

NUCLEAR REGULATORY COMMISSION

IN THE MATTER OF:
THREE MILE ISLAND
SPECIAL INTERVIEWS

INTERVIEW OF JOHN DAVIS

POOR ORIGINAL

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Date - Thursday, 13 September 1979

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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In the Matter of: :
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THREE MILE ISLAND :
SPECIAL INTERVIEWS :
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INTERVIEW OF JOHN DAVIS

Room 9107
National Bank Building
Bethesda, Maryland

Thursday, September 13, 1979
8:35 a.m.

BEFORE:

WILLIAM G. BALLAINE, ESQ.
TMI Consultant

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C O N T E N T S

WITNESS:

EXAMINATION

John Davis

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E X H I B I T S

None

MM mte 1

P R O C E E D I N G S

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(8:35 a.m.)

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MR. BALLAINE: Mr. Davis, this is a continuation of a deposition that began two days ago. I am simply going to remind you at the outset that you are still under oath. Whereupon,

JOHN DAVIS

was resumed as a witness and, having been previously duly sworn, was examined and testified as follows:

THE WITNESS: I understand the

EXAMINATION

BY MR. BALLAINE:

Q Mr. Davis, the questioning to this point has generally probed your personal role or your staff's role in the Three Mile Island accident and its antecedent events. We would like to turn now to broader issues, each in some way raised by Three Mile Island. These issues are at the heart of how the NRC functions. We are addressing them with both broad and specific questions, which call not for a simple factual answer but a statement of personal opinion or conviction.

Because of your standing in the NRC and your personal insight into its operations, we feel compelled to put these questions to you. We believe the effectiveness of this inquiry, its value to the NRC, and the quality of NRC

MM mte 1 service to the health and safety of the public may be
2 improved in no small proportion to the way in which you
3 respond to these questions.

4 If some of these questions go beyond your personal
5 experience or expertise, we understand that you may not
6 choose to respond to them.

7 These questions are divided into three general
8 categories, starting with review and licensing issues,
9 proceeding with operational issues, and culminating with
10 questions relating to the mission and nature of the NRC as
11 an agency.

12 I'm going to start with issues related to review and
13 licensing. It has been said that under the present system
14 of review and licensing, the primary responsibility for
15 safety rests on the owner. The owner must do every safety
16 analysis or test necessary to provide for the public health
17 and safety, and the NRC relies upon a partial review to test
18 the sufficiency of the owner's safety work.

19 First, do you agree that this is a fair description of
20 the NRC's method of audit review?

21 A Let me interject at the beginning that I have had
22 no experience in reactor licensing. Years ago I had a brief
23 period of experience in what is now materials licensing. My
24 total agency experience has been in an inspection function
25 and an enforcement function.

MM mte 1 However, as a general philosophy, throughout the agency
2 the agency has looked to the licensee, as I understand it,
3 for basic responsibility for health and safety, with the
4 agency performing an audit function to assure or assess the
5 manner in which the licensee is discharging that
6 responsibility.

7 Q I take it, then, with the qualification that you
8 haven't been directly involved in the licensing facet of the
9 NRC's work, that you do agree with the general statement of
10 how the audit process works?

11 A Yes.

12 Q And again, I'm going to remind you that if, for
13 some reason, you don't feel you have enough direct
14 experience to have an opinion about something, just say so
15 and we'll move on. There's no obligation for you to offer
16 an opinion that you are not comfortable with because you
17 don't feel you know enough or have enough background.

18 A Sure.

19 Q Do you think that the TMI experience -- for
20 example, picking up those events which presaged the failure
21 of the TMI-2 relief valve -- is affirming or denying the
22 validity of the present NRC approach to audit review insofar
23 as safety is concerned?

24 A I think that basically the agency's primary
25 deficiency in this particular accident was in fact the

MM mta 1 treatment given to what are now identified as precursor
2 events. Perhaps in our audit function we could increase
3 certain portions of that audit. But I personally do not see
4 us, the agency, assuming responsibility for total review,
5 total approval, a stamp of approval for everything within
6 the plant.

7 Q But you do believe that the major failure
8 disclosed by TMI-2 is the fact that the agency had missed
9 what we have been calling precursors to the way in which the
10 accident unfolded?

11 A Whether they missed in the total sense, at least
12 did not ascribe to precursor events the importance that
13 these events should have been ascribed.

14 Q Given that fact, what do you think should be done,
15 if anything, in the way in which the audit function is
16 performed in order to avoid this same error occurring again
17 in the future?

18 A All right. Perhaps the audit function should
19 continue with, say, some modification in the approval of the
20 application, approval of the ongoing activities of the
21 licensee. But perhaps we should move away from the audit
22 function into a total review function and evaluation
23 function on events as they occur.

24 In other words, when something does go wrong, that we
25 look at each and every one of those things that go wrong to

MM mte 1 see how it applies to the total regulatory process.
2 However, again, I'm not certain that we should move into the
3 same approach in trying to predict -- in other words, when
4 the licensee submits his application for these fairly
5 complex machines, it would be almost an overwhelming task
6 for the government, for NRC to personally review each and
7 every thing in that particular plant.

8 The cascading down which is fairly typical in the
9 audit-type function of various levels of audit and various
10 levels of detail as you go down, seems to me to be an
11 appropriate system for that. But I do think we need to
12 improve greatly our learning process when things do go
13 wrong.

14 Q Let's see if we can clarify some aspects of your
15 opinion in that regard. Is it fair to say that sometimes
16 when something goes wrong at a plant, that some testing may
17 be required in the aftermath of the event in order to cure
18 the deficiency? Is that not something that would have to
19 happen frequently?

20 A Yes, to determine that in fact corrective action
21 had been accomplished.

22 Q Some specific tests to assure that you have
23 fiddled with the system and solved the problem that took
24 place before.

25 A Right.

MM mte 1 Q Would it be your opinion that the NRC should
2 conduct those tests, rather than the licensee?

3 A Well, it depends, of course, on the importance of
4 the event to safety, the importance of the failure to
5 safety. I don't mean just the importance as it occurred,
6 because hopefully we will continue in the history which we
7 have developed, that most events do not lead to safety
8 problems; that systems are designed properly to absorb most
9 events.

10 But when those events relate to safety systems, are
11 important events, rather than the NRC directly perform, the
12 NRC should approve the testing and observe the testing, and
13 maybe not even direct NRC employees but third party type,
14 perhaps contractors to the NRC, observe that testing.

15 Q What, if anything, happens now in a situation such
16 as this?

17 A In a situation such as this, as I understand it,
18 it is not infrequent that we will review the test procedure
19 and on some occasions we will observe the tests. But I
20 don't believe that is set up as the most common of
21 practices.

22 Q It's fair to say, though, that there certainly is
23 no specific requirement set forth anywhere that directs a
24 particular minimum role by an NRC official in connection
25 with testing; is that correct?

MM mte 1 A The presence of NPC?

2 Q For example, yes. Do you think there should be
3 some explicit criteria concerning presence of an NRC
4 official during a test or concerning a requirement as to
5 when an independent party or the NRC should conduct the
6 testing, rather than the licensee, things like that?

7 A Yes, I think it would be important, although these
8 criteria would have to be pretty carefully drawn to make
9 certain that we do look for tests which are important and
10 observe the tests which are important.

11 I think one thing that the NRC must be careful to
12 maintain is the continuing responsibility of the licensee
13 for his safety. In other words, I do not think we should
14 move in in such force that he believes that we are now
15 assuming some of his responsibility.

16 When we observe the tests, for example, I believe that he
17 must also observe the tests and approve or reject the tests,
18 and then we observe the tests and either concur in that
19 approval or rejection of the tests. In other words, I do
20 not think the NRC should relieve the licensee of his
21 responsibility.

22 Q I am going to come back to that in a second. But
23 let me ask one more question concerning requirements imposed
24 on an NRC official, if there are any, when something goes
25 wrong and corrective action is taken by a licensee. Are

MM mte 1 there any requirements written down anywhere as to how an
2 NRC official is supposed to proceed in auditing or
3 reviewing licensee corrective action as it proceeds?

4 A I don't know in detail how -- I would not be
5 surprised if there were not some written down somewhere in
6 either the inspection guide or the standard review plan or
7 some other internal document within the agency. I don't
8 know of any requirement placed outside that describes how
9 the NRC official down within the staff should react.

10 Q What do you mean, "placed outside"?

11 A Placed outside by law or anything like this.

12 Q Now, do you believe that the licensee does more on
13 known safety concerns than the minimum that is required by
14 the NRC, or that the licensee addresses new areas of
15 potential safety concern which have not been identified by
16 the NRC?

17 A Well, that is really a belief type question, and I
18 believe it depends at least to some degree on the licensee.
19 My impression -- and it's strictly an impression -- is that
20 some licensees are more attuned to safety issues or
21 regulatory issues than other licensees. But if you ask, for
22 example, to identify where I get this impression, it would
23 be very difficult to do and it may be the fact that some
24 licensees are, say, better at portraying to the regulatory
25 body that they are concerned, whether they really have it

MM mte 1 or not. In any event, they give the appearance of high
2 concern, and they really turn to when a situation arises.

3 Now, with regard to whether they identify and pursue
4 problems independently of those identified by the NRC, I'm
5 trying to recall perhaps some instances. My impression is
6 that they do, but I don't recall any specific instances. In
7 other words, my impression is that they do not sit back and
8 make no move unless the NRC tells them to make a move.

9 I will say this, though, that as the regulatory program
10 has progressed from the early years, when the regulatory
11 program was quite general, that I believe that as the
12 regulatory program has become more and more, that the
13 tendency of the licensees is to wait more and more for the
14 regulatory program.

15 Q Do you also have an opinion or an impression as to
16 the reason why some licensees at least portray a greater
17 interest in safety concerns independent of an NRC
18 requirement or directive?

19 A I really don't know whether you could describe it
20 in anything other than the personality of management.

21 Q You indicated just a bit earlier, I think, that
22 you believe it is important for the licensee to continue to
23 bear primary responsibility for safety concerns. Is that a
24 fair statement?

25 A Yes.

MM mte 1 Q Isn't it fair to say, from what you have just
2 said, that at present in your view there are at least a
3 number of licensees who are not doing any more on safety
4 concerns than what they are told to do by the NRC?

5 A Or that they are required to do.

6 Q Or that they are required to do.

7 A I think then --

8 Q Wait a minute. Is that a fair statement? I want
9 to make sure I understood.

10 A Make the statement one more time.

11 Q Perhaps I can ask the reporter to repeat it.

12 (The reporter read the record as requested.)

13 A I would say, from my impression of licensees, some
14 licensees are more aggressive toward safety. All right?
15 Now, whether there is any licensee that meets the absolute
16 bare minimum -- in other words, there's absolutely nothing
17 else than what the NRC requires -- I really don't know. I'm
18 not of that impression, of the bare minimum.

19 But I think what the NRC must devise is some way to go
20 beyond mere requirements, you know, that these are the black
21 and white requirements which you must meet, and have the
22 licensees, through some technique, devote this attention to
23 safety. In other words, as a management philosophy, that
24 safety is an overriding consideration as a management
25 philosophy.

MM mte 1 Let me interject one other thing. Of course, much of our
2 early effort in quality assurance carried that and I believe
3 it was more successful with some licensees than with other
4 licensees. Maybe it wasn't required to be successful.
5 Maybe we haven't influenced them as much as we might think,
6 but they already had these positions and we merely became
7 more aware of them.

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pv MM 1 Q Let me ask you this: To the extent that a
2 licensee under the present process is only doing what is
3 required by the NRC, is it fair to say that the system is
4 not appropriately putting the prime burden of safety on the
5 licensee?

6 A Let me see if I understand what you're driving
7 toward. If, in fact, there are licensees who meet only the
8 minimum requirements, then the philosophy that you depend on
9 the licensee as the first and foremost bulwark for safety is
10 misplaced. Is this --

11 Q Do you think that's so?

12 A I think -- in my opinion, the philosophy of the
13 licensee being responsible for the safety of his plant must
14 continue.

15 Q To the extent that a licensee at present is not
16 doing any more than is required by the NRC, isn't it fair to
17 say that the licensee is not bearing the prime
18 responsibility for safety under the present system?

19 A I understand your question. In other words, if
20 you have a licensee who is so immune to safety concerns that
21 all he does is barely meet NRC requirements.

22 Q Or maybe a touch above.

23 A Well, then, perhaps we're misplacing our reliance
24 on that licensee for the kind of safety which is necessary
25 for nuclear power plants. Well, I still think we have to

pv MM 1 ride with that philosophy.

2 Q Yes. But you can concede that you would not be
3 effectuating the philosophy as respects that licensee?

4 A Right. And what we need to do, then, is devise
5 some way to effectuate that philosophy with that licensee.

6 Q Do you think the present system is the best system
7 for effectuating this philosophy of keeping prime
8 responsibility for safety on the licensee?

9 A I think the present system -- now we're talking
10 about the total regulatory system?

11 Q Yes.

12 A I think the total regulatory system could be. In
13 other words, I don't necessarily believe you need to change
14 all the regulations, this type of thing, to bring this into
15 being. I think we need to direct more attention to
16 identifying those licensees who have this
17 less-than-eagerness for safety, and then bring to bear
18 whatever pressure is necessary to upgrade that attention to
19 safety. And, again, I believe that the attention to safety
20 at any -- not just a utility, for any industry, flows from
21 the attitude of upper management.

22 Q When you talk about bringing pressure to bear on
23 those licensees that you identify as not being, shall we
24 say, sufficiently concerned with safety, what do you think
25 you can do specifically?

pv MM

1 A Well, some things that we have done in some areas
2 which have been relatively successful is that we have had —
3 NRC has had meetings with the highest levels of management
4 to point this out. Sometimes the highest level of
5 management believe they have the commitment and somehow it
6 disappears filtering down through the worker because either
7 of what their subordinates believe — the subordinates see
8 other things as prime characteristics, and in some cases I
9 think there has been such success, and not necessarily
10 safety philosophy, but in other things.

11 Q Where else?

12 A We could institute a program of really sitting
13 down, in a very deliberate sense, and evaluating the total
14 performance of the licensee and safety by a very detailed
15 evaluation, a management-type approach of evaluation of when
16 things go wrong why did it go wrong; not just the valve
17 failed, but what led to that valve failure, tracing it all
18 the way back to the ultimate cause and react to that.

19 Q What good would that do in bringing pressure to
20 bear on a licensee?

21 A Okay. You can identify where the failure came
22 from. In other words, where was licensee management, where
23 did licensee management in the first instance not perform or
24 perhaps did perform.

25 Q Okay. Once you have identified a flaw in the

pv MM 1 management of the licensee or somewhere in the licensee's
2 efforts, then what happens?

3 A Okay. You take this to whatever course it takes
4 to bring about a change. It may be this lack of performance
5 occurred somewhere down in the inner structure of the
6 organization. If the lack of performance occurs at the
7 highest levels, the only option you have is to go to the
8 stockholders or public utility commission or something, to
9 impress upon that utility management, the highest levels of
10 management, that they need to devote ~~some~~ of their personal
11 attention and philosophy, and this philosophy must get down
12 to the workers that safety is a prime consideration to run
13 the company.

14 Q Is it fair to say that what you would do, what you
15 are suggesting, is that the NRC would simply identify flaws
16 and make those flaws known so that somebody else would bring
17 pressure to bear?

18 A On, no. Then, of course, the NRC would follow up
19 to see if corrective actions were taken.

20 Q But I take it you are not suggesting that the NRC
21 would ever specifically direct the management to make a
22 change once a problem was identified?

23 A You would direct them to make the change.

24 Q You wouldn't simply make the information known to
25 stockholders and hope the stockholders would make the

pv MM 1 required change?

2 A Oh, no. And I think, in our experience in
3 situations that might be somewhat similar to this, that
4 management, when points are brought to them with sufficient
5 force and sufficient -- and expressed so that they
6 understand what the problem is, that they react very well
7 to it.

8 Q Do you think, by the way, that this is not being
9 done at present?

10 A I think it could be better done.

11 Q You think it is being done at present?

12 A To some degree.

13 Q Could you give me an example?

14 A Well, I think that NRC meets with presidents of
15 companies on occasions and reviews their progress in various
16 things. One of the things, to give you a specific example,
17 as I recall, for a period of time one of the licensees that
18 had a history of problems with enforcement actions, you
19 know, meeting requirements and events, was Commonwealth
20 Edison. And we exerted a great deal of effort through our
21 regional office and through IE office management in dealing
22 with the upper echelon of Commonwealth Edison.

23 Of course, I have been away from it for some weeks now,
24 but my impression and the impression of the regional
25 director out in Chicago, the last time I talked to him, is

pv MM 1 that there had been a noticeable improvement and that this
2 was reflected in whatever indicators we had to show this
3 improvement.

4 Q By the way, at present, does the NRC have some
5 kind of centralized system for gathering together the
6 experience of a utility as distinct from the experience of a
7 particular plant?

8 A Well, I will answer that in plans, more than in
9 actual situation. One of the things that IE, when I was
10 over there, that we were looking at was what we call
11 "licensee regulatory performance evaluation," which, by the
12 way, I would have to describe as somewhat controversial.

13 In this system, what at least IE management hoped to
14 achieve, was to identify some factors that would indicate to
15 NRC those utilities that performed well or did not perform
16 well in comparison with these factors and then, based on
17 this, to meet with this utility management, bring this to
18 their attention with reviews, and point out to them trends
19 which they may be encountering which they do not see.

20 Now, hopefully, this would lead to the utility doing the
21 same kind of trend analysis. And, of course, if this worked
22 out, we could make it a requirement that they do this kind
23 of trend analysis.

24 As I say, it was somewhat controversial, and not just
25 controversial in our relationship with the utilities, but

pv MM 1 there was a great deal of staff disagreement. And there was
2 a great deal of discussion on this.

3 When I left, I briefed the Commissioners, sometime, I
4 guess, a year, year and a half ago, now, on this particular
5 system. And the IE was directed to go back and relook at it
6 and proceed somewhat with it, but come back to the
7 Commissioners with their plans.

8 What it aimed toward -- by the way, we did come out with
9 a draft of some early work we did on it, where we had given
10 utilities or plants, really, ratings which we chose ABC to
11 put with them, and although they were not that precise and
12 they were used internally, this did attract a fair amount of
13 media attention. And one of the things I guess we -- to be
14 realistic in this, of course, the media attention to a
15 utility also has some effect on management. And I feel very
16 certain that no utility that NRC rated as a C utility would
17 like to continue as a C utility over a long period of time.

18 So, there was an effort under way which, to my knowledge,
19 has never been a second publication of these numbers or
20 anything like that, of these ratings. But this was an
21 effort to drive toward identifying utilities and plants --
22 and, by the way, you can, in one utility, have some plants
23 that do according to the system quite well and others do no
24 so well -- and then seek to identify the causes, and, if we
25 can find the causes, then to make these causes known to the

pv MM 1 utility industry so that anyone can look at, say, the A
2 plant and say it's managed very well and from NRC's review
3 of the plant, this is why we think it's managed well.

4 Q By the way, when was this effort made, as best you
5 recall?

6 A I believe I briefed the Commissioners -- that
7 whole effort has been going on for some years. I mean, two
8 or three years, at least; maybe more. I believe I briefed
9 the Commissioners soon after -- soon after Dr. Volgenau
10 left, which would make it, I believe, late '77. But -- by
11 the way, this is well known, this is very well known in the
12 agency, because it does inspire some emotions.

13 Q Is it in place today or not?

14 A No. It's back under study, as I understand it.

15 Q Whose study?

16 A I&E is supposed to be studying it.

17 Q Who?

18 A Stello heads it up. I think Harry Thornberg is
19 the man directly in charge of that. I would suspect Three
20 Mile Island has delayed it some.

21 Q It's at the director level, director of I&E?

22 A Oh, the director knows about it.

23 Q It's being studied in that office?

24 A Either office director level or division level
25 director. But that was an effort aimed precisely at what I

pv MM 1 think you've been driving at; in other words, how can you
2 identify utilities which do not perform well or have a
3 different philosophy and upgrade that philosophy?

4 Q By the way, did you favor this licensee regulatory
5 performance evaluation?

6 A Yes, I was one of the proponents of that.

7 Q Can you tell me the names of some of the opponents
8 of it?

9 A I can tell you people who had different ideas
10 about it.

11 Q Okay.

12 A I think I was very favorable for it. And I might
13 say that was not an emotional commitment from the start. I
14 wasn't certain we could do it. But as it began to develop,
15 I became more committed to it.

16 Thornberg favors it. Morris Howard favors it. I am not
17 certain of Stello's position. I would suspect that he is a
18 questioner of the procedure. Some of the regional
19 directors, at least in the beginning, were not in favor of
20 it. Jim O'Reilly, and this type.

21 Q Do you know anybody else in headquarters who took
22 a position critical of it in some respects? I just want to
23 make sure we ask the people who would give a differing
24 viewpoint.

25 A I will tell you who could give you a list of the

pv MM 1 pros and antis, would be Harry Thornberg or Morris Howard,
2 since they were involved much deeper in the development.

3 Q Okay. Mr. Davis, is it fair to say that much of
4 the safety work assigned to plant owners or regulated by NRC
5 is actually done by major vendors or not regulated by NRC?
6 Is that a fair statement?

7 A I believe that's a fair statement.

8 Q In your judgment, is that a flaw in the regulatory
9 process?

10 A Should we directly regulate the NMSS and the
11 suppliers? That's been an issue that's been kicked around
12 for sometime. I think that we -- obviously, we should
13 regulate the utility. Then one of the questions that we
14 have had is the regulation of vendors, direct regulation of
15 vendors. You may or may not be aware that the office of
16 Inspection and Enforcement has a program that directly
17 inspects vendors, which means it does not inspect the
18 licensee, inspect non-licensees, basically to see if they
19 have the appropriate quality assurance programs to produce
20 quality products is basically what is aimed toward.

21 This is ed at. We proceed on that, as I recall, on
22 the basis of that Part 50 Appendix B, quality assurance
23 requirements require -- cascade down to the suppliers. The
24 licensee must assure that the supplier has a property
25 quality assurance program.

pv MM 1 There are those who believe we should be directly
2 regulating these people. I personally think we need more
3 direct regulation of suppliers so we can go directly to
4 them.

5 There is a belief among some people that Part 21 gives us
6 this power, but I am not certain it is that clear to
7 everyone.

8 Q In other words, you think that there is possibly a
9 legal question as to whether the NRC has the authority it
10 needs to regulate the vendors as thoroughly as it might
11 choose to?

12 A In the manner that they should be regulated, that
13 I think they should be regulated.

14 Q Okay. Can you give me some illustrations of ways
15 in which the vendor should be regulated but is not at
16 present?

17 A Well, I think that the vendor should receive a
18 certificate or something from the NRC which, in final
19 matters, could be lifted from them and say that this vendor
20 is no longer qualified to supply the nuclear industry.

21 Now, understand that we may be able to issue civil
22 penalties against them or against offices of these
23 companies, but I think the legal end of the vendor
24 regulation needs to be cleaned up and made more explicit.
25 And, as I say, there are people who think we have a legal

pv MM 1 threat to them now.

2 Q Just out of interest, do you have an opinion as to
3 whether there are at present any vendors supplying materials
4 to a licensee that are supplying materials that do not meet
5 what you think would be the minimum quality assurance
6 standards?

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gsh 1 A I don't know. However, that is something that our
MM 2 vendor program should be able to reveal pretty explicitly.
3 I know that in the conduct of our vendor program, that we
4 did have deficiencies that in the licensee's program they
5 would be items of non-compliance.

6 We call them deficiencies in the vendor program.

7 But as to whether this produces a non-quality product,
8 you know, the product itself being non-quality, I'm not
9 certain. It may be system, you know, failure to keep certain
10 records, this type.

11 Q Well, assuming that the NRC did have the authority
12 to issue some kind of certificate to a vendor and also
13 withhold a certificate to a vendor in certain situations,
14 in what respect do you think that safety would be improved
15 over the way it is now under the present system?

16 A Well, I think -- my impression is if you look at
17 the total customer load of a vendor and look at an individual
18 utility dealing with that vendor, trying to have the vendor
19 improve something, you know, say, a QA program that the
20 leverage of the NRC dealing directly with the vendor is much
21 more than a single customer dealing with that vendor.

22 I think that, of course, most major concerns have a degree
23 of pride in their product and they would react if, for no
24 other reason, than the bad name that they would get to give
25 higher attention to producing a quality product.

gsh 1 Of course, this is a very complex area because of
MM 2 contracting specifications and this type of thing. But I
3 do think that NRC should do more direct work with these
4 vendors.

5 Q The Three Mile Island accident, like the Brown's
6 Ferry fire before it, was not a design basis event. Do you
7 have an opinion as to whether the present approach of using
8 design basis events is or is not an effective way to handle
9 safety review?

10 A Well, as I mentioned, I'm not in that line of the
11 regulatory business. It seems to me a logical way to
12 conjecture those things which can go wrong and react to them.

13 I guess the other way is what we would call probabilistic
14 view of it. I think it needs to be obviously restudied and
15 perhaps there could be some combination of the deterministic
16 view and the probabilistic view.

17 But I am not equipped to say abandon it now. Okay.

18 Q Is it fair to say that the review of plant designs
19 for their ability to cope with design basis events at present
20 involves the postulation of some specific active and
21 passive equipment failures, if you know?

22 A I am not that familiar with the review process.

23 Q Okay. I think that you have already answered this,
24 but I want to make sure that you do have the opportunity to
25 have other thoughts. Other than use of the design basis event

gsh 1 approach to safety review, do you know of any other approaches
MM 2 which the NRC might consider adopting?

3 A Probabilistic would be another.

4 Q Either alone or in conjunction with design basis
5 event approach?

6 A Yes.

7 Q I want you to listen to the following and first
8 tell me whether you think the statements are fair ones.
9 The TMI 2 accident was initiated in a non-safety system
10 failure and exacerbated by the failure of a non-safety
11 grade valve.

12 The recovery cooling mode adopted the first night, which,
13 in retrospect, was the best choice, relied on the non-safety
14 grade reactor coolant pumps and the pressurizer heaters.

15 First of all, is that a fair statement, to your knowledge?

16 A Let me interject. I am not a nuclear engineer or
17 a plant engineer. And so, consequently, I may have heard
18 people say basically what you have said, but I personally
19 cannot make that statement.

20 Q Okay, that's fine. By the way, I do want to
21 encourage you to be cautious in that regard about offering
22 your own opinions.

23 Let me ask you this, however: Do you have an opinion as
24 to whether the events at TMI and the recovery of the plant
25 after the accident indicate that all equipment should be

gsh 1 reviewed without drawing any distinction between safety grade
MM 2 and non-safety grade equipment?

3 A I think it obviously means the NRC should review
4 whatever distinction it draws. Now if you use the term,
5 "all equipment," that may be too embracing a term. But
6 obviously, we should go back, NRC should go back and relook
7 at how it has defined safety grade equipment and non-safety
8 grade equipment.

9 Q Do you have any opinion as to the categories of
10 equipment that should be, shall we say, considered safety
11 grade equipment that is not presently considered safety grade?

12 A I do not have an opinion on it.

13 Q The NRC uses a standard review plan for reactor
14 safety review and has for some years. Do you believe that the
15 adoption of a standard review plan and the ground rules for
16 its application are matters which should have been set by
17 the Nuclear Regulatory Commission itself, meaning the
18 commission members?

19 A I am not that familiar with the plan. I am not
20 that familiar with the way it is implemented.

21 You could say, however, that the IE inspection manual may
22 be a companion piece. All right.

23 I believe that the commissioners should approve perhaps
24 the generalities of the plan. But the details of the plan,
25 the detailed procedures of how it is applied should be done

gsh 1 by staff.

MM 2 Q Insofar as the commissioners' review of the
3 general aspects of the plan, do you agree that it should be
4 done before a plan is ever implemented?

5 A Oh, I think to be of any value, the commission
6 interaction with what the staff intends to do should precede
7 the staff action.

8 Q By the way, is it fair to say that from time to
9 time the commission reviews staff action after the staff
10 action has already been initiated?

11 A Oh, the commission -- the staff does a fair amount
12 of staff work which is staff initiated. And then the
13 commission is informed of what the staff has done. And this
14 licensing regular performance evaluation is one of those.

15 I believe the commission was told by title that we were
16 thinking about this, or maybe more than we were thinking about
17 it, we were going to do this but without any details of what
18 was going on.

19 But later on, after we had worked on it awhile, we then
20 gave them a fairly detailed briefing. And that is not
21 atypical of the way the staff has performed.

22 Q Do you have an opinion as to any changes that should
23 be considered in the use of the present standard review plan?

24 A I'm not that familiar with it.

25 Q Mr. Davis, is it fair to say that the NRC has had

gsh 1 difficulty in deciding whether to backfit a change to a
MM 2 previously approved design either in individual licensing
3 cases or in generic cases?

4 A Has had difficulty?

5 Q Yes, in deciding whether to backfit.

6 A I believe -- well, let's put it this way: There
7 must have been some concern about it since, as I recall, we
8 now have a committee that deals with that particular issue.
9 As I understand it, the staff develops whatever the situation
10 may be and then comes to that committee, which is at
11 management level and a decision is made at that committee of
12 whether or not to "backfit" items.

13 Q You are talking to what is popularly referred to as
14 the Ratchet Committee.

15 A Yes, sir, the RRRC, or whatever.

16 Q Do you have an opinion as to what role the
17 commissioners should play, if any, with respect to these
18 backfit questions?

19 A The commissioners should at least know what backfit
20 questions are being treated by staff so that if they have
21 an interest in one, they can reach down and ask that it be
22 brought to them.

23 I don't know whether they know that now or not. And then
24 another consideration, of course, is if a threshold could be
25 defined, that certain backfit problems must be raised to

gsh 1 commission level.

MM 2 But I believe the Ratchet Committee has some idea, may even
3 publish a piece of paper that says that these are the things
4 that we're going to be considering for staff. And perhaps
5 this should go so the commission knows what is going on
6 before it has transpired.

7 Q By the way, do you know whether at present the
8 Ratchet Committee has a clear set of criteria by which to
9 judge backfitting?

10 A I was on the committee some years ago when it was
11 first getting started and haven't had a lot to do with it
12 since that time.

13 At that time, in the early stages, it was quite judgmental.
14 I don't know whether it has been developed more to a standard
15 at this time.

16 Q Some say that the NRC is very reluctant to backfit
17 when the cost of doing so may be high. Do you agree that
18 that is so?

19 A I am sure the cost is a consideration. As I recall,
20 it was one of the considerations. I just don't know whether
21 that is an overriding consideration or not.

22 Q All right. Do you think it's appropriate to
23 consider cost as a consideration in deciding whether or not
24 to backfit a change?

25 A I think there must be some consideration given to

gsh 1 cost. However, I think the overriding consideration is to
MM 2 the impact on safety.

3 Q It is also alleged that the NRC is inclined to
4 accept procedural changes for operator action to take the
5 place of a costly equipment backfit.

6 Are you in a position to agree or disagree with that
7 statement?

8 A I don't know.

9 Q Do you have any ideas as to what could be done to
10 improve ratcheting decisions as they are presently made?

11 A Well, one thing you might want to do with the
12 ratcheting committee, particularly for major issues, as
13 one of your questions implies, at least commission notice,
14 you might want to consider more participation by industry
15 in these particular things, and also, more participation by
16 groups. Let's say anti-nuclear groups on major backfitting
17 issues.

18 Q Do you have any thoughts as to how that participation
19 by industry or public interest groups, shall we say, might be
20 implemented?

21 A No. I would - if, in fact, the backfitting issue
22 is of importance, I think it would perhaps be
23 counter-productive to get it involved in a lengthy hearing
24 process. But I think that there should be some way they can
25 comment so that the ratcheting committee, or whomever, can have

gsh 1 more than just staff viewpoints.

MM 2 Q Are you suggesting some kind of public notice to
3 permit time for comment?

4 A On major issues.
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1 Q By the way, can you think of situations in which
2 the NRC at present has a public notification process which,
3 in your view, actually is of some benefit because of the
4 response to the public notification?

5 A Oh, I think that the process of new regulations
6 and public comment is very valuable. We do the same type
7 thing now in our Reg Guide series and I believe that is very
8 valuable. It is, in my opinion -- you get some comments
9 from the public or from outside groups which just don't
10 occur to staff, and which should be considered.

11 Q By the way, in your experience do the comments
12 always come from someone in industry, or at least someone
13 industry-connected?

14 A Oh, no. No, if you mean industry as the group who
15 are in the business making money out of it --

16 Q Somebody's got to put money in his pocket
17 eventually.

18 A No, frequently the comments -- well, not
19 frequently. Some of the comments come from groups that are
20 opposed to the nuclear industry, which bring about changes
21 to plans.

22 Q Some contend that as the NRC licensing process is
23 developed it has separated the safety debate from the legal
24 debate. It is said that safety issues are worked out in
25 lengthy negotiations between the NRC staff and the plant

kap MM 1 owners with their principal vendors and that the ACRS
2 appears to provide some oversight on the safety debate, but
3 that the legal debate bringing in the hearing boards and
4 intervenors follows quite separately and rarely approaches
5 the depth or effect of the safety debate which precedes it.
6 Do you think this is a fair description?

7 A Well, I think that the staff work done --
8 recognizing I'm not in that end of the agency -- my
9 impression is that the staff work done in the review of an
10 application is done with much greater detail than either the
11 ACRS review or the hearing board review, which of course
12 involves the intervening groups.

13 Q Well, do you have an opinion as to whether the
14 legal debate portion of the licensing process serves the
15 public interest?

16 A The legal debate -- the public hearing aspect of
17 it?

18 Q Yes.

19 A I think the public hearing aspect of it does serve
20 the public's interest.

21 Q Can you tell me in what respect you think it does?

22 A I think it brings issues, different viewpoints
23 particularly from the intervenor groups, which staff may or
24 may not and the applicant may or may not have considered if
25 these were not brought in that arena.

kap MM

1 Q Okay. Is it fair to say, then, that you think
2 that portion of the entire process should be continued?

3 A In a general sense. And there may be some area
4 where it could be sharpened, improved, made better, but I
5 think that we should have a hearing process or a public
6 participation process.

7 Q Okay. Some complain that intervenors in the legal
8 process cannot participate sensibly unless they have
9 technical expertise and that they can't have technical
10 expertise unless they have funding. Do you believe that
11 providing such funding could make the existing licensing
12 process a better one?

13 A I really haven't decided on funding. I do believe
14 this, however: I mean there are, as you know, two issues on
15 funding. I do believe that if funding could be controlled
16 so that people would not enter into the process in whimsy,
17 you know, just to enter into the process, that there should
18 be some way that the intervenors can reach a more technical
19 expertise.

20 Now, maybe this is by providing them with the expertise
21 and not the funding, but -- however, I will say this: I
22 have been impressed that the intervenors do a pretty good
23 job in identifying issues at the present time.

24 Q By the way, how have you been -- how have you
25 developed that impression?

kap MM

1 A Well, just in general from watching the issues
2 which have come up from the hearing process.

3 Q You have seen some issues coming up from the
4 hearing process?

5 A From the hearing process.

6 Q From intervenors or at least issues that appear to
7 be initiated by intervenors?

8 A Yes.

9 Q Can you give me a specific example?

10 A I think emergency planning might have been one.
11 For some years they've been interested in. Informing the
12 public, this type of thing. There again, this type of issue
13 I don't think requires the deep technical expertise that
14 perhaps you are referring to. In other words, those issues
15 can be arrived at fairly easily and I think they are
16 important issues. But I think the intervenors have focused
17 attention on that and perhaps have attempted to focus
18 attention on it. Perhaps the NRC has not responded
19 appropriately to that interest.

20 Q Do you have an opinion as to how to change the
21 present licensing process in order to improve it?

22 A No.

23 Q Do you think that the greater use of a
24 standardized plant design would improve safety and licensing
25 process?

kap MM

1 A Standardized plants, and this is strictly an
2 opinion since I'm not involved in that issue, but
3 standardized plants is a very attractive idea. My concern
4 about standardization in any way, not just in the nuclear
5 business but in standardization, is that it may stifle
6 innovation and the innovation may lead to higher safety. I
7 believe that we should move at least partially into
8 standardization but I would hate to get to the point in
9 standardization where we keep selling Model T Fords because
10 the Model T Ford is standardized and that there can be a
11 continuation of aggressive looks into better ways for
12 safety.

13 Q Let me ask you something. Can you think of an
14 example of a situation in which a private industry has made
15 an innovation that has led to higher safety, quite
16 independent of something that was initiated by the NRC?

17 A You mean in the nuclear business?

18 Q Yes.

19 A Well, it depends on what you mean by the NRC. I
20 think the NRC may establish a goal, like for example zero
21 releases from plants and then the industry, seeing that
22 goal, will react to try to achieve that goal, perhaps coming
23 up with techniques and devices NRC never would have thought
24 about.

25 Q Can you think of an example, however, of a

kap MM 1 situation in which the industry thought of an innovation
2 leading to higher safety that was not even stimulated by
3 some kind of NRC goal?

4 A I can't think of one, but that doesn't mean there
5 aren't some.

6 Q Okay. Assuming you did make use of a standardized
7 plant design, do you think there might be alternative means
8 of obtaining — strike that.

9 Again, assuming standardized plant designs were used, do
10 you think that there is another way of still encouraging
11 innovations leading to higher safety?

12 A I think that if you did go into standardization,
13 yes, you could. It may be a little bit more difficult, but
14 if you could keep staff attention, NRC attention on the need
15 for improving safety rather than saying, now we have a
16 standardized plan, it meets our standards so consequently we
17 could lift forever, or what if it is 40 years on that plant?

18 If we have a group whose interest was improving safety,
19 that they could identify ways, examine the standardized plan
20 that safety could be improved, and pose these standards for
21 solution, again using ACRS as is now done. But I think it
22 would require more effort than currently.

23 Q What do you mean by requiring more effort?
24 Talking about resources?

25 A I am talking about NRC resources. See, when you

kap MM

1 go through the budget process, one of the things that is
2 more difficult to sell in the budget process is something
3 which is viewed by budget people as somewhat esoteric. What
4 is the product? And while the product is future improvement
5 in safety, maybe that would sell and I'm sure it would sell
6 right now -- but five, 10 years from now I think it maybe
7 would be very difficult to sell something that is as
8 esoteric. While with safety -- the concern for safety, the
9 concern for improvement in safety built into the individual
10 review process is more a natural part of the ongoing
11 regulatory program.

12 But it could be done, and in fact, if you could keep the
13 attention on, it might even be better done because it
14 wouldn't be pulled out, these are safety improvements.

15 Q Given the problems exposed by TMI-2, do you think
16 it would be unreasonable if the NRC stopped issuing new
17 construction permits and operating licenses until the
18 licensing process is overhauled?

19 A Totally stopped?

20 Q Stopped issuing new construction permits and/or
21 operating licenses.

22 A Now, you're not suggesting that they stop the
23 staff review process that leads to the issuance. Or are you
24 suggesting that?

25 Q Let's consider both alternatives. One is that

kap MM 1 there is no further review and those matters are put aside
2 entirely until the licensing process can be overhauled. And
3 the second alternative would be to continue review, also try
4 to overhaul the licensing process and simply withhold the
5 actual issuance of a construction permit and/or an operating
6 license.

7 A Well, I'm not certain what overhauling, or the
8 degree of overhauling people are thinking about with regard
9 to the licensing process. You know, my impact has been
10 basically by reading. There are some people that think it
11 should obviously start from zero, others who think tinkering
12 will do it, or fine-tuning, I think is a better description.

13 I personally think that the review process should
14 continue and that at the point of license issuance there
15 should be -- we should stop and really look at it. Now,
16 that won't be coming along, as I understand it. There are
17 not scheduled to be a great number.

18 Q There are a couple.

19 A Yes, and I think those should be considered not as
20 staff actions but as Commission actions and that the
21 Commission deliberate on what they want to do with that.

22 Q Whether or not to issue an operating license to
23 Salem-2, for example?

24 A Right. The Commission should be involved in that
25 licensing action.

kap MM 1 Q This is what? During the time that decisions are
2 made concerning the licensing process?

3 A Right. Until the investigations are finished and
4 people can really sit back and say, Where are we going from
5 here?

6 Q Do you have an opinion as to any limitations that
7 should or could be placed on the issuance of operating
8 licenses pending reexamination of the process?

9 A No.

10 Q Now, I want to go to the next section, which deals
11 with the phase of NRC action concerning operating plants.
12 Is it fair to say that as respects operating plants, the NRC
13 assigns the primary responsibility for safety to the plant
14 owner and provides an audit review of the owner's
15 performance in meeting that responsibility?

16 A Yes.

17 Q Do you think the NRC should continue to do this?

18 A Yes.

19 Q Are there disadvantages to this method?

20 A Lets' see, disadvantages to that method -- I guess
21 the only disadvantage that I can think of to the method is,
22 again, the different degrees of safety sensitivity of the
23 particular licensees, and of course I think there are ways
24 to overcome that as we have already discussed.

25 Any other shift, as I see it, would lead to direct NRC

kap MM

1 running the plant, federalization of the plant, and that is
2 something that should be approached with the greatest of
3 caution, in my opinion.

4 I am not convinced, for example, that taking an employee,
5 the same human being and moving him from working for a
6 utility or working for the federal government makes him more
7 safety-conscious. If in fact the federal government ran the
8 plants, and I'm sure if it ran the plants it would have some
9 production quota it was looking for and the operator -- the
10 federal employee operator would be interested in that
11 production quota as currently private industry operators are
12 interested in production quotas.

13 I do think -- and again I have been a strong supporter of
14 the resident inspection program -- I do think that we should
15 sharply increase our audit function of the licensing.

16 Q Why don't you tell me in what specific respects,
17 as best you can, you would sharply increase the NRC activity
18 in the audit process?

19 A Okay. I think the resident inspection program,
20 personally, is the way to go. I think that the presence of
21 the regulator on the site, assuming that the regulator is
22 able to maintain his objectivity and remoteness as the
23 regulator from the production people, in itself his presence
24 and the fact that they cannot predict when he will appear
25 for a certain operation leads to an increased awareness. I

kap MM 1 guess one would call that the policeman effect, that there
2 is some benefit to that.

3 I think also that the individual being on-site who has no
4 production, absolutely no production interest, will view
5 situations in a manner somewhat different than people with
6 production interests and that he will be in a position to
7 transmit this information back to the NRC system in a more
8 objective sense.

9 Q How do you propose to ensure the "objectivity and
10 remoteness" of a resident inspector?

11 A The resident inspector program -- first you must
12 select good people. Secondly, you must have it clearly
13 defined, a code of conduct for these individuals which
14 should be quite rigid. The individual should be relatively
15 well-paid so that they are satisfied in that particular
16 job. The individuals should be rotated in that assignment
17 after a period of time. The individuals should have some
18 way for social and technical exchange other than with plant
19 employees.

20 I think if you do that -- and then of course you need to
21 audit these people. And I believe one way this could be
22 done is to send in a group of other inspectors who look at
23 particularly the events that have transpired at the plant
24 and let them take a hopefully disinterested view of these
25 events and see if they arrive at the same impressions as the

kap MM 1 resident inspector.

2 Q There is now being put into effect a resident
3 inspector program, is that correct?

4 A Right.

5 Q It's, I guess, in effect in some plants and in the
6 process of being put in in others.

7 A Right.

8 Q To your knowledge have they selected good people?

9 A Yes.

10 Q To your knowledge, is there a clearly-defined code
11 of conduct governing these resident inspectors?

12 A Yes.

13 Q Where is that, by the way?

14 A It's in an I&E manual chapter or in addition to a
15 manual chapter.

16 Q And you're satisfied with it?

17 A It's tough.

18 Q Does that mean you're satisfied with it or not?

19 A It can always be reviewed with a lot of
20 experience.

21 Q As of the moment are you satisfied?

22 A I think it is as good as I've seen, yes.

23 Q Are you satisfied with it? I think it's a
24 yes/no. I'm not sure why you seem unable to give the answer
25 or not.

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Yes, I'm satisfied with it.

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1 Q I should know this. Are they going to engage in
2 some kind of rotation of the residence inspectors?

3 A Yes.

4 Q Is there a way that has been set up for providing
5 for a social and technical change for each of the resident
6 inspectors outside of plant personnel?

7 A Basically it was by visitation of a man's
8 supervisors of a plant bringing him back to the regional office
9 on an occasion and having other inspectors go out. I understand
10 now they are moving into a type of inspection where there
11 will be more than one inspector at the plant, which should
12 provide this relief.

13 As initially conceived, my biggest concern was that
14 particular concern that the man was out there by himself and
15 would feel necessary -- it's a natural thing -- necessary to
16 deal with the licensing staff to find relief there.

17 Q Are you satisfied the way it is set up now will
18 satisfactorily resolve this problem of ensuring social and
19 technical exchange?

20 A Yes. If not resolving it completely, it will
21 greatly improve it.

22 Q Other than the Government taking over a plant, is
23 there any alternative to an audit review system for ensuring
24 the safe operation of a plant?

25 A Well, one of the things that has been mentioned is

sls-2 1 that there be a Government representative highly skilled in
2 plant operations who would somehow be in the control room
3 24-hours a day ready to instantly respond to any problem.
4 Personally, I have difficulty with that. Conceptually it
5 sounds good. Practically, I have difficulties with it. I
6 cannot imagine hiring people of that quality who -- for eight
7 hour shifts or whatever the shift is -- sit there and watch
8 other people do things and are constantly alert so that they
9 can move in instantly to give directions or whatever when
10 something goes wrong. People of that quality, I think, need
11 more involvement.

12 Now, perhaps you could create some situation where there
13 are other things they do to maintain this involvement by
14 involvement. The involvement is necessary to maintain the
15 sharpness, as far as I'm concerned. I really think that
16 having NRC presence on site and very available does just about
17 as much as that would do.

18 Another thing, the NRC presence -- an aspect of NRC
19 presence that should be considered is this "take over the
20 plant" does the NRC man whoever he may be under certain
21 situations take over the plant? I don't believe that's a
22 concept in our resident inspection program, that he takes over
23 the plant. And if it is intended or believed necessary to take
24 over the plant, this is something that really should be
25 considered. By considered, I mean should be examined. I am not

sls-3

1 suggesting it be done. I think it should really be examined
2 before we begin to move in that direction.

3 Q Do you have an opinion one way or the other as to
4 whether there should be situations in which an NRC man takes
5 over the plant?

6 A I have difficulty with one man taking over the
7 plant. I have difficulty in thinking that we can have one
8 man so skilled that he can match expertise with the staff of the
9 licensee.

10 Q Do you have an opinion as to or a thought as to
11 any method of resolving that particular difficulty you have?

12 A Well, what you could do, I guess, is have an NRC
13 staff at the plant of various skills that could move in and at
14 least render direct advice to the licensing when things are
15 going wrong. As I recall, one of the remarks that were made
16 in Three Mile Island while it was unfolding was that the people
17 who were on site were very busy. In other words, reacting to
18 various things. And there was a perceived need, at least
19 early in the unfolding of this event, to have some group who
20 were not reacting to the various things, but sitting one step
21 back saying where do we go from here, what is happening? Where
22 do we go from here? And perhaps an NRC staff, either here or
23 up there very available could fulfill a role for that.
24 That actually is what IRACT is supposed to be doing, but they
25 have a difficult time doing it simply because of communication.

sls-4 1 Q Do you have an opinion as to whether or not you
2 should have a team or staff of NRC people available at the
3 plant?

4 A I think we are aiming in the new resident concepts
5 to have more than one. But again, as I understand the concepts,
6 it is a continuation of the inspection role. In other words,
7 they just are moved to the site for presence and this type of
8 thing. And maybe we should look at the composition of that
9 team and say we need different types of individuals on it who
10 know that one of their prime responsibilities is if things
11 begin to deteriorate at this plant they would be expected to
12 move promptly into a detailed analysis role of what's going on.

13 Q Other than financial considerations, are there any
14 disadvantages to this method?

15 A Again, the disadvantage is when things are going
16 great it may be hard to challenge these people to keep the
17 proper people. People of that type like challenge.

18 Q Is it fair to say that at present most of the audit
19 review involves checking a licensee's records?

20 A You're talking about inspection?

21 Q Yes.

22 A A portion of it does. I think -- in my personal
23 opinion, coming from inspection, is that there is less of that
24 in the context of the use of those words than people seem to
25 think there is. You are checking the records, most people

1 conceptualize opening something like a ledger and an auditor
2 auditing the ledger when actually checking the records means
3 such things as examining radiographs. It means such things as
4 looking at trace charts on instrumentation. It means such things
5 as looking for trends in records. It is not just simply
6 checking records in the sense that apparently some people
7 think.

8 In my opinion, in the absence of a resident on site, it is
9 an essential process because the history of that plant is in
10 those records. The trends of that plant is in those records,
11 and a fair amount of time is spent checking those records.

12 Q How is it that the inspector ensures or determines
13 that the records are accurate?

14 A Many of the records are instrument records. Of
15 course, you could tinker with the instrument. Also, many of
16 the records are records that it is to the benefit of the
17 licensee as to their accuracy. As to our benefit, power
18 levels and this type, and he has to know it also.

19 One of the questions, and that is a very good question, is
20 how do we know the licensees don't keep two sets of books, and
21 this has occurred to I & E. How do we know this? And one of
22 the things that I & E is moving into is to do some independent
23 auditing of those things that the records portray. Now, they
24 have been working on this for some time, but it is, as I recall,
25 one of their major efforts.

sls-6

1 Q Who is they? Who is working on it?

2 A It would be the division directors or the division
3 director. It is called the Independent Measurement Program, and
4 it's designed to do independent measurements to independently
5 determine whether we agree with that which the licensee has
6 done, and that would be under the three divisions.

7 Q When you say something has been worked on for some
8 time, does that mean there is at present no independent
9 auditing?

10 A There is some, but -- and again I am speaking of
11 how I & E used to be. The goals when I was there.

12 Q By the way, when you say used to be, how long ago
13 are we talking about?

14 A A couple of months, but management changes.
15 That has a strong impact on organization.

16 Q Okay.

17 A One of the major efforts that at least prior
18 management in I & E sought to bring about was a move into
19 independent measurement. Now, I will say this again, independent
20 measurement in I & E is a controversial issue. It's just
21 like the licensee regular performance evaluation. There are
22 people who think we do enough of it, and there are those --
23 There is another way that you can independently determine things
24 without actually doing them, and that is watching them being
25 done. And the term we used for that is direct observation. And

sls-7
1 a fair amount of direct observation, an increasing amount was
2 being done. The problem with independent measurement is
3 selecting the parameters to measure, and then determining whether
4 you can measure them or not. I believe I & E had a contract
5 for some time with a contractor to look at various systems in
6 the plant, equipment in the plant, and determine where in the
7 lifespan of that particular system or equipment it would be
8 best to perform independent measurements. How you would perform
9 it and what you would find out when you did perform it.

10 So, there has been a fair amount of effort to move into this,

11 Q By the way, are there explicit criteria as to when
12 an inspector would use the direct observation method of
13 auditing, for example?

14 A No, I don't believe so.

15 Q Do you think there should be?

16 A I think there should be some criteria that says he
17 at least puts X percent of his time doing that type of thing,
18 and these are the areas that he should look at.

19 Now, the areas are identified. I don't believe, unless
20 there has been some modification, that there is a requirement
21 he must do independent measurement or direct observation.

22 Q Okay. By the way, do you have an opinion as to
23 whether independent measurements should be employed?

24 A Oh, I strongly support independent measurement.

25 Q And the direct observation? Do you strongly support

sls-8
1 that?

2 A I strongly support that.

3 Q Can you tell me the names of some people who have
4 at least some reservations about either or both of those?

5 A The reservations are not emotional so much as
6 technical. They think some things you just technically can't
7 do. I believe that management in I & E is uniformly in support
8 of this, and that somewhere down in the staff there are people
9 who raise questions that you can't do this, you can't do that,
10 and we have to figure out how to do it. That type of thing.

11 Q You can't name anybody, though, at the management
12 level --

13 A I think management is pretty well committed to it.
14 They recognize it's not as easy as it sounds. It sounds easy
15 conceptually. Oh, we just go out and do it. But the people
16 who do these sort of things say it's not that simple. You have
17 got to identify, have to know when in the life span in the
18 plant, when in the life span of the equipment, specific type
19 tests, should we get contractors to do them. See, one of the
20 things an independent measurement type work, there is upgrading
21 in the sensitivity and ability to do this. Well, I personally
22 was opposed to NRC doing it directly. But rather to hire the
23 cutting edge of innovation as contractors come in and do it,
24 and that got to be quite a discussion.

25 Q You favored independent contractors?

sls-9

1 A Yes. To stay more tuned to it.

2 Q What are the disadvantages of independent contractors
3 other than cost?

4 A There are some people who think NRC should do it
5 themselves. We think we should do it, we should have the skill
6 on our particular roles. And it's just philisophical.

7 Q As of the time you left I & E, did you have an
8 opinion as to whether the inspection program was sufficiency
9 detailed to ensure safety in operating plants?

10 A The guide, the manual?

11 Q The method of inspection.

12 A Okay. Recognizing that it is an audit inspection,
13 I think the audit inspection program was pretty well drawn,
14 was well formulated. Now, you can always say, well, we should
15 do more and I don't think many people would argue with you.
16 That -- to feel more confident with it, when you do more of it.
17 But if you're questioning, did we look at the right areas, I
18 think we looked at the right areas. I would have liked to have
19 seen more independent measurements, more direct observation
20 in those areas. But I think in general, we were looking at the
21 right areas.

22 Q But you did think that in general the method as in
23 place was sufficient to ensure safety?

24 A At least to give us an acceptable confidence in the
25 licensee's operation.

MM mte

1 Q Is there at present any criteria as to what an
2 inspector will or will not -- strike that.

3 Is it fair to say that in part -- not in part -- that the
4 audit process involves spot-checking?

5 A That's what it is, yes.

6 Q By definition.

7 A Yes.

8 Q Where you don't purport to check everything.

9 A Right.

10 Q Are there any express criteria concerning the
11 spot-checking process?

12 A There are -- I&E has a manual, and that manual
13 describes the inspection program and goes into detail what,
14 in various systems, should be inspected.

15 Q Should be or must be?

16 A They're called requirements, inspection
17 requirements.

18 The way this is generally implemented is that the
19 inspector develops an inspection plan based on the manual,
20 which is approved by his supervision, and he goes out and
21 performs an inspection, comes back and reports it to his
22 supervision. So there are -- the manual describes
23 inspection programs.

24 Q Are you satisfied that that procedure ensures that
25 the spot-check is minimally sufficient?

MM mte 1 A The spot-checks should be sufficient to make a
2 judgment, yes. Now again, you do more of it, you get more
3 confidence. You go in more detail and independent
4 measurement; you get more confidence.

5 So I'm not saying, if I were given unlimited resources,
6 that I wouldn't refashion some aspects of the program.

7 Q Let's give you unlimited resources. What would
8 you refashion?

9 A First thing I would do is go to a resident
10 inspection program.

11 Q We discussed that.

12 A We've got the resources to do that.

13 The second thing I would do is move firmly into
14 independent measurements. In my opinion, if there is a
15 weakness in the inspection program, it is in the independent
16 measurements. We have accepted the licensees' records for
17 performance without independently inquiring into those
18 records.

19 Maybe that acceptance is perfectly okay. But we have not
20 inquired to be able to say we have inquired.

21 Now, the term we like to use in IE is licensee
22 verification. We are verifying what he told us, with the
23 assumption, hopeful assumption that, yes, we will verify it,
24 that he has been developing the records and we have seen the
25 records.

MM mte

1 But I think that, in my opinion, is the area that needs
2 the most attention in the inspection program. Again, I
3 don't see it being anything but an audit program. Now,
4 maybe the size of the sample will become larger. But I
5 don't see us not doing an audit-type program.

6 Q Am I correct that for preoperational testing,
7 there are inspectors -- strike that.

8 Is it fair to say that the NRC and the nuclear industry
9 do not have a good record of evaluating operational
10 experience for matters of safety significance?

11 A I would say that Three Mile Island would indicate
12 that, yes.

13 Q They do not have a record?

14 A Based on Three Mile Island?

15 Q Prior to Three Mile Island, would you have said
16 the NRC and the nuclear industry did have a good record of
17 evaluating operational experienced for matters of safety
18 significance?

19 A I'm not exactly sure how you're using the word
20 "record." I think we had a system. I think the system
21 could have been improved, particularly from the generic look
22 at what the situation would be of the event.

23 Q When you say you had a system, did that involve
24 the use of LERs, licensee evaluation reports?

25 A Right.

MM mte 1 Q That was the system?

2 A That was the system.

3 Q Are you familiar with the newly-planned Office for
4 LER Evaluation?

5 A Generally familiar, yes.

6 Q Do you have an opinion as to whether it will make
7 a difference?

8 A Oh, I think it will make a difference. I think --
9 the thing about that Office, though, is whoever heads it has
10 got to be a very strong individual. He has got to be -- his
11 strength must lie in his competence. He must be able to
12 confront the line offices and bring about changes that he
13 thinks should be made.

14 Now, I do think this, and I'm concerned about the
15 attention given to the Office. It will get a lot of
16 attention at first. But the Office will need some leverage
17 to get done what it needs to get done. It needs, in my
18 opinion -- it could perhaps use the ACRS for leverage. In
19 other words, someone should be reviewing what that Office
20 does.

21 I think that every situation, every event that comes up,
22 that comes to be a matter of dispute as to the significance
23 of it and where that Office gets into a real dispute with a
24 line office, that should be -- the Commissioners should know
25 about that, that here we have an event where there is strong

MM mte 1 technical dispute in the staff as to the significance of
2 that event.

3 Q In other words, you need a referee to decide
4 disputes between the LER and the evaluation?

5 A And somebody should know those disputes are going
6 on.

7 Q Do you know whether the present setup as planned
8 has anything like that built into it?

9 A I don't recall. I think there's some ACRS
10 review. But I think that review -- my impression of it is
11 not that it is aimed towards the dispute issues. Again, I
12 think that what we really need is a scheme where there are
13 sharp differences of technical opinion, that one party
14 doesn't win because he is the best arguer. We need some
15 group that doesn't have involvement in it to say, look at
16 that and say which is the way to go.

17 Q Do you think the ACRS, the way it is presently set
18 up and given its other duties, is really in a position to
19 perform this function of arbitrating between the technical
20 people and the LER evaluation group?

21 A Not the way it works right now. I think they
22 could be the umbrella under which a group could operate.
23 The ACRS has high respect. The staff respects ACRS. And I
24 think if you brought in -- maybe give them some more staff.
25 I would hope there wouldn't be a lot of these disputed

MM mte 1 issues, but there may be.

2 We will need some experience on it. But what I am saying
3 is, I think those sharpened, disputed issues should be
4 decided outside the staff of the NRC or the decision
5 reviewed by someone outside the staff.

6 Q By the way, I had asked whether you think this LER
7 evaluation group could make a difference. In what specific
8 respects do you think they would make a difference?

9 A I think the difference will be they will focus
10 attention on the value of LERs, they will focus attention, I
11 hope, on the generic aspects of LERs. I personally think
12 that from the plant-specific aspects of LERs, they have been
13 pretty good. Something happens, you get it corrected at
14 that plant.

15 And there has been some generic view of these. But I
16 think the generic review has taken too long, and other
17 things come and impede with its progress. There are other
18 demands on the staff doing that generic look at it.

19 So I think we really need to sharpen it up on what is the
20 impact of this particular event to other plants; and again,
21 as I believe I mentioned the last time we talked, that it
22 needs to go a step beyond. In other words, as I say, most
23 of the events are handled by the plant systems. You don't
24 have a Three Mile Island. Most of them are handled.

25 But what we need to do is have a group that says, okay,

MM mte 1 this is what happened and the system handled it; but what if
2 this other component had not handled it, or if the operator
3 had done so and so? Where would this have taken us? I
4 think that's an important aspect of this generic review, the
5 what-if.

6 Q You are familiar, are you not, with the concerns
7 that an inspector named James Creswell had raised with
8 respect to -- I guess to licensee events at the Davis-Besse
9 plant, is that right?

10 A Yes.

11 Q Is it fair to say those were instances in which
12 the kind of corrective action that Mr. Creswell thought
13 should have been taken was not taken under the
14 then-existing LER system?

15 A As I recall, that's true. Now, it's my impression
16 that at least staff thought the corrective actions were
17 being, quote, "worked on." So it may have just been a
18 matter of timing. But I'm not that familiar with the
19 details of that particular issue.

20 Q Do you know enough to have an opinion as to
21 whether the institution of an LER evaluation group would in
22 any way have obviated the problem that Mr. Creswell appeared
23 to have in ensuring that corrective action was taken?

24 A I think there are two ways. There's one thing
25 that hopefully it will do and one thing that I'm not sure

MM mte 1 it is set up to do right now.

2 If an evaluation group properly performs, they would have
3 seen those events in the same light as Mr. Creswell, and if
4 they saw them in the same light as Mr. Creswell, action
5 would have been taken.

6 I think, however, again, the group may have not seen them
7 in the same light as Mr. Creswell, and you still must have
8 some scheme to get these high concerns on lower staff levels
9 flushed up without going through this back and forth
10 argument of different professional opinions for long lengths
11 of time.

12 Q Am I correct, though, that one of Mr. Creswell's
13 concerns was perhaps not so much identification of problems
14 as ensuring that prompt corrective action was taken with
15 respect to identifying problems?

16 A I think that's true.

17 Q What is it that the NRC proposes to do that you
18 are aware of that would ensure that prompt corrective action
19 is taken?

20 A I would assume that establishing a system that
21 will accomplish that will be part of the charter of this
22 particular group which has been recently established. What
23 procedures are in effect right now to take care of that
24 problem, I don't know.

25 Q To your knowledge, are there any criteria for

MM mte 1 determining when corrective action is taken after a problem
2 is identified as a result of a licensee event?

3 A As a status criteria, no, I don't know of anything
4 that you have to do within five days, ten days, that type.

5 Q Should there have been?

6 A It may be. You see, you can't give the answers to
7 something on a time scale, that's true. At least I think
8 that's true.

9 But I do think that we need to have these identified and
10 milestones set, so that the proper level of management knows
11 work is going on. See, again, we need to know that they are
12 not just getting backlogged somewhere and they will be
13 picked around next year, when they have time; but that in
14 fact here is something with high priority or some staff
15 member has identified as high priority and is in fact being
16 worked.

17 But I think a lot of this type thing must come out of
18 procedures which ought to be developed by that review
19 group.

20 Q Do you think that review group should have the
21 power to, shall we say, set milestones for taking corrective
22 action?

23 A Oh, yes. Or for -- at least milestones to assure
24 that progress is being taken. I don't think they will be
25 able to say, you must have an answer to this in six

MM mte 1 months. There may be a problem you can't get an answer to
2 in six months.

3 But I think they should assure that active work has been
4 going on on these major things. I also think that group
5 should have an open telephone line to any staff member in
6 this NRC who thinks he's got a safety problem that is not
7 getting worked properly.

8 See, part of the Creswell problem was disagreement
9 between Creswell and his various levels of management. They
10 just weren't seeing the problem the way he was seeing it.

11 Q Is it fair to say that, as of the time, there was
12 no clearly delineated office that was responsible for making
13 the final decision as to what problems had to be corrected
14 and when they had to be corrected?

15 A I think that's true. But I think, with regard to
16 generic issues, that generally -- now, whether it is clearly
17 defined or not -- generally, the opinion of IE was that
18 eventually those would be decided by NRR.

19 Q What was that opinion based on? Is there
20 something in writing that says that?

21 A NRR -- see, NRR is generally considered -- at
22 least I consider it, so maybe since I consider it I think
23 it's generally considered -- NRR is a repository of the very
24 high theoretical skills in these areas, as opposed to IE's
25 prime interests, which are more operational type. Besides,

MM mte 1 if this is an issue which requires change in plans, NRR
2 would have to impose that change.

3 Q Well, is it fair to say that one of the problems
4 is that there is no explicitly defined responsibility in any
5 one particular office for deciding what corrective action
6 must be taken after a licensee event and under what
7 timetable a corrective action must be taken?

8 A I think the timetable is not as clearly defined as
9 the responsibility for corrective action. I think NRR has
10 the basic responsibility of reviewing events and saying,
11 should there be corrective action in the form of licensing.

12 Q So you do think at present the NRR does have the
13 final responsibility?

14 A Yes. But if you ask me to pull a piece of paper
15 out and show you that, I may be hard pressed to do that.

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gsn 1 Q By the way, do you know whether the LER evaluation
MM 2 office, as it has been constructed, is or is not empowered
3 to make a final decision as to what changes must be made or
4 when they must be changed?

5 A I don't know.

6 Q You don't know one way or the other?

7 A No.

8 Q In light of the TMI 2 experience, do you have
9 an opinion as to whether Met Ed was prepared to meet its
10 operational safety responsibilities in accident response?

11 A As TMI unfolded, it would appear to me that Met Ed
12 should have had -- or been prepared to do more deliberative
13 analysis than apparently they were able to do.

14 Again, where do we go from here type of analysis.

15 Q What leads you to believe that they did an
16 insufficient amount of deliberative analysis?

17 A Basically, what leads me to that is during the
18 unfolding of event, particularly on the Wednesday, the
19 impression I got from IRACT members is that they were having
20 a difficult time getting information as to predicting what
21 might be next. And I would assume from that that they
22 couldn't get it from Met Ed because Met Ed wasn't doing it.
23 Maybe Met Ed was doing it. We just didn't get it.

24 Q That's what I wanted to clarify. Is your impression
25 as to Met Ed's inadequately -- then based solely on such

gsh 1 information as you got from IRACT?

MM 2 A Yes.

3 Q Okay. Are there any other respects in which you
4 have an opinion as to whether Met Ed was prepared to meet
5 its operational safety responsibilities in an accident
6 situation?

7 A That's a very difficult question. I don't have
8 an opinion on that.

9 Q Just the one concerning predicting potential
10 problems or alternatives.

11 A The unfolding of events, where is it going, rather
12 than reacting to where it's been, where is it going.

13 Q Okay. Given the experience of TMI, would you agree
14 that other utilities are now operating in a situation where
15 the people running the plant and their immediate on-site
16 supervisors -- I should say the operators running the plant
17 and their immediate on-site supervisors -- are not capable
18 of an adequate response to emergency conditions?

19 A Are not capable of an adequate response.

20 Q Not capable.

21 A Would you repeat the question?

22 (The Reporter read the record as requested.)

23 A I am not that familiar with conditions at other
24 plants, with how they're staffed at the present time. My
25 impression is that there has been a large reaction on the

gst. 1 part of the industry to this particular accident, recognizing
MM 2 that they must upgrade their preparation to respond to this
3 type of event.

4 Q Do you have an opinion as to what should be done?

5 A Really, I think that discounting, let's say
6 engineering fixes, engineering changes, it would appear to
7 me that, again, they should either -- they should be able to
8 give this engineering forecast of things or where are we
9 going, not just simply falling into a reactive mode, but
10 what is this leading to?

11 Q Any suggestions as to how you're going to get that
12 result, that capability?

13 A It would be with appropriate technical people,
14 appropriately trained technical people.

15 Q Some suggest that a national reactor monitoring
16 center should be set up where telemeter data from every plant
17 is available, along with round-the-clock surveillance by
18 reactor plant experts.

19 With such a center, top flight engineering talent could
20 be available and well informed to provide advice for accident
21 response.

22 Regulatory surveillance might work through the same
23 channels. Do you have an opinion concerning such a concept?

24 A I think, again, conceptually, it sounds great.
25 Practically, getting it implemented, it would have to be done

gsh 1 with the utmost of caution. By that I mean you would have
MM 2 to clearly identify what parameters you want monitored. You
3 would have to clearly identify what the role of that center
4 is when they see changes in parameters. You would have to,
5 of course, have with that group a tremendous improvement in
6 what we had with the operations in here for communications
7 to the site in order to impact on the unfolding of the
8 event, anyway.

9 Merely knowing the event was unfolding won't impact on it.
10 You have to be able to communicate what you are seeing and
11 what should be the reaction to it.

12 I say the conception is good, but again, I think it's one
13 of these areas that must be looked at with extreme deliberation

14 Q This concept talked about -- talks about round the
15 clock surveillance by reactor plant experts and the
16 availability of top flight engineering talent.

17 Do you think as a practical matter that you would never be
18 able to get such talent, such experts, because of the nature
19 of the job?

20 A I think it would be difficult to maintain the level
21 of the challenge that top flight people like to set their
22 watch dials.

23 Now you might be able to have an engineering center
24 somewhere. Maybe the thing to do is have the same group of
25 people do event analysis as their normal course of work, with

gsh 1 lower skilled people watching the dials.

MM 2 And you call on this core, not around the clock watching
3 the dial, but they are very available when things begin to
4 deteriorate, as they can tell by the reading.

5 In other words, I don't think it's inconceivable. I don't
6 think that you should abandon the thought or the concept merely
7 by building the belief that you can't get people to do it
8 because I think you might build other jobs that would be
9 challenging and I think event evaluation and "what if" events
10 is the kind of things a lot of engineers like to do.

11 It might be another aspect of the work which would give
12 them this day-to-day professional fulfillment and keep them
13 attuned to plant operations also.

14 That's where you learn plant operations, what goes on.
15 Have them really available not around the clock sitting. I
16 don't think that you can have them sitting around the clock
17 at that skill level.

18 Some people you can have around the clock watching and
19 know who to call when things begin to deteriorate.

20 Q Other than financial considerations, can you think
21 of any disadvantages with this concept?

22 A I think, conceptually -- again, it's not something
23 that we should rush into because I think if we run into it,
24 we may do it wrong.

25 I think that you would have to conceptually, for example,

gsh i individuals assigned to this particular task would not look
MM 2 to it as a career assignment. It's something you put a few
3 years in and then go back to something else.

4 They would have to remain very sharp in hardware aspects
5 of the plants to really fulfill the role that would be
6 envisioned for them, that they can't influence what's going on
7 at that plant remotely from the plant. You really have to
8 know those plants.

9 You would have to have drawings familiar with the plant,
10 familiar with equipment names, and all that stuff, because
11 part of the problem once you have something unfold is merely
12 communicating.

13 Plant people talk in much more detail than the people
14 sitting back. And the things they're concerned about may be
15 valve AX-2. We may not even know what valve AX-2 is sitting
16 back from it.

17 So it would be a fairly massive undertaking.

18 Q Do you believe that the government should consider
19 buying all commercial nuclear plants and operating them through
20 COMSAT-type agency, selling the power to utilities?

21 A Here, again, as I have mentioned -- you mean
22 existing plants, leave them where they are and just run them
23 where they are?

24 Q Yes.

25 A My impression of that is negative. And I have

gsh 1 already explained my reasoning behind it.

MM 2 The people who run the machine are the same human beings,
3 regardless of whether they work for the public or work for
4 private industry.

5 Now there is a belief apparently that public servants
6 lack -- have more incentive to public service than to
7 producing power. But I think that the people who would be
8 there running the plant would become interested in production
9 out of the plant and you would still have to have a group
10 do what NRC does now -- sit back and audit the people who
11 are running the plant.

12 Q Can you tell us whether there are some particular
13 advantages to the change I have just suggested and whether
14 there are particular disadvantages?

15 A I think the advantages are perhaps more in
16 appearance than in fact. I think that there is a belief, at
17 least among some segments of the public or some people, that
18 individuals who work for the government would react
19 differently in situations than individuals who do not work
20 for the government.

21 And if that's true, then that's an advantage, if that is
22 true.

23 What I am saying is I believe as the years went by, the
24 same person would end up with basically the same goals,
25 regardless of who he worked for.

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gsh 1 Q Are there some other advantages, though, that are
MM 2 clear advantages, as far as you're concerned?

3 A Well, I think that you might have the advantage, if
4 you have government people there, of more technical back-up
5 resources, more availability of these because of the cost
6 factor.

7 But again, this could be imposed on licensees by regulation.
8 It could be imposed on industry by regulation and picked up
9 by the rate-payers, like everything else is.

10 Q Are there any particular disadvantages to this
11 type of alternative?

12 A The disadvantages that I would see, not dwelling
13 on economic systems, you know, free enterprise and all the
14 theoretical disadvantages or advantages, depending on one's
15 viewpoint, is that it may -- assuming that I am right that
16 they would end up with basically the same motives, it may
17 give the appearance of more safety, a quantum change in
18 things, when the appearance is not true.

19 Q Okay.

20 A Maybe mislead.

21 Q Assuming that whatever legislative action required
22 is taken, do you think the NRC's role in accident response
23 should be to take over an affected plant?

24 A Now if you mean take over to mean moving government
25 officials in there and running -- punching the buttons,

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gsh 1 turning the dials, and all this --

MM 2 Q Yes.

3 A I don't think so.

4 Q Why not?

5 A Because I don't think that you can train people to
6 do that in an accident situation remotely. In other words,
7 the people who best know the plant, the characters of the
8 plant, are the ones who run that plant.

9 Now I do think the NRC should move promptly in and
10 oversee what's going on.

11 Q Monitor?

12 A Yes.

13 Q What about ordering the plant operators to take
14 certain action?

15 A I think if it's necessary to order them, they
16 should order them.

17 Q Are there any other alternatives to either of those
18 two, taking over the plant, on the one hand, and simply
19 monitoring on the other hand?

20 A Well, let's see, is there? It may be that the
21 NRC -- if you're talking about taking over meaning bringing
22 in an operating crew, you may bring in certain people and
23 supplant the licensee.

24 In other words, the shift supervisor, you can bring in a
25 federal shift supervisor.

gsn 1 Here, again, I have a problem with that unless he's already
MM 2 living at the plant. If he's a resident already at the plant,
3 that's a different matter. He should be as familiar with the
4 plant as the man who runs it.

5 But if he is someone who is not at the plant on a
6 day-to-day basis, I find it difficult to conceive that he
7 would be that familiar with that plant's operation since the
8 plants are different.

9 Q By the way, are there any specific criteria set up
10 for what the role of the resident inspector will be in the
11 event of an accident at a plant?

12 A There may be some general description. But if so,
13 it's quite general.

14 Q Do you think there should be something explicit?

15 A Yes, I think it should be.

16 Q What do you think his authority should be?

17 A I think -- it depends on whether you have got a
18 group there or a single man there. Okay?

19 Q Let's say the single man from the NRC we're talking
20 about.

21 A The single NRC representative were there, should
22 first assure that NRC back wherever he reports, knows what's
23 going on. In other words, he is a prime communications link.

24 He should also feel free to advise a licensee to point out
25 if the individual is of the analytical nature and knows the

gsh 1 plant as he should know it, that certain actions of the
MM 2 licensee may lead to these particular events.

3 And if, in fact, the licensee persists in doing things,
4 that individual believes to be unsafe, I think he should
5 immediately call back and have the NRC back here order the
6 licensee to stop.

7 Q Should the licensee be asking him in advance as to
8 what should be done next as an event of the fault?

9 A I don't think so.

10 Q Why not? Time problem?

11 A Time problem and, again, knowledge of the plant.
12 That man cannot match knowledge of the plant with the staff,
13 with the plant staff, at least, hopefully, he can't.

14 Q Realistically, do you think this one individual
15 could have in any way coped with the events as they were
16 unfolding at TMI?

17 A No. No, I don't think -- I think the only thing
18 that he could have done was to get information back to us.

19 Q Realistically, then, do you think that anything
20 would have occurred differently at TMI if there was a
21 resident inspector in place?

22 A At TMI?

23 Q Yes.

24 A I have thought about that a great deal and my
25 impression is I can't think of a lot that would have been

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gsh 1 done differently in the early hours.

MM 2 Q Is it fair to say then that the resident inspector
3 concept would not help matters in an accident situation such
4 as TMI?

5 A It would help in the aspects of getting information
6 back to the NRC. If, again, we looked at the resident
7 inspector as a primary agency tool in accidents, it might
8 shift our concept of the program right now, and perhaps that's
9 one thing that we should be looking at.

10 Q You'd better clarify that for me.

11 A Okay. The resident inspector out at the plants
12 now, the concept of resident inspection program at the present
13 time, as I understand it, is to perform a continuation of
14 the audit inspection program with the larger audit. His
15 presence heightens the sensitivity of the licensing meeting
16 requirements and this type thing.

17 But I don't believe that it has been conceptualized as to
18 his specific activity during an accident.

19 Specifically, what he would do other than provide
20 information back here, and perhaps we should look at it,
21 particularly if we're going to have two or three out there,
22 what specifically should these people be doing in the event
23 of an accident?

24 Q I can't resist asking, isn't it practically
25 impossible for a man such as a resident inspector to be

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gsh 1 providing information back to some other office of the NRC
MM 2 and at the same time, be monitoring the licensing activities
3 and perhaps making judgments as to whether a point is being
4 reached where the licensee should be directed to do
5 something differently?

6 A I think that during the course of an event when
7 things are very busy, you know, when conditions are changing
8 very rapidly, he's almost consumed in communicating.

9 Q In communicating?

10 A Communicating, yes.

11 Q Communicating to --

12 A Back.

13 Q Is that what he should be doing rather than being
14 in the control room or wherever he should be in order to
15 know what the licensee is doing, be in a position to make
16 a decision as to whether the licensee should be directed to
17 do something else?

18 A Well, let me inject. We're not talking about
19 communicating. He's communicating from the control room or
20 the supervisor's office.

21 So he sees generally what's going on. But I think that
22 he is spending most of his time passing information back so
23 it can be assessed back here.

24 Q Is that what he should be doing?

25 A If he's one individual, that may be the most

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gsh 1 important thing he is doing.

MM 2 So it can be assessed back here.

3 Q If he had to make a choice, is it your opinion that
4 he should be passing information back rather than trying to
5 understand exactly what the licensee is doing and perhaps
6 make an evaluation as to whether or not certain specific
7 actions should be taken by a licensee?

8 A Okay. If there is some other way to get the
9 information back -- I think the information flow is
10 essential. If there's some other way to get the information
11 back like a licensee employee floating it back, then the
12 inspector should be assessing what's going on.

13 Q But if that is not possible to get the information
14 back some other way, in your view, the inspector's first
15 responsibility should be to get the information back?

16 A Unless there is something glaring going on.

17 Q He may not know something glaring is going on, but
18 it is your opinion that his first responsibility would be
19 to get the information back?

20 A No. His first responsibility is to assure that
21 the licensee is discharging his safety responsibilities.

22 Q Can the inspector know that if he is spending time
23 ensuring that information is going back to the NRC?

24 A I think it impinges on his ability to know that.
25 I think he would feel more secure in knowing this if he didn't

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gsh 1 have to worry about getting information back.

MM 2 Q Exactly. Which, then, is his first responsibility?
3 Doing everything he needs to do to ensure that the licensee --
4 to monitor the licensee and to be sure the licensee is doing
5 what he believes should be done? Or in the alternative,
6 making certain that as much information as possible goes back
7 to the NRC?

8 A I think it's not an either/or. I don't think it
9 can be an either/or.

10 Q If it is, if in his view it comes down to making
11 that choice, which choice must he make?

12 A Okay. If it's an absolute either/or, he should be
13 assuring the safety of the plant.

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sls-1

1 He is doing what he is supposed to do. But in my opinion,
2 it never comes that sharply that he can steal that and still
3 communicate back.

4 Q Do you think he can do both?

5 A To a degree. And obviously, he can do either one
6 best if he did that exclusively, or better if he did that
7 exclusively. But here again, with the movement of more than
8 one resident to the site, I think it will help that situation
9 significantly.

10 Q Just out of interest, in connection with TMI, do
11 you think that ultimately if the inspector who was there as the
12 events were unfolding had to choose between giving the
13 information back to the NRC and being sure he was properly
14 monitoring the activities of the licensee, that he should have
15 monitored the licensee rather than proceeded, did that to see
16 that the information got back to the NRC.

17 A Do I think that's what he should have done?

18 Q Do you think he should have done that if he had
19 to make that decision?

20 A Oh, yes.

21 Q Do you think the NRC should be the principle
22 authority to make decisions on measures to protect the public
23 such as making evacuation decisions?

24 A You mean supplant the state in making the evacuation
25 decision?

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Q Yes.

A I think the NRC's role in that is to make the recommendation to the state authority. But the recommendation should be clear and they should be prepared to explain the basis for that recommendation.

Q But that ultimately the state should make the decision?

A Yes.

Q Do you have an opinion as to how the NRC's response to an accident should be structured differently from the way it was structured in connection with TMI?

A If we have a resident -- assume we have residents, I think that will clean up the early stage of getting people out there and notification. The residents should be brought into that. If you are talking about the general practice of how we responded, if you sit back and look at TMI and look at our preplanning, I think there is one area where we obviously did not preplan, and that was the Commission role in the response. I think that the Agency must preplan that role. I think if you look at the other plan, the concepts of the other plan, that the concepts were proper. They may not have been implemented to the degree that they should have been, or followed precisely to the degree, but the concepts were proper. I think one of the problems we encountered very early in this was actually the physical layout of the operation center. It

sls-3

1 was not the most efficient layout, and that needs to be redone.

2 And, of course, communications need considerable improve-
3 ment. But I think, basically, the role of the Commission
4 needs to be defined and interplayed between Commission and
5 staff.

6 Q What about the -- strike that.

7 Do you have an opinion as to whether a senior official
8 from NRC such as Harold Denton should be immediately dispatched
9 to the site and perform some, shall we call it EMT functions
10 from the site of an accident?

11 A I think if it is a significant accident, there
12 should be additional NRC present, the senior NRC presence at
13 the site.

14 Q So, in other words, you think the judgment, as you
15 went along, as to whether it was appropriate?

16 A I think the fact that you get a telephone call, "Hey,
17 you've got something wrong," that you immediately put him on
18 the road. I think you need some early assessment of the
19 unfolding of the situation. But that team should be pre-
20 designated, not by personality, predesignated as a skill and
21 type and authority level, and when the call comes in, they
22 should be put on alert so they can get ready to move just as
23 soon as possible.

24 Q Do you think there should be some changes to improve
25 the ability of NRC people who do arrive on the site to

sls-4 1 thoroughly monitor the licensee's actions as they are taking
2 place and to make directive action as required?

3 A I think it needs to be clearly pointed out to them
4 what their role precisely is. I think that we in our plans --
5 the plans were not that specific -- and again one of the
6 reasons is, you know this thing lasted so much longer than
7 we had ever conceptualized.

8 I think we need to review the plan, identify the
9 Commission's role, the Commission interfaced with the staff
10 role, and more clearly define responsibilities in the plan.
11 This would include, of course, sending people out to the site
12 and what they are to do when they get to the site. What their
13 responsibility is when they are out at the site.

14 Q How would you improve communications?

15 A Well, one thing I mentioned to you is that I think we
16 need more land lines, more NRC land lines out there that are
17 ours. I believe that I mentioned to you last time I think that
18 the resident inspector or resident inspector's staff out there
19 should have a radio communication's plant, a vehicle that can
20 communicate off that site and back into here and through a
21 relay. I think that is what we need.

22 Q What about the operation of the layout at the
23 Incident Response Center. How should that be changed?

24 A Oh, the Incident Response Center, the EMT layout
25 as it existed was too accessible. I mean, too many people could

sls-5
1 come in there and people walking down the hall could generally
2 look in and see what was going on. I think the EMT should be
3 out of the hurly burly flow of things, so that they can
4 deliberate on what is going on, and the arrangement over there
5 was not conducive to it. There were too many different people
6 in that EMT room, in my opinion.

7 Q Any other changes?

8 A I think that -- of course we mentioned communica-
9 tions.

10 Q I am sorry. I mean with respect to the operational
11 layout.

12 A Another thing I think we need to have small ante-
13 rooms off the EMT rooms where individual staff members were
14 frequently called upon would be, but they would not be in the
15 EMT room all the time. For example, Public Affairs, there
16 should be somewhere, for example, that the Public Affairs
17 officer is housed where his functioning does not interfere with
18 EMT deliberations. The same thing with state programs. They
19 are very important to the deliberations of EMT, but I think it
20 is distracting to have them sitting there with EMT while these
21 deliberations are going on, particularly Public Affairs. He's
22 on the phone some of the time, this type of thing.

23 Q To what extent do you think the NRC should act as the
24 spokesman to local authorities and to the public, you know,
25 in the event of an accident?

sls-6 1 A Apparently, the NRC or the Government agency is
2 looked upon as having a high degree of reliability by some
3 media and public -- other public officials. And again, if we
4 go into persons on the site, then perhaps we should relook at
5 our role in dealing with these people.

6 I think, however, that it is important in situations that
7 promptness may overcome source. In other words, if something
8 is unfolding very rapidly and NRC does not have a presence
9 there that can begin this, then the licensee must do it in order
10 to get the information out.

11 Q Do you think, though, that wherever possible
12 communications to the public should be funneled just through the
13 NRC rather than permitting the licensee or some other private
14 entity to provide information to the public in the event of an
15 accident?

16 A I think ideally the licensee should do it himself,
17 but I think -- with the NRC commenting if they disagree, this
18 type of thing, but I think as things have developed, that
19 apparently there is a lack of trust among some members of the
20 public that because of the self-interest of the licensee
21 that he would be candid. So, consequently, maybe it is time
22 to say the NRC becomes the "official spokesman" when there is
23 a major accident that has occurred on the NRC jurisdiction.

24 Q Do you think that during the course of the accident
25 the NRC spent too much time informing the public or members of

sls-7
1 the legislature, for example, that that's what was going on?

2 A I think that it is essential that these people be
3 informed. I think we could streamline the way that we do it.
4 There may have been too much repetition of the same message to
5 so many different people. There must be a different way to do
6 it other than that. And we should look at a way to streamline
7 that, although I think we should make every effort to keep
8 the flow of information to satisfy people, because I think the
9 worst thing you can do is have people think things are going
10 on that affect them and nobody is telling them what is going
11 on.

12 Q Why don't we break here?

13 (Recess.)

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BY MR. BALLAINE:

2 Q Sir, we are now on the final phase of the general
3 questions concerning general issues. First, Mr. Davis, does
4 the NRC have a clearly recognized agency mission, in your
5 opinion?

6 A In my opinion, the commissioned mission of the NRC
7 is to help protect the health and safety of the public and
8 the environment.

9 Q Does the NRC have a program to improve nuclear
10 safety, at least as with respect to reactors?

11 A My understanding is that that is the purpose of
12 the research program, office of research.

13 Q How would you describe that program in carrying
14 out that mission to improve nuclear safety?

15 A I am not familiar with the details of what they
16 do. As I understand it, what they do is identify areas
17 where improvement is needed; then they will identify
18 research projects, go out to contractors, and let contracts
19 for the performance of research.

20 Q Do you have an opinion as to the adequacy of the
21 program?

22 A No, I don't.

23 Q Do you believe that a five-member commission can
24 fulfill a responsibility that the statutes place on this
25 agency?

pv MM 1 A Of protection of the health and safety of the
2 public and so forth?

3 Q Yes.

4 A I think it can, yes.

5 Q Do you think that a five-member commission can
6 fulfill the responsibilities that should be placed on the
7 agency?

8 A Yes. Let me interject. If, from your use of the
9 word "five-member commission" or five-member body, you are
10 suggesting there should be some other membership --

11 Q We'll get to that.

12 A Yes, I think the commission can perform its
13 function and whatever its function should be.

14 Q Now, some say that the Commission does not really
15 make the policy of the agency, but is the captive of the
16 staff, merely modulating policies pursued by the staff. Do
17 you agree with that?

18 A To some degree. I think that a lot of policy made
19 by the Commission is, in effect, endorsing that which the
20 staff has proposed. However, I don't think that is
21 necessarily a criticism of the concept of commission. I
22 think a commission form of organization can make policy.
23 Maybe the history of this particular agency, in its growth,
24 has led to this is the way business has been done, but it
25 doesn't necessarily mean that's the way it ought to be done

pv MM 1 or will be done.

2 Q Do you think it ought to be done that way, or not?

3 A I think the Commission -- I think partially it
4 should be done that way. But I think, as a senior staff
5 member, in some areas I would like to have seen the
6 Commission speak with greater clarity on what the policy
7 is. Now, the Commission may find that they come to better
8 policy in their opinion by letting the staff struggle with
9 various options, come up with what the staff believes is
10 right, and then Commission comment on it and redirect it.
11 That's one way of doing it.

12 The other way, of course, is for them to conceptualize
13 and pronounce it.

14 Q Do you think there is a way of getting greater
15 clarity from the Commission, if that's what you decide is
16 the better way to proceed?

17 A Oh, I think that -- well, let me interject here.
18 The Commission, in my opinion, the NRC, is within recent
19 months considerably improved over what it used to be. Right
20 now, when the Commission makes a determination, we do get a
21 piece of paper that expresses that determination. I don't
22 recall, in the early years, that we got those pieces of
23 paper.

24 I do think that the Commission -- one of the
25 disadvantages of a commission form of organization is the

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pv MM 1 time it takes, simply because you must bring into some
2 expression the different viewpoints, which, of course, is
3 the strength of the Commission, th. different viewpoints. I
4 think once the different viewpoints are brought together,
5 the Commissioners may want to have something which they call
6 "this is a policy expression," write it down, and this is
7 the policy. Occasionally, they have had such things. But
8 it might be well if they did that more frequently.

9 Q You say it's been done, that there's been more
10 written expression of policy in recent months. Is this
11 since TMI-2?

12 A Oh, before that.

13 Q Before that. Do you associate this change with
14 any particular event?

15 A No, I think it's just the maturing of the
16 Commission.

17 Q In your view, what does the Commission really do
18 with the bulk of its time and attention?

19 A The only time I see the Commissioners is when I am
20 down for various generally issues or briefings of this type,
21 and my impression is the Commission reviews a great deal of
22 what the staff does. They, I suspect, formulate how they
23 think the things should go.

24 I will say this: My impression of the way the Commission
25 operates is that the staff does not just come up with a

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pv MM 1 concept which is rubber-stamped by the Commission.

2 I think if that is the impression of people, in my
3 opinion, that's not the correct impression. The staff may
4 come up with what they think should be done, and then the
5 Commission modifies it and shifts it and changes it to
6 something they find acceptable.

7 But the Commission generally, as I understand what they
8 do, spend most of their time reviewing that which the staff
9 has proposed and sending messages to the staff of these are
10 things they should begin to think about.

11 Q Do you have an opinion as to whether the
12 Commission is involved too much in technical details, rather
13 than overall policy formulation?

14 A In my opinion, they are.

15 Q Too involved in technical details?

16 A Yes.

17 Q Do you have some examples of that or something
18 that supports your opinion, leads to your opinion?

19 A Well, it's an impression. Let me see if I can
20 think of an example. I can't think of an example. I may as
21 we continue to talk.

22 Q What's the basis of your impression?

23 A My impression is they ask extremely detailed
24 questions about extremely detailed matters. And I guess, if
25 you went back and looked at it all, I don't -- this is not

pv MM 1 necessarily typical -- if you go back and review the
2 Commission's reaction to the aftermath of Three Mile Island
3 and that which was going on, what staff was recommending,
4 they asked extremely detailed questions on that particular
5 issue.

6 Maybe it was called for in this particular situation, but
7 my impression -- and as I say, I will try to recall some
8 examples that led to the impression -- is that they do deal
9 in considerable detail. Maybe that's what they ought to
10 do. My impression is they deal in a great deal of detail.

11 Q If you were a Commissioner and you were supposed
12 to be making policy decisions, do you think you also might
13 go into considerable detail in reviewing the facts, you
14 know, that have been put before you as part of the process
15 of asking for your policy formulation?

16 A As a person?

17 Q Yes.

18 A I am accused of that.

19 Q I guess I am asking whether there is any way of
20 avoiding.

21 A I am accused of going into a great deal of detail.
22 And why am I in detail? Because I want to check. And I
23 guess that's exactly what they do. They want to check to
24 assure themselves of the accuracy.

25 Q In 1972, the chairman and the commissioners of the

pv MM 1 Atomic Energy Commission recommended its abolition and
2 replacement with a single administrator. At that time,
3 Dr. Seaborg, in his letter to the Bureau of the Budget,
4 said:

5 "It was generally recognized at the time the original Act
6 was passed that the commission form of organization diffused
7 responsibility and slowed down the decisional process. At
8 that time, it was felt that sacrifices in these areas were
9 preferable to the concentration of power in a single
10 individual in connection with a new source of energy.
11 However, the circumstances are now markedly changed."

12 In your view, would NRC be a more effective agency under
13 a single administrator, rather than a commission?

14 A You are talking about in the discharge of their
15 total span of responsibility?

16 Q Yes.

17 A Again, it depends on what you mean by
18 "effectiveness." Personally, I think that the commission
19 form of organization should continue. That's not based so
20 much on effectiveness and promptness as perhaps apprehension
21 about what else there is, a single administrator. And I
22 think that it would be a very — it would be a wrong move,
23 in my opinion, to go to a single administrator.

24 And the reason that I believe that is because a single
25 administrator would have too much power. If you got in that

pv MM 1 job a pro-nuclear individual who was pushing for whatever
2 sentiment and may not even recognize it, I think that could
3 have some effects that we would not like on the nuclear
4 industry.

5 Conversely, if you got in that job an anti-nuclear
6 person, he could destroy the nuclear option as a part of the
7 energy mix of this country.

8 Another aspect of the single administrator is, I think
9 one of the advantages of a commission form of organization,
10 which is also one of the disadvantages, is its
11 deliberateness, the bringing together of ideas, the
12 interplay of ideas. From that deliberateness, I believe you
13 avoid the tremendous swings in philosophy which you may
14 encounter if you are -- if you had a single administrator.

15 So, consequently, I believe we should continue with
16 that. I think one of the things that is necessary in a
17 regulatory program is predictability, the absence of
18 tremendous swings. And for that reason and for the belief
19 that I think a single administrator would be too powerful, I
20 think we should continue with the commission form. That's
21 my personal opinion.

22 Let me interject one other thing: I also -- now, the
23 reason I say that is not because of the Commission's
24 reaction to an accident, but the Commissioners have many,
25 many other responsibilities other than reacting to an

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pv MM 1 accident, and under that umbrella of a commission form of
2 organization, I think, with proper planning you can end up
3 with an organization that can respond to accidents.

4 Q Well, in fact, I think you are anticipating my
5 next question. You ask whether I was asking for your
6 opinion as respects the total span of responsibilities. Are
7 there certain responsibilities that you think should be
8 handled finally by a single administrator, rather than a
9 commission?

10 A By a single entity -- in other words, I think that
11 there are some responsibilities -- maybe there is only one,
12 but there are some responsibilities.

13 Q What are those?

14 A Namely, the accident conditions that require
15 prompt reaction, that the commission form, as a commission
16 form of deliberateness, whether it leads to lack of decision
17 or not, it gives that appearance, and that a single
18 administrator can react better. A single entity can react
19 better in certain circumstances.

20 However, I will hasten to add that he can also react
21 worse. I mean, if he makes the improper decision, that one
22 man makes the improper decision, it may be much more
23 devastating than the delay, seemingly the delay, brought
24 about by the deliberateness essential to a commission.

25 Q Any other responsibilities that you think should

pv MM 1 be handled by a single administrator, rather than a
2 commission?

3 A I think one thing, that the head of the agency,
4 let's say, the chairman, there should be some point at which
5 the chairman speaks for the agency with great clarity.
6 Sometimes, I think, the way we do now -- and I don't know
7 how to do it otherwise; maybe it is proper -- is that there
8 is a great deal of effort exercised which stretches our
9 deliberations to come to unanimity of thought on a
10 Commission level, and perhaps we need to move more promptly
11 into "the Commission has decided, and some people don't
12 agree."

13 Q By a 3-2 vote?

14 A Yes, as decided that the majority expresses their
15 opinion. But my impression -- and it may be wrong, but my
16 impression is a great deal of time is expended trying to
17 come to unanimous decisions.

18 Q With respect to an accident situation, what role,
19 if any, should a commission play?

20 A Well, I think that the commission should speak for
21 the agency. It is the agency. That it should speak to the
22 public and to the political public as the agency.

23 I think, however, that the technical handling of the
24 accident should be more sharply drawn into an organization
25 with that responsibility.

pv MM 1 Now, of course, the Commission, at some point in time,
2 must review what that group does, but I am not sure, as the
3 accident unfolds, is the time for that review.

4 Q What about with respect to the ultimate decision
5 whether or not to recommend evacuation? Should that
6 decision be finally made at the Commission level or by some
7 other organization within the NRC below the Commission?

8 A Okay. That's an unusual decision. I think that
9 decision, the technical need for the evacuation or
10 recommendation for the evacuation, is obviously evolved on
11 the staff. In my opinion, that recommendation could be made
12 from the staff.

13 Q And if I understand your view, the Commission
14 would then be the spokesman or the conduit for making that
15 recommendation known?

16 A Right.

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1 Q Even if they disagree?

2 A And again, that will probably never come to pass.

3 Q The reorganization act gave unique stature to some
4 of the NRC staff offices and to the chairman of the
5 Commission. Does this structure bring with it problems or
6 deficiencies which tend to defeat the effectiveness of the
7 agency, in your opinion?

8 A Are you referring to the point that certain office
9 heads have direct access to the Commission as opposed to the
10 executive director of operations?

11 Q That's right. Among other matters. There may be
12 other things that you can think of, but that's one.

13 A Well, one thing, I think that calling out certain
14 of the office heads and not other office heads has created
15 some difficulties for the Commission, for the organization,
16 where these other office heads who may have very strong
17 responsibilities are somehow looked upon by the people as
18 not quite -- they're not a statutory office, is the term
19 that is used.

20 Q Give me an example.

21 A Well, Inspection & Enforcement is not a statutory
22 office. With regard to going to the commissioners, in my
23 opinion, the role of executive director for operations is
24 eroded somewhat by that -- let's say bypass or whatever it
25 is. I do not think that we -- that an individual would be

kap MM 1 selected for executive director of operations who would put
2 a block on people going to the Commission, but that bypass
3 can be used to go around that individual to the Commission
4 without him having full knowledge of what is going on, and
5 it does kind of diffuse the tightness of the organization,
6 in my opinion.

7 Q is it your opinion, then, that all matters should
8 be channeled through one person like an EDO?

9 A I think that the EDO position would be
10 strengthened and should be strengthened if he did not have
11 what the formal bypass has identified.

12 Q How should it be strengthened specifically?

13 A By doing away with the bypasses.

14 Q But that's what you had before the reorganization
15 act, is that correct?

16 A Yes.

17 Q Were you satisfied with the strength of the EDO
18 before the reorganization, then?

19 A For the director of regulation? That was the
20 comparable job.

21 Q I'm sorry, that's right.

22 A Yes, I thought the director of regulation
23 organization was a pretty effective organization.

24 Q You thought it was a better way? Do you believe
25 the NRC suffers from interoffice rivalry?

kap MM

1 A Interoffice rivalry? I believe it doesn't suffer
2 as much now as it used to. I think for example during the
3 early days of the NRC, right after the formation of the
4 agency, there was a fair amount of what one might call turf
5 identification where the offices were clearly identifying
6 their responsibilities. My impression now is there is some
7 rivalry, some that may be bad, some that may be good.

8 But to describe it as suffering from it --

9 Q Do you think there tends to be conflict between
10 the I&E office, for example, and NRR?

11 A Oh, we have conflict, that is correct.

12 Q Do you think it's healthy conflict?

13 A Some of it is healthy.

14 Q Some of it is not?

15 A Some of it is not.

16 Q How would you describe that conflict which is not
17 healthy?

18 A I think conflict which is not healthy is what I
19 would call that which is so interested in turf that it may
20 overlook the overall -- or it may detract from the overall
21 attention to the role of the Commission.

22 Q Can you give me an example from your experience in
23 which you believe there was conflict between I&E and NRR
24 over what you have called a turf matter, something that was
25 not healthy conflict?

kap MM

1 Q Oh, I think we have almost a continuing little
2 interchange. Maybe conflict is overglorification of the
3 little difficulty, but I&E likes to look upon itself as the
4 office with the prime contact with licensees. NRR has
5 project managers who also consider themselves prime contact
6 with licensees and I think you will find on occasion it may
7 be somewhat confusing to a licensee. I don't know. I'm not
8 a licensee, but to have two different groups approaching him
9 for the same -- asking the same questions on a slightly
10 different time scale.

11 Q Without having coordinated the contact?

12 A Right. Apparently, some people get a great deal
13 of satisfaction by knowing something first and there may be
14 some of that in the playoff, so in other words they like to
15 know it first.

16 Q What about with respect to making decisions for
17 corrective actions? Safety correction actions. Do you
18 think there tends to be some conflict between I&E and NRR as
19 to who bears ultimate decision-making authority, for
20 example?

21 A Okay. That used to be a source of a fair amount
22 of conflict. More recently there is now an official, a
23 written memorandum of understanding between the two offices.

24 Q As of when?

25 A I guess it's two or three years ago. That makes

kap MM

1 it fairly clear -- in fact pretty clear, as to who is
2 responsible for what in dealing with licensees, the
3 decisions on licensees, and the break point basically if
4 what the point in contention is is a pre-existing condition
5 then it is I&E's responsibility to assure that the licensee
6 meets that condition.

7 However, if the point in contention means changing the
8 requirement, that becomes a licensing rule. But that was
9 not clear until we had this.

10 Q Then it becomes NRR or DOR, whoever has
11 responsibility?

12 A I'm sorry, right. Yes.

13 Q Are there changes that you think should be made in
14 order to reduce or in an effort to reduce or eliminate the
15 unhealthy rivalry between offices?

16 A I think there should be changes made to reduce
17 it. Now exactly how you bring these about, I don't know. I
18 think one of the things the agency needs to do is to make it
19 real clear to the lowest member in this agency what our
20 business is, protection of the health and safety of the
21 public, and keep that as the ultimate goal of this agency.
22 And everyone knows that's what he's doing. This little job
23 that he is doing is contributing to that ultimate goal and
24 he should not be jealous of that particular job.

25 Maybe I am overemphasizing this, but in any event I think

kap MM

1 it should be real clear what we are about. I think that
2 would overcome a lot of what we might call petty rivalries,
3 where you get satisfaction with the agency performing its
4 mission in a superior manner rather than you personally
5 having this little bit of proprietary piece of material
6 that's yours and you're going to defend it if anybody wants
7 to get into it.

8 And a lot of that is really management saying, Look, this
9 is what we're about, this type thing.

10 Q I had meant to ask also by the way, whether in
11 your view there is unhealthy conflict between I&E regional
12 office personnel and headquarters personnel, be they I&E
13 headquarters or some other office headquarters personnel.

14 A There is, I guess, an organization traditionally a
15 headquarters group and a production group or a staff group
16 and a production group, and there are traditionally
17 animosities between these two. I think that there are --
18 that it varies from time to time. There are disagreements
19 between headquarters and regions.

20 Again, I think the biggest problem that I&E has in
21 dealing with its regions is basically a communications
22 problem. We will have situations arise in headquarters
23 where there is a need for information which the regions
24 supply and the basis for that need may not be transmitted to
25 the regions. And the regions hear it as, So-and-So at

kap MM 1 headquarters wants us to do this silly thing. But my
2 impression is once they know why things are needed that they
3 are very receptive to them.

4 Now there are, of course, some disagreements and there
5 always will be, I guess, on the adequacy of the program.
6 Some people think the program is perfect or basically
7 perfect and some people think it is much too detailed. We
8 don't need that kind of guidance, just turn us loose and let
9 us do our thing. Others say we need more detail, that type
10 of interplay.

11 As I mentioned last time I talked with you, there will be
12 disagreements on the adequacy of response to technical
13 questions. The headquarters will take one issue, the region
14 will take another position. There are disagreements on
15 enforcement actions, the stringency of an enforcement
16 action, whether an enforcement action should be taken. And
17 these continue. As I say, they do run and they seem to
18 cycle. Sometimes there seems to be a fair level of
19 disagreement; other times things seem to be very
20 cooperative.

21 Now, one thing I might mention, when Dr. Volgenau came
22 with us he was very attuned to this. I understand Stello
23 was also very attuned to this, and as a deputy director I
24 used to go around every quarter to just talk to the regional
25 offices, every person in the regional offices. And I think

kap MM 1 this had a very good effect. The regional people -- and I
2 used to be a regional director -- you end up with I guess
3 what we call the camp swapping syndrome. You think
4 headquarters has forgotten you. I think the biggest problem
5 in IE, and one which will lead to a solution is more
6 communications back and forth.

7 Q Do you think that there should be any structural
8 changes to reduce this problem of conflict?

9 A In terms of IE region?

10 Q Well -- in fact I am talking specifically about
11 the conflict between I&E region and headquarters, using that
12 term generically.

13 A Well, headquarters, I think, needs to be
14 reorganized, in my opinion. It needs to be reorganized. IE
15 has been in its current organization now for a couple of
16 years, I guess, and there is a more effective organization
17 in my opinion.

18 Q What is it?

19 A To move back to a stronger outfit called field
20 operations.

21 Q Where we came from?

22 A And again you say, Gee, we made a mistake. I
23 don't know. But in any event in my personal opinion I think
24 that would be --

25 Q This is an I&E change now?

kap MM 1 A Yes. I think one thing that would really improve
2 IE, and this is fairly general for any geographically
3 centralized organization, is a higher exchange of staff
4 which is extremely difficult to accomplish, where people
5 move from the regions into the headquarters and then send
6 them back out into the regions and that's very difficult to
7 accomplish, primarily because of the restrictions in
8 government service on compensation for this type of thing.

9 Q Do you think the NRC can efficiently respond to an
10 emergency situation such as TMI where the people at the site
11 are I&E people from the region and the people back at
12 headquarters who have overall responsibility for directing a
13 response may be I&E people from headquarters and may be NRR
14 people from headquarters?

15 A I think what we need to do in that particular area
16 is we must make it a lot clearer to all concerned what the
17 role of that man at the site is. And again, we should
18 re-look at the composition of the team, if it's going to be
19 a resident team at the site. Perhaps we need someone at
20 that site who is more attuned to NRR needs in the event of
21 an emergency. Maybe not a different person but NRR might
22 pre-express their needs better than we have, so that the
23 team there will be able to respond to them. I do think the
24 NRR people, when an emergency is unfolding, get very
25 frustrated at information flow and tend to blame that

kap MM 1 frustration on the IE person. It may or may not be
2 appropriate blame. He may be giving them everything he
3 knows or can get. But it seems to focus in, well, he's the
4 man we're talking to, he doesn't know. So I think that
5 whole communications thing needs to have a very severe look
6 at it.

7 Q Are you satisfied with the way in which safety
8 problems or issues are raised up through the NRC staff and
9 evaluated?

10 A I think that we need to improve the speed in which
11 they come up. We also need to improve the speed of
12 evaluation. I was not aware until the Creswell matter came
13 up -- I don't recall being aware that there may be a long
14 delay, just in -- before they are bucked up. I think we
15 need to improve the understanding of staff that there are
16 bypasses. In other words, if they hit a dead end they can
17 just bypass that dead end, which eventually Creswell did.

18 Q How would you speed up the process?

19 A As I mentioned to you, I think when you get to a
20 point you have got to set things on a milestone schedule.
21 If an individual brings up a point in the region, or say
22 within a branch in NRR and it doesn't break out of that
23 branch chief by a certain length of time, then the
24 management needs to know, Hey, we're working with this thing
25 down here.

kap MM

1 Q Do you think there should be some particular
2 office that somehow has overall responsibility for setting
3 these milestones? Or how would you go about effectuating
4 this idea of having some kind of timetable?

5 A I think the event group would be a group to start
6 it. Maybe it's just a bum idea, but it looks to me like we
7 shouldn't wear people down, in other words, after a while I
8 think you can just delay things so long people give up and
9 say, "the heck with it." And I think what we need is to set
10 up some time schedule.

11 If a working level person has a problem and he doesn't
12 get some reaction to that problem, then you elevate it.
13 Maybe at the time you elevate it, a report comes into this
14 review group, Hey, they're working on this. It may be
15 something they have a particular interest in. I think we
16 must do these things faster, at least know they're being
17 worked on faster. What I am concerned about is basically
18 hidden in our lower priorities, maybe another Three Mile
19 Island we just haven't seen.

20 Q Do you know on what basis safety problems are now
21 brought to the Commission's attention?

22 A The Commission's attention? I think on the
23 importance, as I understand, they're basically brought
24 through NRR.

25 Q Who makes the decision as to what's brought before

kap MM 1 them?

2 A NRR, I believe.

3 Q Are you satisfied with the system as far as you
4 understand it, insofar as bringing safety problems to the
5 Commission's attention is concerned?

6 A No, I think again if you set these milestones up
7 and begin bumping against them, the Commission should know
8 there's a problem down there that's really getting hassled
9 in the staff. Because those are the problems --

10 Q Before it has emerged to the Commission level?

11 A Yes. We've got this problem and it's really
12 causing problems down at the staff because those are the
13 problems. The ones that everyone agrees with, they flow and
14 everything happens pretty good. But one like Creswell,
15 you've got a problem where you've got a group of people that
16 just don't agree and it gets hung up in time. And I think
17 we have got to set up a scheme to correct that.

18 Q Do you have any opinion as to how NRC management
19 practices can be improved?

20 A Management practices?

21 Q Yes.

22 A I think NRC management practices could be improved
23 by planning and by assuring that plans are accomplished and
24 at the current time I think we do better planning than we do
25 assuring that they are accomplished. And I can point to

kap MM 1 many examples I have been involved in. A fair example is
2 independent measurement and direct observation. The plants
3 are pretty good. You know, in fact I always sit down and
4 wring my hands over, Good God, we had the solution of that
5 and events overtook us. We shouldn't have events overtaking
6 us like this.

7 Q What do we do? What do you suggest that the NRC
8 do to get better at planning how to get something
9 accomplished than the NRC apparently is?

10 A Well, I think, hopefully the new government senior
11 executive service is a way to get there, where people are
12 really judged on their fulfillments. My impression -- this
13 isn't just NRC, this is fairly common, is that people
14 frequently are judged by their performance in a single
15 instance that attracts attention, and so consequently if you
16 are an aggressive young man, what are you looking for?

17 A single instance that attracts attention, where the
18 individual who is really getting the work done and who is
19 getting the system set up to get these events reviewed, all
20 these events done may go largely unnoticed because it's
21 done, so it's no longer a problem. It doesn't attract
22 attention. So we do problem management and really, we
23 should do performance management, in my opinion.

24

25

kap mm

1 Q That's the last of the general questions that I
2 have, Mr. Davis, and I want to thank you for taking the time
3 to come back. The rule is the same, that because it's an
4 ongoing investigation there may indeed be further questions
5 we need to ask. We will, of course, try to avoid that.

6 If we do, however, we would have to call you back for a
7 deposition.

8 MR. BALLAINE: I'm going to note for the record
9 that Mr. Davis has indicated that he's leaving the NRC after
10 this Friday. Friday is his last day.

11 THE WITNESS: That's right. Tomorrow's my last
12 day.

13 MR. BALLAINE: But you understand we might have to
14 ask further questions of you. I doubt that will happen.

15 THE WITNESS: Surely.

16 MR. BALLAINE: For that reason, I am simply going
17 to adjourn the deposition at this time, and again offer my
18 thanks to you and also to the reporter. That's all.

19 (Whereupon, at 11:35 a.m., the taking of the deposition
20 was adjourned.)

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