.

17 I don't know whether they did or did
18 not say that.

19 Q Prior to February 1978, did you have
20 any discussions with Bruce Karrasch about
21 your concerns over premature termination of
22 high-pressure injection?

23 A I can't recall now whether I did or didn't.
24 I don't think so.

25 Q Did Swanson or Kelly indicate that

1
2 either of them would present your concerns to
3 Mr. Karrasch?

4 A I don't recall.

5 Q Is Karrasch somebody that you
6 felt some distance from, some difficulty in
7 talking to?

8 A No.

9 Q In the fall of 1977?

10 A No.

11 Q During the fall of '77 do you believe
12 that you had conversations on any subject of
13 technical interest with Mr. Karrasch?

14 A Excuse me, was the question do I believe
15 that I had conversations with Mr. Kelly on any
16 subject of technical origin?

17 Q Technical interest.

18 Between September of 1977 and February of
19 '78.

20 MR. FISKE: How about does he recall?

21 MR. SELTZER: Fine.

22 A No, I do not recall.

23 Q Karrasch was the Unit Manager of
24 Integration at the same time that you were the
25 Unit Manager of ECCS Analysis, right?

2 A Yes.

3 Q During the fall of '77 did you and
4 he attend meetings together?

5 A Yes.

6 Q Did you attend meetings of the Plant
7 Design Section between September '77 and
8 February of '78?

9 A Not that I recall.

10 Q Did Dr. Roy convene periodic meetings
11 of the Plant Design Section in or about the
12 period between September '77 and February of '78?

13 A Not that I recall.

14 Q What types of meetings do you recall
15 attending with Bruce Karrasch between September
16 '77 and February of '78?

17 A At least staff meetings.

18 Q Whose staff?

19 A Don Roy's.

20 Q How frequently did Don Roy convene staff
21 meetings?

22 A Approximately once a month.

23 Q Did all of the Unit Managers in the
24 Plant Design Section attend those staff meetings?

25 A Generally.

1

2

Q Who else was invited to attend?

3

A Staff meetings would also be attended by Don's secretary.

4

5

Q So these were meetings of the Managers in the Plant Design Section and the secretary of the Plant Design Section?

6

7

8

A And Don Roy's secretary.

9

10

Q And Roy was the head of the Plant Design Section, right?

11

A That is correct.

12

Q And these were monthly meetings, right?

13

A Approximately.

14

Q A moment ago when I asked you did you

15

attend periodic meetings of the Plant

16

Design Section, you said you didn't recall.

17

A I said I didn't recall meetings with the

18

Plant Design Section.

19

Q Does this refresh your recollection

20

that there were monthly staff meetings of the

21

Plant Design Section during the period between

22

September '77 and February of '78?

23

A No.

24

Q Why, just so I can understand --

25

A The Plant Design Section is composed of

1
2 approximately 100 people.

3 You asked for the section meetings.

4 Q Was an agenda usually circulated before
5 or at Dr. Roy's monthly staff meetings?

6 A Usually. It varied.

7 Q From whom did you get that agenda?

8 A My secretary.

9 Q From whom do you believe, to the best
10 of your knowledge, those agenda originally
11 emanated?

12 A That would vary.

13 Q From whom to whom?

14 A It could be Don himself or quite frequently
15 Unit Managers would place items on the agenda.

16 Q Did you ever place items on the agenda?

17 A I am sure I have.

18 Q Did you ever place your concern over
19 when operators terminate high-pressure injection
20 on the agenda?

21 A No.

22 Q Was the subject of termination of
23 high-pressure injection ever on the agenda of Don
24 Roy's monthly staff meeting?

25 A Subject to my memory, no.

1
2 Q It's a fact, isn't it, that Don Roy
3 shared your concern over operator termination
4 of high-pressure injection, isn't that a fact?

5 A You should ask Don Roy.

6 Q It's a fact, isn't it, that you
7 understood from conversations with Don Roy
8 that he shared your concern, isn't that correct?

9 MR. FISKE: I think, Mr. Seltzer,
10 we are back where we were before on that,
11 on conversations.

12 MR. SELTZER: I press the question.

13 MR. FISKE: Well, I press my procedural
14 point.

15 MR. SELTZER: Are you going to instruct
16 him not to answer the question?

17 MR. FISKE: At least not until you have
18 asked him to describe what was said in the
19 conversations.

20 Q You discussed with Don Roy your
21 concern over premature termination of high-pressure
22 injection, didn't you?

23 A Yes.

24 Q It's a fact, is it not, that Don Roy
25 said to you in words or substance that he agreed

2 that the operator termination of high-pressure
3 injection at Davis-Besse had been inappropriate,
4 isn't that correct?

5 A Yes.

6 Q Did you ever discuss with Don Roy
7 the appropriateness of putting this subject on the
8 agenda of one of his monthly staff meetings?

9 A Not that I recall.

10 Q Did you ever discuss with Don Roy getting
11 the Integration Unit to proceed with the resolution
12 of your concern?

13 A I am not sure.

14 Q Bruce Karrasch, the head of the
15 Integration Section, reported to Don Roy, right?

16 A That is correct.

17 Q As you understand how things work
18 at B&W, is it your understanding that Roy could
19 have asked Karrasch to proceed with the resolution
20 of your concern over premature termination of
21 high-pressure injection?

22 A Yes. I believe Don could have asked Bruce
23 to proceed with that issue.

24 Q Did Bruce Karrasch ever come
25 to you and indicate that he had been asked to

1
2 proceed with a resolution of your concern over
3 high-pressure injection prior to February 1978?

4 A Not to my knowledge.

5 Q Did he ever come to you after February
6 1978 or during February of 1978 and indicate
7 that he had been asked to proceed with a resolution
8 of your concern over the premature termination of
9 high-pressure injection?

10 A Yes.

11 Q When?

12 A During or just before the Kemeny Commission
13 depositions.

14 Q That's the first time that Bruce
15 Karrasch came to you and said he had been directed
16 to proceed with the resolution of your concern?

17 A I don't believe that Bruce Karrasch ever
18 came to me and said to me that he had been
19 directed to proceed.

20 Q What in words or substance did
21 Bruce say to you just before the Kemeny depositions?

22 A Subject to the inaccuracy of just before or
23 during, Bruce indicated that Don Hallman had
24 issued him a memo requesting that he resolve certain
25 points.

1
2 Q When had he received that direction from
3 Hallman?

4 A I don't know.

5 Q Was it before or after the Three Mile
6 Island accident?

7 A Before.

8 Q Did Bruce tell you how long before
9 the Three Mile Island accident he had been
10 directed by Don Hallman to resolve your concern?

11 MR. FISKE: I am not sure that is what
12 Mr. Dunn testified to.

13 MR. SELTZER: Let's clear it up.

14 Q I thought you had said Karrasch got a
15 memo from Hallman telling him to resolve your
16 concern over the premature termination of
17 high-pressure injection, isn't that right?

18 A No.

19 Q What did Bruce tell you he had gotten
20 from Don Hallman?

21 A A memo requesting that he resolve certain
22 issues relative to my requests.

23 Q Hallman is in what unit or section?

24 A Don Hallman is a member of Nuclear Service
25 and I can't give you the specific title of the

1
2 section.

3 Q Hallman was concerned that going
4 solid might do some damage to the equipment,
5 is that right?

6 MR. FISKE: Well, are you asking him
7 now about what Karrasch told him before
8 the Kemeny Commission?

9 Are we still on that conversation?

10 MR. SELTZER: I am trying to get
11 at what Bert Dunn's understanding is
12 of Hallman's request to Bruce Karrasch.

13 Q And I am asking you, isn't it correct
14 that it is your understanding that Hallman had
15 voiced a concern to Bruce Karrasch about the
16 dangers of going solid?

17 A I believe the issues raised in that
18 communication relate to concerns over going solid
19 but I couldn't testify to it without seeing the
20 communique.

21 Q Between the date that Bruce Karrasch
22 received that communication from Don Hallman --
23 which I think the record will reflect was in
24 August 1978 -- and the date of the Three Mile
25 Island accident, did Bruce Karrasch ever come

1
2 to you to discuss either the resolution of your
3 concern or the concern that Don Hallman had
4 raised?

5 A Not to my recollection.

6 Q Have you ever discussed with Bruce
7 Karrasch what, if anything, he did between August
8 1978 and the March 1979 accident at Three Mile
9 Island to resolve either your concern or
10 Don Hallman's?

11 A Yes.

12 Q What, if anything, did Mr. Karrasch
13 say he had done between August '78 and the
14 Three Mile Island accident to resolve your concern?

15 MR. FISKE: You mean as opposed to
16 Hallman's?

17 MR. SELTZER: Yes, I will take them
18 separately rather than as a compound subject.

19 MR. FISKE: Do you understand that?

20 THE WITNESS: No, I don't think I
21 appreciate the difference.

22 Q Let me ask it in reverse order.

23 What, if anything, did Bruce Karrasch
24 indicate he had done between August '78 and the
25 Three Mile Island accident in March of 1979

1
2 to resolve Don Hallman's concern?

3 A I believe he indicated to me that he
4 communicated to Don that I was right and he should
5 do what I wanted.

6 Q Did he indicate to you whether that
7 communication between Karrasch and Hallman was oral
8 or written?

9 A I was left with the impression that it was
10 oral.

11 Q Did Bruce Karrasch tell you when in the
12 period between August '78 and the Three Mile
13 Island accident in March of 1979 he communicated
14 to Hallman his resolution that Mr. Dunn was right
15 and Hallman's concern was not valid?

16 MR. FISKE: Wait a second. You are
17 changing what --

18 MR. SELTZER: Let me ask it again.

19 Q Did Bruce Karrasch indicate to you
20 that he believed that you were right in your
21 concern and that your prescription should be
22 conveyed to customers?

23 A During the -- after the accident at Three
24 Mile Island, Bruce indicated to me that he had
25 communicated to that extent, that I was correct on

the issue and that Hallman should do what I wanted.

Now, I don't think that's totally responsive to your question. If you would give it to me again.

Q When you say Bruce had communicated to Hallman that Hallman should do what Bert Dunn wanted, is what you wanted what you had expressed to Jim Taylor in your February 9 and February 16, 1978 memoranda?

A I believe so. We are talking about the 16th memoranda.

Q Yes. Specifically, you wanted B&W to communicate to customers the two criteria which operators should have in mind in determining when it is appropriate to terminate high-pressure injection, is that right?

A That's what I felt was wise or necessary.

Q Did Bruce Karrasch tell you that he had told Don Hallman that Hallman's concerns about going solid were not a sufficient obstacle to sending out the advice to customers that you had proposed in your February 16, 1978 memorandum?

A No, he did not tell me that.

Q When between August '78 and March 28,

1
2 1979 did Bruce tell you he had given this
3 communication to Don Hallman?

4 A He told me after March 28th, 1979.

5 Q In other words, Bruce Karrasch did
6 not tell Don Hallman until after the Three Mile
7 Island accident?

8 A No, Mr. Karrasch did not tell me he had
9 told Don Hallman anything until after.

10 Q Right.

11 What I am trying to place in the time
12 spectrum is when Bruce Karrasch told Don
13 Hallman that you were right and that your
14 prescription should be sent to customers.

15 MR. FISKE: In other words, when Karrasch
16 told you he had done that. Did he tell you
17 when he had done that?

18 THE WITNESS: No.

19 A He did not indicate to me when he had taken
20 that action.

21 Q Have you ever come to know at what
22 point Bruce Karrasch took that action?

23 A I have not come to know that he took the
24 action.

25 Q I beg your pardon? I thought you

1 testified that Bruce Karrasch told you he told
2 Don Hallman that you were right and that the
3 prescription should go out.
4

5 MR. FISKE: The problem is the word
6 "know," Mr. Seltzer.

7 MR. SELTZER: All I am trying to find
8 out -- we are just looking at the shadows
9 on the wall here.

10 MR. FISKE: I don't know who is looking
11 at what shadows. There is a valid basis for
12 Mr. Dunn's point.

13 You asked him when did he know that this
14 happened, and he said he doesn't know.

15 MR. SELTZER: Fine.

16 MR. FISKE: Mr. Karrasch said something
17 to him. He is not equating that with
18 knowledge.

19 Q Did you ever get indication of when
20 Bruce Karrasch communicated to Don Hallman that
21 you were correct and that your prescription should
22 be sent to customers?

23 A No very good indication.

24 Q Did you ever get any indication that
25 the communication had taken place prior to the

1
2 Three Mile Island accident?

3 A Yes.

4 Q What is the indication that you got?

5 A Somewhere in between August 10th and the events
6 of Three Mile Island.

7 Q The famous events at Three Mile
8 Island?

9 A The accident at Three Mile Island.

10 Q Who gave you that indication?

11 A I'm not sure now.

12 Q Have you ever spoken to Don Hallman
13 regarding his communications with Bruce Karrasch
14 on this specific subject of your concerns over
15 premature termination of high-pressure injection
16 and Hallman's concerns about going solid?

17 A I spoke to Don Hallman about my concerns
18 on termination of high-pressure injection.

19 Q Have you ever spoken to Don Hallman
20 about his communications with Karrasch or his
21 interactions with Karrasch?

22 A Yes.

23 Q Did Hallman ever confirm in words or
24 substance that Karrasch had responded to Hallman
25 telling him that Karrasch believed that Bert Dunn

1
2 was correct and that the Bert Dunn prescription
3 of February 16, 1978 should be sent out to
4 customers?

5 A Not to me.

6 Q Did you ever hear indirectly that
7 Hallman had stated that he had received such
8 advice from Bruce Karrasch?

9 MR. FISKE: What do you mean
10 "indirectly"?

11 MR. SELTZER: When he said Hallman
12 didn't say it to me, I am wondering if he
13 knows that Hallman has said that to someone
14 else and that somebody else repeated it to
15 Mr. Dunn.

16 A I don't believe so.

17 Q When for the first time did you
18 discuss with Hallman your concern over premature
19 termination of high-pressure injection?

20 A I am not sure.

21 Q Do you have any recollection of having
22 such a conversation before the Three-Mile
23 Island accident?

24 A Yes.

25 Q In what context or forum do you recall

1
2 having a conversation with Don Hallman
3 regarding your concern over premature termination?

4 A I believe that shortly after the events at
5 Davis-Besse on September 24th, 1977 I stopped
6 by Don's office and indicated to him that I thought
7 that the HPI had been wrongly terminated or
8 inappropriately terminated.

9 Q Was anybody else present when you
10 were discussing this with Don Hallman on that
11 occasion?

12 A I don't think so.

13 Q Approximately how long a conversation
14 did you have with Don Hallman on that occasion?

15 A A few minutes.

16 Q Is there anything else that you
17 recall in words or substance saying to Don Hallman
18 on that occasion?

19 A No.

20 Q What in words or substance did Don
21 Hallman say to you in response?

22 A At this time I can't characterize his response.

23 Q What was Hallman's position or function
24 in or about late September 1977?

25 A Don Hallman was in Nuclear Service.

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Q Was there anything that distinguished his area of responsibility from anybody else's in Nuclear Service at that point in time?

A I am sure there was.

Q Is there anything that you can recall that distinguishes Don Hallman's area of responsibility?

A It was my perception at the time that Don was connected with support of plant operations.

Q What does that mean? Let's start with the semantic question.

When you refer to "plant operations," is there a capital P and a capital O on those two words?

A No, I don't think so.

When I do say "plant operations," I do mean our nuclear plants in the field.

Q What does it mean to be in Nuclear Service working in support of plant operations?

A I will have to respond to the question in terms of my perception and the limited facets about it that were important to me, and this means to me that Don would have a connection with or be responsible for providing technical information,

1
2 or B&W information to the plants for their
3 operations in general or operational problems or
4 difficulties.

5 Q To whom did Don Hallman report in the
6 fall of 1979?

7 A I believe it was Mr. Andy Olds but I'm not
8 sure.

9 Q What is your understanding of the
10 relationship between the support function of Nuclear
11 Service in the fall of 1977 and the role of
12 Plant Integration at that same time?

13 A Excuse me? Would you repeat the first part?

14 Q What do you understand is the relationship
15 between the responsibilities of Nuclear Service
16 in supporting plant operations and the role of
17 the Plant Integration Unit in the fall of 1977?

18 A Integration was a unit within the
19 Engineering Department responsible for coordinating
20 to some extent design work or detailed engineering
21 work.

22 Nuclear Service was responsible for
23 dealing with the customers in that -- well, "customer"
24 is a wrong word. The operation of plants. And
25 again that's my perception.

1

2

Q Was Hallman a Unit Manager?

3

A I am not sure.

4

Q Are you familiar with a unit called

5

Plant Performance Services?

6

A No. But I may be. I am not familiar

7

with the name.

8

Q Was it your understanding in

9

the fall of 1977 that Hallman's group was an

10

appropriate group to communicate to B&W nuclear

11

plants in the field your concern over when and when

12

not to terminate high-pressure injection

13

A Yes, I believe that was my impression

14

at that time, that that was an appropriate

15

group to perform that function.

16

Q Is that why you felt it was appropriate

17

for you to stop in to Don Hallman's office shortly

18

after the Davis-Besse event to discuss your concern

19

with him?

20

A No.

21

Q Why did you stop into his office to have

22

that conversation?

23

A I think just to let him know what I thought.

24

Q Why did you pick Don Hallman?

25

A I am not sure I know now.

2

Q Approximately how many other people

3

did you discuss your concern over premature

4

termination of high-pressure injection with shortly

5

after the Davis-Besse event?

6

A I believe we have covered them all.

7

Q Swanson, Kelly, Jones, and Hallman?

8

A Yes. And Roy.

9

Q Thank you.

10

After the conversation you had

11

with Don Hallman shortly after the Davis-Besse

12

event, did you have any other discussions with him

13

prior to the Three Mile Island accident on the

14

subject of your concern regarding premature

15

termination of high-pressure injection?

16

A After the first conversation and prior to

17

March 28th, 1979?

18

Q Yes.

19

A I don't believe so.

20

Q Prior to the Three Mile Island

21

accident, did Don Hallman ever discuss with you

22

his concern -- and this is a subset of the last

23

question -- his concern that your prescriptions

24

would lead to taking the plant solid?

25

A I don't believe he did.

Q Since the Three-Mile Island accident, have you discussed either of those two subjects with Don Hallman?

A Not explicitly.

Q Have you discussed them any way other than explicitly?

A The issue of solid is connected to the requirements to maintain high-pressure injection, and both Don and I participated in the team which generated the small break operating guidelines.

Q Did you ever say to Don Hallman at any time since the Three Mile Island accident in words or in substance, "Why didn't you come talk to me, Don, if you had this concern regarding my prescription?"

A No, I didn't. I haven't.

Q Have you ever voiced to anybody any disappointment that Don Hallman hadn't come to you to discuss his reservations between August 1978 when he formulated them in writing and the Three Mile Island accident in March of 1979?

A Yes.

Q To whom have you expressed that?

A To Don.

1

2

Q When?

3

A I don't know.

4

Q Where did you have that conversation?

5

A I don't think I can even recall that.

6

Q What did you say to him and what did he say to you as best you can recall in words or substance?

8

9

Q In substance I said "I wish you had given me a call or told me verbally about the August 10th memorandum."

10

11

12

MR. FISKE: I don't think it's August

13

10th.

14

MR. SELTZER: What is the date?

15

MR. MacDONALD: The 3rd.

16

Q August 3rd.

17

A Excuse me.

18

Q Is there anything else you said to him in words or substance?

19

20

A I am sure there is.

21

Q On that particular subject?

22

A No.

23

Q Why did you tell him you wished that he had spoken to you about his concern voiced in the August 3rd memorandum?

24

25

1
2 A Because at that time -- which is after the
3 accident -- I knew that I had been on copy for the
4 memorandum sent to Karrasch and had not done
5 anything after August 3rd to re-emphasize my
6 concerns.

7 Q What, in words or substance, did Don
8 Hallman say to you?

9 A I don't recall.

10 Q Have you ever had any conversation
11 in which you discussed with anybody what, if any,
12 action Don Hallman took after Bruce Karrasch got
13 back to him and told Don Hallman that Bert Dunn is
14 correct and that Bert Dunn's prescription should
15 be sent to customers?

16 MR. FISKE: I'm sorry, I would like
17 to hear that question again, please.

18 (Question read by the reporter.)

19 MR. FISKE: I will object to the form
20 of that question.

21 Q You may answer.

22 A First of all, I don't think we are on the
23 record is my saying Bruce told me that he had told
24 Don to send the information to the customers.
25 Past that I have had such conversations.

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Q With whom have you had such conversations?

A At least with Mr. George Edgar.

Q Do you believe you had such conversations with anyone else?

A Yes, I believe I had such conversations with other people.

Q Do you have any recollection as to who those other people are?

A No.

Q What was George Edgar's position at the time you had the conversation with him?

A Counsel.

Q Counsel to whom?

A B&W, I guess.

Q You recall, am I correct, having conversations with people other than George Edgar but you can't recall their names on this same subject?

A That's correct.

Q What did the other people whose names you don't recall tell you they understood Don Hallman did after Karrasch had advised Don Hallman that your prescriptions in your February memoranda

1
2 to Jim Taylor were correct?

3 MR. FISKE: I am going to again
4 object to the form of the question, and
5 also, just ask Mr. Dunn, before he answers
6 that question, to not answer it with
7 respect to any individual who he may have
8 known to be a lawyer even though he didn't
9 know his name, if there is such a person.

10 A I don't think I can give the answer then.
11 I don't believe I can separate the lawyers from
12 the non-lawyers.

13 Q This is going to be stretching
14 Upjohn pretty far.

15 MR. FISKE: May I just suggest, in the
16 interest of expedition, that if it is a
17 lawyer, we are not going to let him answer
18 the question, whatever you may think of
19 Upjohn, and if he can't remember the name
20 of the person who said it, I can't see how it
21 can be much use in discovery.

22 MR. SELTZER: We have our ways, Mr. Fiske.
23 We will find out who he is and if he has a
24 recollection of a conversation with somebody,
25 just because he can't remember the man's name,

1
2 doesn't mean that it won't come to him in the
3 middle of a Broadway show tonight or something
4 else.

5 MR. FISKE: In any event, if he can't
6 sort out the lawyers from the non-lawyers
7 at the moment, I think there is no point
8 in pursuing it. If he is able to do that
9 at any later time, fine.

10 BY MR. SELTZER:

11 Q Have you at any point, independent
12 of what lawyers have told you, corroborated what
13 lawyers told you Hallman did?

14 MR. FISKE: I think you are going to
15 have to explain to Mr. Dunn what you mean by
16 "corroborated."

17 Q Just because a lawyer tells you
18 something doesn't forever cloak that fact in privilege
19 if you later learn the fact again from some other
20 source that is not a lawyer.

21 A O.K.

22 Q So now I am asking whether you ever
23 learned or confirmed the fact about what Hallman
24 did from a source who wasn't a lawyer.

25 MR. FISKE: I guess the question, if

1
2 it helps any, is did anybody that you knew
3 not to be a lawyer tell you what Hallman did.

4 A I believe that I had conversations which
5 touched on the subject of what happened in that
6 time frame with people that were not lawyers.

7 Q What did the non-lawyers tell you Don
8 Hallman did, if anything, after Bruce Karrasch had
9 told him that your February prescriptions were
10 correct?

11 MR. FISKE: The same objection to the
12 form of the question.

13 Q You may answer, however.

14 A I don't think that anybody told me any
15 exact information about what Don did but rather
16 an impression was generated that confusion remained
17 and Don was going to continue to pursue the issue.

18 Q Did you ever learn that Don Hallman had
19 done anything to pursue the issue before the Three
20 Mile Island accident?

21 A Maybe.

22 Q Are you just speculating?

23 A Well, you asked me a question about him
24 doing something.

25 Q Hallman writes a memo on August 3rd to

2 Bruce Karrasch. Some time after August 3rd,
3 1978 Karrasch communicates back to Don Hallman
4 saying notwithstanding your concerns, Don Hallman,
5 I think that Bert Dunn is correct in his
6 prescriptions; is that right?

7 MR. FISKE: That's what Mr. Dunn
8 testified Mr. Karrasch told him.

9 MR. SELTZER: Right.

10 Q You have added just now 'from someone
11 you got the impression that Hallman still had
12 lingering concerns about whether it would be
13 safe to take the reactor coolant system solid,
14 is that right?

15 A I added that I was given the impression that
16 Don felt there was still some confusion on the
17 issue.

18 Q Confusion in whose mind? As you
19 understand it?

20 MR. FISKE: As he understands it.

21 A I don't know.

22 MR. FISKE: Isn't this an impression
23 from anonymous people?

24 Q Where is the confusion that you just
25 testified to existing?

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2 MR. FISKE: I just want to make sure I
3 understand the question.

4 You are asking Mr. Dunn what his
5 impression was as to where the confusion -- in
6 whose mind the confusion was between
7 Hallman and Karrasch as a result of these
8 conversations with people he can't remember,
9 is that it?

10 MR. SELTZER: No, you are adding that
11 the confusion is between Hallman and Karrasch.
12 I am not limiting it to that.

13 The witness just testified that it is
14 his impression that there was confusion still.
15 I want to find out where the confusion was
16 unlimited as to any two particular people.

17 MR. FISKE: I guess you are entitled
18 to ask the question.

19 MR. SELTZER: Thanks.

20 MR. FISKE: But it seems that this is
21 a little silly.

22 Q Where was the confusion that you had
23 the impression existed somewhere?

24 A The impression is that the confusion is
25 over the issue, not necessarily in anybody's mind.

1
2 Q And who was it that perceived such
3 confusion? Who thought there was confusion
4 as it was related to you?

5 A Don.

6 Q Don Hallman?

7 A Don Hallman.

8 Q What, if anything, have you ever
9 been told Hallman did to resolve that sense of
10 confusion prior to the Three Mile Island accident?

11 A What about the issue of lawyers?

12 MR. FISKE: All these questions I am
13 sure Mr. Seltzer agrees exclude any
14 conversation with anyone that you knew
15 to be a lawyer.

16 THE WITNESS: And I am to answer even
17 thought I can't distinguish?

18 MR. FISKE: No.

19 Q No.

20 I want you to tell me things that you
21 know or believe came from non-lawyers.

22 A O.K. I don't think I was necessarily
23 told that he did anything after that.

24 Q So to the best of your recollection,
25 you have never heard that he did anything after

1
2 receiving the communication from Bruce Karrasch,
3 is that right?

4 MR. FISKE: From anyone other than a
5 lawyer.

6 Q Well, if you say you heard something
7 from a lawyer, I want you to tell me that, and I won't
8 ask you the substance of the communication.

9 A The answer is maybe.

10 Q Maybe what?

11 A Just maybe.

12 Q Maybe you heard it from whom?

13 A Maybe I heard that he did something after
14 the time when I was told by Bruce Karrasch that
15 Bruce talked to him, and maybe I didn't.

16 Q O.K.

17 Have you ever discussed with Don
18 Hallman whether he did anything, or what,
19 if anything, he did after his communication
20 back from Bruce Karrasch?

21 A No, not that I recall now.

22 Q You have had conversations with Don
23 Hallman since the Three Mile Island accident, have
24 you not?

25 A Yes.

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Q But you don't recall asking him whether he did anything between the Bruce Karrasch communication back and the Three Mile Island accident, is that right?

A That's true.

Q Since the Three Mile Island accident, have you ever written down or attempted to write down a description of what you tried to do to resolve your concern over premature termination of high-pressure injection?

A Not outside of prepared for the Kemeny Commission.

Q You have prepared such a description for counsel?

A I have written down in the testimony for the Kemeny Commission and the testimony for the Rogovin Commission investigation.

Q I'm sorry.

You testified orally under oath, and that's a matter that you testified to?

A Yes.

Q Have you ever written anything which is a description of your actions and thoughts in trying to resolve your concern over premature

1
2 termination of high-pressure injection?

3 Have you ever done such writing
4 since the Three Mile Island accident?

5 A Other than the depositions, no.

6 Q When for the first time did you discuss
7 with Don Roy your concern over premature termination
8 of high-pressure injection?

9 A Very shortly after the Davis-Besse incident.

10 Q Had Don Roy attended the colloquium
11 in Training Room B shortly after the Davis-Besse
12 incident?

13 A I am not sure.

14 Q Where did you have your conversation
15 with Don Roy?

16 A In Don's office.

17 Q How close is his office to yours?
18 How close was it then?

19 A 100 feet.

20 Q How long was your conversation with him
21 on that occasion?

22 A I think approximately 15 minutes.

23 Q Was that quarter of an hour devoted
24 entirely or substantially to discussing the
25 Davis-Besse event?

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A Substantially.

Q What in words or substance did you say to Don Roy?

A I described my concern over the termination of the high-pressure injection. I described why it was concern and that I felt we should do something.

Q What did you indicate B&W should do?

A The end of what we should do at that time would have been unclear. The thing we should do then would be to measure my concern.

Q What do you mean, "measure"?

A Determine its validity.

Q What did Don Roy say to you in words or substance at that meeting?

A I can't recall very much of it. In substance the answer was do it.

Q Don Roy was your immediate superior at that time, right?

A That's correct.

Q So at that meeting you had authorization from your boss to take steps to resolve your concern, is that right?

A Well, I think the word "authorization" has

1
2 a particular meaning.

3 Q I didn't mean to cloak it with
4 excessive majesty.

5 You had approval from your immediate
6 superior to take steps to resolve your concerns
7 over premature termination of high-pressure
8 injection, is that right?

9 A We had an agreement between us that I would
10 take steps to resolve my concern or 'cause those
11 steps to be taken..

12 Q Am I correct that the meeting you had
13 with Don Roy was shortly after the Davis-Besse
14 event?

15 A Yes, September 24th, '77.

16 Q In taking steps to resolve your concern,
17 what did you do other than speaking with Swanson
18 and Kelly?

19 A Those were the steps I took.

20 I also received verification of my
21 opinion concerning the inappropriateness of
22 terminating high-pressure injection from a ECCS
23 viewpoint from Mr. Bob Jones.

24 Q What is the next thing that you became
25 aware of that took place with respect to resolving

1
2 your concern over premature termination of
3 high-pressure injection?

4 A The next thing I recall is the issuance of the
5 Kelly memorandum.

6 Q That's Kelly to whom?

7 A I don't recall who he wrote it to at this
8 time.

9 Q That is the November 1, 1977 memo to
10 seven individuals including Karrasch, Swanson,
11 Finnin, LaBelle, Elliott, Hallman, and
12 somebody named B. M. Dunn?

13 A Is there any reason to bother to look at
14 it to verify it?

15 Q Here, I will show it to you (indicating).

16 A Yes, I believe that's the one I am talking
17 about.

18 MR. FISKE: Could I make a suggestion,
19 if we are about to get into this memorandum,
20 which I assume is not going to be a five-minute
21 discussion, we resume tomorrow at 9:30?

22 MR. SELTZER: Well, you must know
23 more about that memo than I do. I wasn't going
24 to ask anything about it.

25 MR. FISKE: O.K., that's a deal.

MR. SELTZER: Since it is 5:00 o'clock,
why don't we resume until tomorrow at 9:30.

(Time noted: 5:05 o'clock p.m.)

Bert Merrit Dunn
BERT MERRIT DUNN

Subscribed and sworn to
before me this 29 day

of October , 1983.

*Danita R. Kidd - Notary
Commissioned Notary as Danita D. Robertson
Commission Expires: July 1, 1983.*

CERTIFICATE

STATE OF NEW YORK)
) SS.
COUNTY OF NEW YORK)

I, CHARLES SHAPIRO, CSR,, a Notary
Public within and for the State of New York, do hereby
certify that the foregoing deposition of

BERT MERRIT DUNN was taken before me
on March 11, 1981;

That the said witness was duly sworn before
the commencement of his testimony and that the
within transcript is a true record of said testimony;

That I am not connected by blood or marriage
with any of the parties herein nor interested directly
or indirectly in the matter in controversy, nor am I
in the employ of any of the counsel.

IN WITNESS WHEREOF, I have hereunto set
my hand this 28th day of MARCH, 1981.

Charles Shapiro
CHARLES SHAPIRO, CSR

I N D E X

WITNESS

PAGE

Bert Meritt Dunn

3

E X H I B I T S

GPU

FOR IDENT.

75

Memorandum from T. E. Geer
to L. P. Williams dated
August 18, 1980, subject
"Engineering Capability
Inventory" with attachment for
ECCS Unit

* * *